

# FUNCTIONAL FOODS AND WOMEN'S HIGH CHOLESTEROL

FUNCTIONAL FOODS AND THE RISE OF HIGH CHOLESTEROL  
AS-DISEASE IN WOMEN'S HEALTH

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## Abstract

Food and the various aspects surrounding what we eat, what we *should* eat, and concerns about how to remain healthy and ward off disease and illness is escalating while our choices are endless. In this competitive food market a new type has emerged: the functional food. Functional foods are those that have an added health benefit beyond the basic nutritional content and display physiological benefits in reducing chronic diseases. A popular category of functional foods are those that purport to lower one's cholesterol. In particular, high cholesterol is marketed as a "disease" rather than a risk factor for various cardiovascular diseases, such as heart disease. Little is known about the sociological diagnosis of high cholesterol and the marketing of functional foods, in particular with women. This dissertation address this gap by asking: (1) How is high cholesterol identified and marketed as a disease rather than a risk factor for cardiovascular diseases in functional food advertising - specifically addressing the Becel® pro.activ® margarine campaign? (2) How do women understand the issue and *causes* of high cholesterol; and (3) What do women understand the *solution* to high cholesterol to be and how do they view Becel's® high cholesterol solution?

This sandwich thesis is organized into an introductory chapter where I introduce the main research questions and give an overview of the research problem and need for the study. Chapter 2 is the literature review. Chapter 3 contains the research design, data collection and analysis. A content analysis of the functional food campaign of Becel® pro.activ® margarine and semi-structured in-depth interviews with 49 women over the age of forty who were concerned with high cholesterol took place.

Chapter 4 contains article 1 and provides the background for the empirical research by examining the functional food landscape and high cholesterol directed at women. It is based on a content analysis of the narratives behind the Becel® pro.activ® margarine health campaign which consisted of 6 key advertisements in 2 Canadian magazines.

Chapter 5 contains article 2 and examines what the participants think are the *causes* of high cholesterol, how it is understood by women, whether they classify it as a disease and how *blame* and *responsibility* for high cholesterol is attributed. I discuss how these findings vary by class.

Chapter 6 contains article 3 and examines what women understand the *solution* to high cholesterol to be and the strategies involved. I also examine Becel's® corporate marketing solution to high cholesterol and see how they differ from lay perspectives.

In the conclusion (chapter 7) I discuss the key findings and contributions to the literature, the strengths and limitations of the research and future work. This interdisciplinary research draws on sociology, in particular the sociology of diagnosis and the sociology of health, illness and medicine, nutrition studies, women's health, cultural studies, and health promotion. This research is a key contribution to knowledge about the social creation of disease and the reproduction of health along class lines.

## Acknowledgments

This dissertation would not have been possible without the expert advice, guidance and unwavering support of Neil McLaughlin. He is a mentor and a friend, who gave his time so generously to me over the years. His valuable suggestions and enthusiastic encouragement is deeply valued. Neil has taught me the value of always looking at the bigger picture and to plan my dissertation, my research and my life's ambitions with one eye to the future. I would also like to thank Josee Johnston who provided a much needed critical food sociologists' perspective. Josee, thank you for reading so many drafts, for your thoroughness, sound judgment and constructive feedback which strengthened this dissertation and made me a better sociologist. I would like to thank my thesis committee of Tina Moffat and James Gillett for providing timely and useful feedback through our committee meetings and over the years when reading the many versions of these articles.

To Sandra Colavecchia, who although is not on my committee, she has served as a mentor and true friend over the years and has supported and guided me with sage advice and gentle but probing reminders to *publish, publish, publish!* To Weizhen Dong (my M.A. supervisor from the University of Waterloo), who continues to be a source of unflagging support and a mentor to me since we first met over 6 years ago. She guided me through one graduate degree, then another, and continues to provide encouragement and uncannily accurate professional advice.

I would like to thank the 49 women who participated in this research, without whom much of qualitative work would cease to exist. I thank you for your honest and detailed responses and hope that I have remained true to your voices in the selection of quotes.

I would also like to honor the memory of a fellow sociologist, my colleague Zac Walker (1989-2013), whose untimely death shocked and saddened us all. Zac died before graduating from his M.A., and I know that he would have been proud and delighted for those of us who completed our graduate journey and who stand now where he once wanted to be.

Lastly, I would like to thank the reviewers and editors of *Food, Culture & Society*, and *Social Science & Medicine*, that have published my first two dissertation articles, and *Sociology of Health and Illness*, where I am currently revising and resubmitting. Their helpful comments and feedback has strengthened my work.

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### List of all Abbreviations and Key Terms

**Functional Foods:** According to Health Canada (1998), a functional food is "similar in appearance to, or may be, a conventional food that is consumed as part of a usual diet, and is demonstrated to have physiological benefits and/or reduces the risk of chronic disease beyond basic nutritional functions".

**Nutraceuticals:** "A nutraceutical is a product isolated or purified from foods that is generally sold in medicinal forms not usually associated with food. A nutraceutical is demonstrated to have a physiological benefit or provide protection against chronic disease". (Health Canada 1998)

**Statins or Statin drugs:** This is a cholesterol-lowering medication, and is most commonly known by trade names as Lipitor or Crestor.

**Plant Sterols:** Plant sterols are "natural, fat-like compounds structurally similar to cholesterol. Plant sterols can be commonly found in vegetables, fruits, legumes, and unrefined vegetable oils" (Agriculture and Agri-Food Canada 2008:1). Plant sterols "provide additional cholesterol lowering effects with statins...and may reduce the risk of coronary heart disease by reducing blood cholesterol levels as part of a diet low in saturated fat and cholesterol". (Ibid: 2).

<b>Becel<sup>®</sup></b>	Becel <sup>®</sup> pro.activ <sup>®</sup> margarine
<b>CVD</b>	Cardiovascular diseases
<b>HC</b>	High cholesterol
<b>HD</b>	Heart disease
<b>HSF</b>	Heart and Stroke Foundation of Canada
<b>LMC</b>	Lower middle class
<b>SDOH</b>	Social determinants of health
<b>SES</b>	Socio-economic status
<b>UMC</b>	Upper middle class
<b>WC</b>	Working class
<b>WP</b>	Working poor/underclass

**Declaration of Academic Achievement**

The following is a declaration that the contents of the empirical research in this document has been completed by Maja Jovanovic.

**PREFACE: THREE PAPER DISSERTATION FORMAT**

This dissertation takes the format of the "three paper model" (i.e. Sandwich Thesis), a format available to McMaster students in various departments. All three of my papers have been prepared, revised, edited and reviewed by the author and subsequently by my supervisor and committee members. Once in proper form, all three articles were submitted for publication in scholarly interdisciplinary journals. I have also written a general introductory chapter including research problem and main research questions; a literature review chapter; research design and a concluding chapter (containing the key findings, contributions to the literature, strengths and limitations, and future research). These papers are all in different stages of publication of which I outline in detail in the introductions to each journal article.

\*\*As an aside, there is some necessary overlap in the various chapters, in terms of the definitions used, the research questions, methods sections and conclusions due to the nature of a three-paper dissertation format.

## INTRODUCTION

In this introductory chapter I describe the research problem (e.g. why study functional foods and women's high cholesterol?) and the need for this study, along with the main research questions. I also give a brief introduction to the three articles submitted to journals that make up the bulk of this dissertation. Chapter 2 is the literature review, and chapter 3 contains the research design including the methods, methodology, data collection and analysis. Chapters 4-6 are the three journal articles, and chapter 7 is the overall conclusion to the dissertation.

### **Overview of Research Problem: Why study functional foods and women's high cholesterol issues?**

Foods known as functional foods have recently been promoted as a panacea for people's health woes, specifically for high cholesterol problems. Functional foods extend the health benefit beyond the basic nutritional content of a food and purport to "...provide physiological benefit or protection against chronic disease" (Health Canada 1998). Functional foods are being touted as having the potential to prevent illness and contribute to health while obscuring the greater social, political and economic contexts and abilities of consumers to attain and maintain this 'good health' (Scrinis 2008; Korp 2010). This particular state of confusion and anxiety over food choices and food risks (Lupton 1996) has increasingly focused on high cholesterol and the risk of developing heart disease and can be seen in a variety of functional food products such as cereals, margarine, eggs, oatmeal, snack bars, juices, and granola bars. These foods advertise personal responsibility for health through the consumption of functional foods. For this dissertation, I discuss how high cholesterol is constructed and marketed as a disease through the case study analysis of a specific functional food campaign, --Becel<sup>®</sup> pro.activ<sup>®</sup> margarine, the first

functional food product in Canada manufactured with plant sterols and advertised to lower cholesterol in adults.

Although high cholesterol as a bodily occurrence has always existed, new technologies, products and services have proliferated to now detect these ab(normalities) before they have manifested as symptoms and encourages the assumption that high cholesterol is in fact a disease requiring immediate attention. However, high cholesterol is actually a risk factor among many others, such as, family history, age, stress, diabetes, and being overweight -for heart disease (Health Canada 2010). Other risk factors beyond the individual-level focus include the social, economic, environmental and cultural factors that impact chronic disease (PHAC 2013). While the cholesterol landscape is currently cluttered with products and suggestions that high cholesterol is a disease and a health problem for women in particular, a new framework has emerged to analyze the social creation of diagnosis - namely the sociology of diagnosis.

The sociology of diagnosis extends beyond the micro-level explanations of illness and disease categorization and locates the individual and their disease within both macro and meso-level social structures (Brown, Lyson & Jenkins 2011:942). It provides a useful backdrop to not only explain the ramifications of diagnosing an individual, but more importantly, the organizational and institutional powers embedded in the diagnostic process. Most useful is the ability of the sociology of diagnosis to examine the medicalized approach to cholesterol and heart disease which I argue both creates and markets the 'problem', and privileges and promotes the individualized notion of personal responsibility for health, and in particular, women's health.

This new cholesterol phenomenon arose from three key influences: functional food advertisements (specifically Becel<sup>®</sup> pro.activ<sup>®</sup> margarine); health promotion literature via the

Heart and Stroke Foundation; and cholesterol-lowering medication (e.g. Lipitor). Since 2010, this trifecta of high cholesterol promotion has bombarded women with messages that encourages self-scrutinization and an individualized focus as both cause and solution for this new dis(ease). **I ask how is high cholesterol marketed as a disease and how do women understand the issue of high cholesterol either as disease or lifestyle issue, and what are the causes and solutions to this newly discovered high cholesterol problem?** The study of functional foods and the social construction of diagnosis provide unique opportunities to explore the interdisciplinary connections between the sociology of diagnosis, food and nutrition studies and the sociology of health and illness.

#### **The Need for this Study: Women's high cholesterol and functional foods in the literature**

From 2000-2010, there was an emergence of interesting interdisciplinary studies of functional foods (from a variety of backgrounds including agriculture, nursing, psychology, medicine, the environment, marketing and health policy). This work tended to focus on: (a) *lay discourses about functional foods* (Holm 2003; Jauho and Niva 2013); (b) *analysis of health claims* (Dragicevich, Williams and Ridges 2006; Aiello 2011); (c) *consumer preferences, impressions and attitudes towards functional foods* (Hailu, Boecker, Henson and Cranfield 2009; IFIC 2007; Landstrum, Koivisto-Hursti and Magnusson 2009); (d) *consumption patterns and habits for functional foods* (Herath, Cranfield and Henson 2008); (e) *definitions and developments* (ADA 2009; Subirade 2007; Heasman and Mellentin 2001; IFIC 2007; IFT 2005; NCABR 2007; Wansink 2005); (f) *benefits* (Hasler 2002; Jones 2002; Shahidi 2009); (g) *market analysis and opportunities* (PriceWaterhouseCoopers 2009); and (h) *biomedical discourses* (Weiner, 2010).

The literature on specific functional foods such as probiotics (i.e. Yogurt and yogurt-like drinks with probiotics) seems to be more common and can be seen in studies such as probiotic web advertising by Koteyko and Nerlich (2007) and Koteyko (2009) and discursive perspectives on probiotics such as Koteyko (2010) and Crawford, Brown, Nerlich and Koteyko (2010). The literature on phytosterols (or cholesterol-lowering functional foods), which is my interest, has looked at configuring users for this sub-category of functional foods (Weiner 2010; 2011) and lay understanding of phytosterols and healthy eating (Niva 2007). Of the studies that looked at probiotic web advertising, none included a discussion with actual probiotic users. There has been one case study of cholesterol-lowering margarine (the Finnish product *Benecol*) and how it was originally developed and promoted to Finnish customers (Lehenkari 2003). However, this particular case study did not include any analysis of the marketing, it was simply a historical presentation of how and when *Benecol* was brought to market. Deborah Lupton (1996) also completed a study on the Australian's (both men and women's) lay understanding of cholesterol risk via newspaper articles. While there has been work done on food advertising in women's magazines (Schneider and Davis 2010), this did not incorporate a functional food analysis. Of the studies that looked at cholesterol risk and participants with elevated cholesterol, Hoel Felde's (2010) Danish study interviewed both men and women and their everyday medical reasoning they used to navigate their high cholesterol condition. While another Danish study looked at heart disease and functional food use as preventive measures among post- menopausal women (Korzen-Nohr and O'Doherty-Jensen 2006).

My study builds upon Canadian work on functional foods by providing a sociological perspective. Most functional food analysis is either European (Cornish 2012; Koteyko 2009; 2010; Ostberg 2003) or Scandinavian in nature (Niva 2007; Jauho and Niva 2013; Katan and de



Roos 2004) with one Korean study on germinated brown rice (Kim 2013). The only Canadian research on functional foods that I am aware of is government documents regarding consumer trends and market opportunities (Agri-Food Canada 2009; Cinnamon 2009; Invest in Canada 2012; Malla, Hobbs, Sogah and Yeung 2013) and two research reports also on consumer trends, one of which focused on probiotics (Hailu, Boecker, Henson and Cranfield 2009) while the other report identified possible functional food users in Canada based on data from the 2006 Agriculture and Agri-Food Canada survey research (Herath, Cranfield and Henson 2008).

As for the sociology of diagnosis literature, it has been used to analyze pharmaceutical marketing of direct-to-consumer ads (Ebeling 2011); alcoholism (Blaxter 1978); autobiographical cancer analysis (Blaxter 2009); obesity and being overweight (Jutel 2006); osteoporosis screening (Salter, Howe, McDaid, Blacklock, Lenaghan and Shepstone 2011); the emergence of female hypoactive sexual desire disorder (Jutel 2010); doctor-patient interactions (Gardner, Dew, Stubbe, Dowell, and Macdonald 2011); what Payer (1992) describes as 'disease-mongering' (the act of convincing well people that they are sick); control over medical information (Nettleton 2004); big Pharma and the marketing of sickness (Moynihan and Cassels 2005), overdiagnosis (Welch, Schwartz and Woloshin 2011); and the medicalization of everyday 'normal' life (Frances 2013). However, there are no studies incorporating a sociology of diagnosis lens with food, and no study using this framework with a functional food campaign centered around cholesterol and women's health.

To my knowledge this is the first qualitative sociological study that examines high cholesterol *as a disease* (or lifestyle issue) from *both* a case study analysis of an entire functional food advertising campaign (via a content analysis) and female participant narratives. This qualitative study adds a more nuanced approach to women's high cholesterol, by examining both the causes

and solutions from a lay perspective *and* a corporate marketing campaign perspective. This study fills a gap in the literature by incorporating a sociology of diagnosis framework from which to analyze both the narratives behind a cholesterol-lowering functional food campaign and women's lay understandings of cholesterol-as-disease, lifestyle and part of a corporate marketing campaign. I now turn to my main research questions.

**Main Research Questions:**

My research design, data collection and analysis was guided by the following questions:

1. **How is high cholesterol identified and marketed as a disease rather than a risk factor for cardiovascular disease such as heart disease in functional food advertising?** I specifically examine the Becel<sup>®</sup> pro.activ<sup>®</sup> margarine campaign (designed to lower cholesterol in adults) for this entire dissertation. This question formed the basis of article 1 which specifically asks:
  - a. How do Becel<sup>®</sup> ads construct cholesterol as a disease?
  - b. How do the ads frighten and empower women simultaneously?
  - c. How do ads sell the individual notion of personal responsibility for health?
2. **How do women understand the issue of cholesterol (as disease or lifestyle issue), and the *causes of high cholesterol*.** This question formed the basis of article 2 which asks:
  - a. How is high cholesterol understood by women?
  - b. Do women classify high cholesterol as a disease?
  - c. How is blame and responsibility for high cholesterol attributed?
  - d. Do findings vary by class?
3. **How do women understand the *solution to high cholesterol to be*?** This question formed the basis of article 3 which specifically asks:
  - a. How do women understand and view the overall solution to high cholesterol to be?
  - b. What are the corporate marketing solutions to high cholesterol and how do women understand and view them?
  - c. How do women understand and view Becel's<sup>®</sup> high cholesterol solution tips?

## Introduction to Journal Articles

**Article 1:** Jovanovic, Maja (2014). "Selling Fear and Empowerment in Food Advertising: A Case Study of Functional Foods and Becel<sup>®</sup> Margarine." Submitted to *Food, Culture & Society*. February 19<sup>th</sup>, 2013.

Publication Status: **Accepted for publication** June 24, 2013. (see Editor's letter below)

Submission Process: First submitted to *Food, Culture & Society* in February 2013.

Since this first article will not be published until the summer of 2014, I have included the editors' letter detailing the reasons for the delay in publication and the formal acceptance of the article.



June 25, 2013

Maja Jovanovic  
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Dear Maja,

Congratulations! The two reviewers who read your piece "**Selling Fear and Empowerment in Food Advertising: A Case Study of Functional Foods and Becel<sup>®</sup> Margarine**" have both recommended publishing the article with only minor (mostly cosmetic) changes. On the basis of their recommendations, I would like to formally accept the paper for publication in *FCS*.

We are operating under something of a significant backlog in the journal. Because of that, I will not even be submitting it to the copy editor until the issue that I submit in February of 2014, for publication about six months later. This will be volume 17, no. 4.

Congratulations on your acceptance, and thanks for supporting *Food, Culture and Society: An International Journal of Multidisciplinary Research*.



In this preliminary article which sets the stage for my empirical research, I explore the narratives behind Becel<sup>®</sup> pro.activ<sup>®</sup> margarine, which is the first functional food product formulated with plant sterols in Canada. This margarine claims to reduce cholesterol by 10% in three weeks in adults and was officially launched in June 2010. The women-exclusive campaign consisted of six advertisements in two key Canadian magazines (*Chatelaine* and *More* magazine which has since closed down). Functional foods have exploded in popularity with a global market of \$130 billion expected for 2015, and Canada is a major destination for functional food development with 40% of all foreign direct investments related to functional and natural health products (Invest in Canada 2012). Canada also has over 680 functional food and natural health companies generating \$3.7 billion (Invest in Canada 2012). Since functional foods are being touted as having the potential to prevent illness and contribute to health, I explore the overall construction of these foods through the lens of the first nation-wide campaign to lower Canadian women's cholesterol via a fortified margarine.

For this first article I employ content analysis and the sociology of diagnosis framework to argue that these advertisements create a false sense of urgency and empowerment surrounding high cholesterol for women, and reinforces the 'healthy lifestyle discourse' which individualizes and depoliticizes the responsibility for health. Using frame analysis as developed by Snow and Benford (1988) I also argue that Becel's<sup>®</sup> pro.activ<sup>®</sup> campaign constructs high cholesterol *as a disease*, rather than a risk factor for cardiovascular disease (CVD) such as heart disease; which simultaneously frightens and empowers women, while also selling the individual notion of personal (not collective) responsibility for health. While CVD disproportionately affects the poorest segments of the population (Clark, Duncan, Trevoy, Heath and Chan 2010), the Becel<sup>®</sup> campaign along with major Canadian health agencies highlights the middle-class initiatives for

change. While income and education have shown to have greater influence in CVD such as heart disease, a 'healthy lifestyle' (i.e. diet and exercise) is continually touted as the answer to modifying risk factors. I argue that promoting diet (i.e. consumption of functional foods) and lifestyle choices belies a complex intersectionality of gender, income and health inequities that cannot be easily modified by individuals, especially those in lower socio-economic groups.

**Article 2:** Jovanovic, Maja (2013). "Creating the 'dis-ease' of high cholesterol: a sociology of diagnosis case study analysis."

Publication Status: **Published.** *Social Science & Medicine.* (2013), 101:120-128.

Submission Process: Submitted to *Social Science & Medicine.* May 22, 2013. Accepted November 10, 2013. Available on line November 16, 2013 <http://dx.doi.org/10.1016/j.socscimed.2013.11.008>

Having argued that the Becel<sup>®</sup> pro.activ<sup>®</sup> margarine campaign constructs high cholesterol *as a disease* rather than a risk factor for heart disease and emphasizes the role of lifestyle and behaviour modification as the key to ameliorating high cholesterol, I then interview 49 women who are concerned with high cholesterol and heart disease to ascertain their views on functional foods and high cholesterol. I explore participants' understanding of the issue of high cholesterol as disease. More specifically, I examine where blame and responsibility is placed and see if these factors vary by class background. In this study, I wanted to know (1) how high cholesterol was understood by women; (2) whether they classified HC as a disease; (3) how blame and responsibility for HC was attributed; and (4) whether the findings differed by class. This reception analysis reveals five major findings:

- I. Women characterized high cholesterol as a disease, however, only if genetics were involved, and a lifestyle disease if genetics were not a factor.
- II. Blame and responsibility for high cholesterol was placed on women's poor lifestyle choices.
- III. High cholesterol was viewed as an individual responsibility.
- IV. Class reinforced the social reproduction of health.
- V. Women lacked an understanding of how the social determinants of health affect HC and heart disease.

I show that all women in my study take on the high cholesterol as disease framing that dominates in the public sphere, and that privileged women are much less likely to understand how lifestyle choices (that influence high cholesterol) are shaped by poverty and income inequality. I argue the sense of urgency surrounding high cholesterol is worrisome and the sole focus on lifestyle choice as both the cause and solution to high cholesterol is problematic.



**Article 3:** Jovanovic, Maja (2013). "Proactive Myopia: Women's discourses on the high cholesterol solution and functional foods".

Publication Status: **Revise and Resubmit.**

Submission Process: Submitted to *Sociology of Health & Illness* September 1, 2013. Received a *Revise & Resubmit* on December 4th, 2013.

Having examined the narratives behind the Becel<sup>®</sup> pro.activ<sup>®</sup> margarine campaign in article 1, and then how women understand the *cause* of high cholesterol to be in article 2, in this final article I examine the *solution* to women's high cholesterol problems. Specifically, this paper asks three main questions: (1) how do women conceptualize solutions to high cholesterol; (2) what are the corporate marketing and health promotion solutions to women's HC; and (3) how do women understand Becel's<sup>®</sup> high cholesterol solution tips? The findings reveal that:

- I. Women's perspectives drew on a notion of 'proactive myopia' (a belief in personal responsibility and accountability for health, personal choices and the power of health knowledge, at the myopic expense of social contextualization)
- II. Women believe the solution to high cholesterol is lifestyle choices and behaviour modifications and reject the notion of functional foods as part of the solution
- III. Women agree with the individualized healthy lifestyle focus of the Becel<sup>®</sup> prevention tips

### References for introduction

- ADA (American Dietetic Association). 2009. Position of the American Dietetic Association: Functional Foods. *Journal of the American Dietetic Association* April 2009: 735-746.
- Aiello, M. 2011. Functional Foods: Between New Consumption Trends and Renewed Perceptions of Health. *Italian Sociological Review*, 1(3): 45-58.
- Agriculture and Agri-Food Canada. 2009, December. *Consumer Trends: Functional Foods*. International Markets Bureau, Market Analysis Report.
- Blaxter, M. 2009. The Case of the Vanishing Patient? Image and experience. *Sociology of Health & Illness*, 31: 762-778.
- Blaxter, M. 1978. Diagnosis as category and process: the case of alcoholism, *Social Science and Medicine*, 47(8):1067-1076.
- Brown, P., Lyson, M., and Jenkins T. (2011). From diagnosis to social diagnosis. *Social Science & Medicine*, 73(6):939-943. DOI: 10.1016/j.socscimed.2011.05.031
- Cinnamon, B. 2009. *Results from the Functional Foods and Natural Health Products Survey - 2007*. Working Paper: Business Special Surveys and Technological Statistics Division Working Papers. Catalogue no. 88F0006X, no.1
- Clark, A.M., Duncan, A.S., Trevoy, J.E., Heath, S., and Chan, M. 2010. Healthy diet in Canadians of low socioeconomic status with coronary heart disease: Not just a matter of knowledge and choice. *Heart & Lung*. 40:156-163.
- Cornish, L.S. 2012. It's good for me: It has added fibre! An exploration of the role of different categories of functional foods in consumer diets. *Journal of Consumer Behaviour*, 11:292-302.

- Crawford, P., Brown, B., Nerlich, B., and Koteyko, N. 2010. Nutritional altruism and functional food: lay discourses on probiotics. *Sociology of Health and Illness* 32(5):745-760.
- Dragicevich, H., Williams, P., and Ridges, L. 2006. Survey of health claims for Australian foods made on Internet sites. *Nutrition & Dietetics* 63:139-147.
- Ebeling, M. 2011. 'Get with the Program!': Pharmaceutical marketing, symptom checklists and self-diagnosis. *Social Science & Medicine*, 73: 825-832.
- Frances, A. 2013. *Saving Normal: an insider's revolt against out-of-control psychiatric diagnosis, DSM-5, big pharma, and the medicalization of ordinary life*. NY: HarperCollins.
- Gardner, J., Dew, K., Stubbe, M., Dowell, T., & Macdonald, L. 2011. Patchwork diagnoses: The production of coherence, uncertainty, and manageable bodies. *Social Science & Medicine*, 73:843-850.
- Hailu, G., Boecker, A., Henson, S., and Cranfield, J. 2009. Consumer valuation of functional foods and nutraceuticals in Canada. A conjoint study using probiotics. *Appetite*, 52:257-265.
- Hasler, C. M. 2002. Functional Foods: Benefits, Concerns and Challenges—A Position Paper from the American Council on Science and Health. *Journal of Nutrition* 132: 3772-3781.
- Health Canada. 2010, February. *It's Your Health - Heart Disease - Heart Truth*. Catalogue # H13-7/72-2010E-PDF.
- Health Canada. 1998. Nutraceuticals/functional foods and health claims on foods". Therapeutic Products Programme and the Food Directorate from the Health Protection Branch, Section 2.2.

- Heasman, M., and Mellentin, J. 2001. *The Functional Foods Revolution: Healthy people, healthy profits?* London: Earthscan Publications Ltd.
- Herath, D., Cranfield, J., and Henson, S. 2008. Who consumes functional foods and nutraceuticals in Canada? Results of cluster analysis of the 2006 survey of *Canadians' Demand for Food Products Supporting Health and Wellness*. *Appetite*, 51:256-265.
- Hoel Felde, L.K. (2010). 'I take a small amount of the real product': elevated cholesterol and everyday medical reasoning in liminal space. *health: an for the Social Study of Health, Illness and Medicine Interdisciplinary Journal*. 15(6):604-619.
- Holm, L. 2003. Food Health Policies and Ethics: Lay Perspectives on Functional Foods. *Journal of Agricultural and Environmental Ethics*, 16:531-544.
- IFIC. 2007. (International Food Information Council Foundation). Consumer Attitudes toward Functional Foods/Foods for Health. <http://ific.org>
- IFT (Institute of Food Technologists). 2005. Expert Report: Functional Foods: Opportunities and Challenges. March 24<sup>th</sup> 2005. [www.ift.org](http://www.ift.org)
- Invest In Canada. 2012. *Functional Foods and Natural Health Products: Canada's Competitive Advantage*. Foreign Affairs and International Trade Canada. Ottawa, Canada. Catalogue #: FR5-38/19-2012E.
- Jaoho, M., and Niva, M. 2013. Lay Understandings of Functional Foods as Hybrids of Food and Medicine. *Food, Culture & Society*, 16(1): 43-63.
- Jones, P. J. 2002. Clinical Nutrition: 7. Functional foods—more than just nutrition. *CMAJ*, June 11 2002; 166(12): 1555-1563.
- Katan, M.R., and de Roos, N.M. 2004. Promises and Problems of Functional Foods. *Critical Review in Food Science and Nutrition*, 44:369-377.

- Kim, H. 2013. Functional foods and the biomedicalisation of everyday life: a case of germinated brown rice. *Sociology of Health & Illness*, 35(6):842-857.
- Korp, Peter. 2010. Problems of the Healthy Discourse. *Sociology Compass* 4(9):800-810.
- Korzen-Bohr, S., and O'Doherty Jensen, K. (2006). Heart disease among post-menopausal women: acceptability of functional foods as a preventive measure. *Appetite*, 46:152-163.
- Koteyko, N. 2010. Balancing the good, the bad and the better: A discursive perspective on probiotics and health eating. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, 14(6):585-602.
- Koteyko, N., and Nerlich, B. (2007). Multimodal Discourse Analysis of Probiotic Web Advertising. *The International Journal of Language Society and Culture*, 23:20-31.
- Koteyko, N. (2009). 'I am a very happy, lucky lady, and I am full of Vitality!' Analysis of promotional strategies on the websites of probiotic yoghurt producers. *Critical Discourse Studies*, 6(2):111-125.
- Landstrom, E., Koivisto-Hursti, U-L., and Magnusson, M. 2009. Functional foods compensate for an unhealthy lifestyle: Some Swedish consumers' impressions and perceived need of functional foods. *Appetite* 53:34-43.
- Lehenkari, J. (2003). On the borderline of food and drug: constructing credibility and markets for a functional food product. *Science as Culture*, 12(4):499-525).
- Lupton, D. 1996. *Food, the Body and the Self*. London: Sage.
- Jauho, M., and Niva, M. (2013). Lay understandings of functional foods as hybrids of food and medicine. *Food, Culture & Society*. 16(1):43-63.

Jutel, A. 2010. Framing disease: The example of female hypoactive sexual desire disorder.

*Social Science & Medicine*, 70: 1084-1090.

Jutel, A. 2006. The emergence of overweight as a disease entity: Measuring up normality",

*Social Science & Medicine*, 63:2268-2276.

Malla, S., Hobbs, J., Sogah, E.K., and Yeung, M.T. 2013, April. Assessing the functional foods and natural health products industry: a comparative overview and literature review.

*Canadian Agricultural Innovation and Regulation (CAIRN) Network*.

Moynihan, R. and Cassels A. 2005. *Selling Sickness: How the World's Biggest*

*Pharmaceutical Companies are Turning us all into Patients*. Toronto: Greystone Books.

NCABR - North Carolina Association for Biomedical Research. 2007. Issue Brief:

Nutraceuticals. July 2007. <http://www.aboutbioscience.org/pdfs/Nutraceuticals.pdf>

Accessed: November 1st 2010.

Nettleton, S. 2004. The emergence of e-scaped medicine, *Sociology*, 38(4):661-679.

Niva, M. (2007). 'All foods affect health': Understandings of functional foods and healthy eating among health-oriented Finns. *Appetite*, 48:384-393.

Ostberg, J. 2003. Functional Foods: A Health Simulacrum. *Advances in Consumer Research*, 30:129-134.

Payer, L. 1992. *Disease Mongers: How Doctors, Drug Companies and Insurers Are Making You Feel Sick*. New York: John Wiley & Sons, Inc.

PHAC - Public Health Agency of Canada. 2013. Chronic Disease Risk Factors.

PriceWaterhouseCoopers. 2009, August. Leveraging growth in the emerging functional foods industry: Trends and market opportunities.

- Schneider, T., and Davis, T. (2010). Advertising food in Australia: Between antinomies and gastro-anomy. *Consumption Markets & Culture*, 13(1):31-41.
- Scrinis, G. 2008. Invited commentary: Functional Foods or functionally marketed foods? A critique of, and alternatives to, the category of 'functional foods'. *Public Health Nutrition*, 11(5):541-545.
- Shahidi, F. 2009. Nutraceuticals and functional foods: whole foods versus processed Foods. *Trends in Food Science & Technology* 20: 376-387.
- Slater, C. I., Howe, A., McDaid, L., Blacklock, J., Lenaghan, E., & Shepstone, L. 2011. Risk, significance and biomedicalization of a new population: older women's experience of osteoporosis screening. *Social Science & Medicine*, 73: 808-815.
- Subirade, M. 2007. Report on Functional Foods November 2007. Prepared for Food Quality and Standards Service (AGNS), Food and Agriculture Organization of the United Nations (FAO). University of Laval, Quebec, Canada.
- Yin, R.K. 2009. *Case Study Research: Design and Methods* (4th Ed.). California: Sage.
- Wansink, B. 2005. *Marketing Nutrition: Soy, Functional Foods, Biotechnology, and Obesity*. Chicago: University of Illinois Press.
- Welch, G. H., Schwartz, L. M., and Woloshin, S. 2011. *Overdiagnosed: Making People Sick in the Pursuit of Health*, Boston: Beacon Press.
- Weiner, K. (2011). The subject of functional foods: accounts of using foods containing phytosterols. *Sociological Research online*, 16(2).
- Weiner, K. 2010. Configuring users of cholesterol lowering foods: A review of biomedical discourse. *Social Science & Medicine*, 71:1541-1547.

## CHAPTER 2: LITERATURE REVIEW

### Introduction

In this literature review chapter I discuss three main areas of literature that have influenced this dissertation. These include **functional foods** (history of FF; consumer acceptance and criticisms of FF); **food discourses** (healthism; health promotion; neoliberalism; and food corporations & advertising); **gender and food** (gender and carework; women and healthy eating; and women and advertising).

#### *1. Functional Foods*

##### *1A. Background of Functional Foods*

Functional foods extend the health benefits of a food beyond the basic nutritional content. For instance, whole grain oats or soluble fibre-enriched cereals and Omega-3 eggs to lower cholesterol, or Probiotics in yogurt to improve bacterial culture and boost the immune system (BDA 2006). According to Health Canada (1998), a functional food is "...similar to a conventional food, but demonstrates physiological benefits and/or reduces the risk of chronic diseases." Functional foods have exploded in popularity, with the global market for these products expected to exceed US \$130 billion by 2015 (Invest in Canada 2012). Canada is a major destination for functional food product development, and the Canadian market for these foods is currently valued at \$4.9 billion, with sales expected to reach \$5.8 billion by 2015 (AGR 2011). In fact, the number of companies dealing specifically in functional foods have risen to 689 in 2007, with over 703 specific functional food product lines (Cinnamon 2009). In 2010, Canadians spent approximately US\$140 per capita on functional food products (AGR 2011).



Table 1. Number of Canadian Companies dealing in functional foods in Canada.

<b>Year</b>	<b>Number of companies</b>	<b>% of total food companies</b>
<b>2002</b>	294	3.4%
<b>2005</b>	389	4.6%
<b>2007</b>	689	8.1%

Source: Malla, Hobbs, Sogah & Yeung 2013.

Functional foods arose for a number of reasons, one of which was consumer demand for healthier food products (Katon and De Roos 2004). Other reasons include the growing realization of a link between diet and health; an aging population; increased concerns regarding rising health care costs; the challenge of meeting daily dietary guidelines for nutrition; a more competitive food market with lower margins; technological advances in nutritional sciences; and food regulation changes, --all of which helped propel FF research and development (Malla , Hobbs, Sogah and Yeung 2013; AGR 2009; ADA 2009; EUFIC n.d.). Put more succinctly, functional foods arose as a way to "...improve health and reduce disease risk through, mainly prevention" (Shahidi 2009:376). The significance of functional foods is evident not only in the growing consumer market but in the increased numbers of products gaining approval for health claims (Malla et al, 2013; Canadian Food Inspection Agency 2011.)

Functional foods are also a more expensive food product and this added expense is claimed to be warranted based on the added functional benefit of the food (e.g. the added component of plant sterols to a food which helps lower cholesterol.) (Katan and De Roos 2004). These novel foods are used not just to meet nutritional and dietary guidelines but instead, are promoted and marketed specifically to prevent certain diseases and to promote overall health and wellness (for a unique case study on how credibility is constructed when producing and marketing a new FF, see Lehenkari's 2003 research on Benecol a Finnish functional food product

designed to lower cholesterol). Therein lies the unique role of FF, as food is not merely promoted for growth, development and caloric needs, but is framed in such a way as to promote health and self-regulation and reduce disease risk profiles (Scrinis 2008a; Scrinis 2008b). Table 2 summarizes the factors currently driving the functional food market.

Table 2. Factors driving the functional food market

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**Factors driving the functional food market**

- Demographic changes due to aging population
- Concerns regarding escalating health care costs
- Consumer recognition of link between diet & health
- Technological changes in nutritional science
- Food regulation changes
- Increased consumer interest in health & nutrition
- Competitive food market with low profit margins for conventional food products

Source: ADA 2009; Jones 2002

Table 3 displays some examples of the benefits of certain functional food components.

Table 3. Potential Benefits of Functional Food Components

Functional Component	Product or Source	Potential Health Benefits
<b>Lycopene</b>	Tomato products	Reduce the risk of prostate cancer
<b>Insoluble Fibre</b>	Wheat Bran	Reduces risk of breast or colon cancer
<b>Soluble Fibre</b>	Psyllium	Reduces risk of cardiovascular disease. Protects against heart disease and some cancers; lowers LFL and total cholesterol.
<b>Long chain Omega-3 Fatty Acids-DHA/EPA</b>	Salmon and other fish oils	Reduce risk of cardiovascular disease; improve mental, visual functions.
<b>Catechins</b>	Tea	Neutralize free radicals; reduce risk of cancer.
<b>Lactobacillus</b>	Yogurt	Improve quality of intestinal micro flora; gastrointestinal health.
<b>Plant Sterols (stanol ester)</b>	Corn, soy, wheat, wood oils	Lower blood cholesterol levels by inhibiting cholesterol absorption
<b>Isoflavones</b>	Soybeans and soy-based foods	Menopause symptoms, such as hot flashes. Protects against heart disease and some cancers; lowers LDL and total cholesterol.

Source: AGR 2009; Health Canada 2010; IFIC 2007

There are currently nine disease risk reduction health claims that are allowed on food products in Canada. Table 4 describes these nine claims.

Table 4. List of disease-risk reduction claims permissible on food products in Canada

<b>1. Low Sodium &amp; High Potassium</b>	<b>Linked to reduced risk of high blood pressure</b>
<b>2. Adequate vitamin D and Calcium intake</b>	Linked to reduced risk of osteoporosis
<b>3. A diet low in saturated &amp; trans fatty acids</b>	Linked to reduced risk of heart disease
<b>4. Consumption of fruit &amp; vegetables</b>	Linked to reduced risk of some cancers
<b>5. Maxima fermentable carbohydrates in gum</b>	Linked to reduced risk of dental caries or cavities
<b>6. Phytosterols</b>	Linked to lowering cholesterol
<b>7. Oat fibre</b>	Linked to reduced risk of heart disease
<b>8. Barley products</b>	Linked to blood cholesterol lowering
<b>9. Unsaturated fats</b>	Linked to blood cholesterol lowering

Source: (Malla, Hobbs, Kofi-Sogah and Yeung 2013)

### *1B. Consumer acceptance of functional foods*

Functional foods can be found in virtually every food category, from spreads to juices, cereals, water, yogurt, cookies, pasta sauces and more. Since the recognition of the connection between diet and health is widespread, the role of nutrition as a key player in disease prevention and well promotion is spurring the functional food movement (IFIC 2008; Heasman & Mellentin 2001; Niva 2007; Siro, Kapolna, Kapolna and Lugasi 2008). Consumer acceptance is paramount for sustained growth in the market. However, consumer acceptance is predicated on a variety of health concerns; (1) how the health-risk is communicated; and (2) familiarity with functional foods or their functionalized ingredients. Consumer knowledge of functional foods and their benefits seems to be limited (IFIC 2002). Research shows that functional food purchases are

based on taste, price, quality, convenience, and trustworthiness of the stated health claims (Siro et al 2008). European consumers are less trusting and more critical of functional foods than North American consumers (Siro et al, 2008; Subirade 2007), except in Finland where consumers view FF in more positive terms (see Bech-Larsen and Grunert 2003; Urala and Lahteenmaki 2004) (Siro et al, 2008; Makela and Niva 2002). Swedish consumers appear to be skeptical of FF, citing the confusion and ambiguity involved in what FF are and the actual functionalized ingredients they contain (Landstrom , Hursti and Magnusson 2009). Swedish consumers are distrustful of FF and see them as unnecessary when more realistic lifestyle changes such as diet and exercise should suffice. Swedish consumers worry that FF will be an easy way to compensate for an unhealthy lifestyle and should only be considered after all healthy lifestyle strategies have been exhausted (Landstrom , Hursti and Magnusson 2009). Danish research on FF users found three distinct consumer segments. These included: (1) the *common* (moderately healthy); (2) the *idealists* (the healthy segment who are motivated to learn about healthy eating); and (3) the *pragmatists* (the unhealthy segment) (Chrysochou, Askegaard, Grunert, and Kristensen 2010).

The first research on Canadian preferences for FF focused on price and health benefits, willingness to pay extra for FF and the various types of production methods such as genetic modification (Larue, West, Gendron, & Lambert 2004; West, Gendron, Larue, & Lambert 2002). Recent Canadian research on FF consumers found two distinct clusters of consumers, based on their attitudes, motivation and knowledge of FF products (Herath, Cranfield and Henson 2008). Canadian consumers who are more likely to purchase FF products consist of older people, who are less educated, live in rural areas, have lower income brackets and a higher concern for health and illness. Conversely, the second cluster of consumers are younger, more educated, live in

urban dwellings, have higher incomes and show less concern with potential health problems and a higher knowledge about chronic diseases (Herath, Cranfield & Henson 2008).

European research shows that consumers willingness to try FF depends on numerous issues such as taste, pleasure, familiarity and knowledge of FF, and the healthiness of the product (Urala and Lahteenmaki 2004). The strongest predictors of FF consumption are perceived reward and confidence in the product. Consumers feel rewarded for taking responsibility for their health and consuming products to proactively prevent diseases, which coincides with an increase in the neoliberal ideas of individualized responsibility for health (Ibid). Functional foods provide a way for consumers to feel good about making the "correct" dietary choices, giving them a sense of control over their health and a positive impression management to others that they are healthy (Urala & Lahteenmaki 2003). In their later research Urala & Lahteenmaki (2007) found four dimensions of FF use: reward, necessity, confidence and safety in the product. However, the strongest predictors of FF use were reward and necessity, with the acceptance of FF approaching the level of conventional food products in Finland specifically (Urala & Lahteenmaki 2007). In Korzen-Bohr and O'Doherty Jensen's (2006) work on heart disease and FF acceptability among women, they also found a reluctance to incorporate FF as a way to ward off heart disease risk. Women in their study showed a lack of interest in FF. These FF products were not seen as a distinct product category in and of themselves, and therefore occupied a nebulous position between food and medicine.

The lack of confidence in certain functional foods can be complicated by the mass quantity of options in the grocery store shelves, each purporting to lower cholesterol levels or boost intestinal immunity. Consumers are confused as to what is a reliable and trustworthy product and what is simply a gimmick. Nestle (2007) distinguishes between *nutritionally rich*

*functional foods* (foods with a proven ability to produce desired health effects such as Probiotic yogurts and cholesterol-lowering margarines), --and *nutritionally poor functional foods* such as fortified cookies and cereals that contain little nutritional value yet claim to prevent disease (see Jones 2002). In fact, Cornish (2012) found that consumers could not effectively distinguish between nutritionally rich and poor functional foods. Both types of FF were perceived as equally beneficial which can lead to the over-consumption of nutrition poor foods 'masquerading' as healthy foods. This overwhelming focus on one key ingredient to functionalize a food and make it healthier is a by-product what Scrinis (2008a; 2008b) terms *nutritionism*. I now turn to a discussion of nutritionism.

### *1C. Criticisms of Functional foods*

The ideology of *nutritionism* was first conceptualized by Gyorgy Scrinis (2002; 2008a; 2008b; 2013). According to Scrinis (2008b) nutritionism occurs when "food is understood in terms of its nutrient profile and at the expense of other ways of understanding and contextualizing the relationship between food and the body" (p.544). Nutritionism proposes a new way of understanding food that encourages a "nutritionally reductive approach to food" where by a key ingredient (e.g. plant sterols in margarine) has moved from the "...periphery to occupy a more central position in people's consciousness" (Scrinis 2008a:39). Nutritionism focuses on the individual nutrient-level components within a food while obscuring the broader social, cultural, political and sensual contexts of food. Nutritionism therefore, is the process whereby a preoccupation with specific nutrients supersedes an understanding and engagement with food, the body and the environment. Functional foods have the potential to draw attention

away from what a balanced diet is, what 'healthy eating' means and raises questions about how nutrition information is communicated to consumers (Holm 2003).

Rather than examining the entire food or the food production involved, consumers are now inundated with information and marketing that highlights only one ingredient while simultaneously downplaying everything else. Nutritionism can lead to what Marion Nestle (2007) refers to as "nutritional confusion". This reductionist approach to food and food products focuses on specific nutrients that claim to functionalize a produce, while obscuring the greater context of the food (i.e. how the food was made; who made the food; and under what conditions was the food made), and has "replaced and at times contradicted other ways of understanding food and dietary health" (Scrinis 2008b:545). This food level reductionism leads to foods that are easily vilified (i.e. too much trans fats), or fetishized (margine that lowers cholesterol!). The reliance on food as a "magic bullet" blurs the margins between food and medicine and can lead to an increase in the medicalization of food, whereby certain foods are treated as wonder/super foods with internal disease-fighting properties.

*Nutritional tinkering* (Scrinis 2002) creates a food hierarchy whereby certain foods are either glamorized or demonized. The more processed and 'tinkered' a food is, equates to greater opportunity to lay health claims, thereby increasing the landscape of functional foods to solve our nutritional deficiencies. Distinctions between natural and artificial foods are blurred leading to *everyday nutritionism* (Scrinis 2008a) which is unconsciously absorbed expressions by the lay public (such as, "nuts are fattening," "milk is good for your bones.") Nutritionism then gets marketed, co-opted and potentially manipulated by the food industry to advertise their functionalized foods. This *nutritional facade* (Scrinis 2008a) and food marketing allows products to be advertised as "high in fibre" or "low in sugar", intentionally focusing on a very limited and



specific ingredient while diverting attention from the overall quality of food. This has been referred to as *nutri-washing* by Michele Simon (2006). Nutritionism as a concept is also similar to Jane Dixon's (2009) concept of '*nutritionalism*' which she defines as the "enumeration, enrichment and promotion of both single foods and national food supplies in terms of a nutrient values profile." (p.321). Dixon's work looks more closely at the relationship between capitalism and food regimes through the lens of nutritionalism.

Nutritionism simultaneously disempowers and confuses consumers with a litany of nutrition-related marketed information, while also creating a more self-aware and seemingly empowered and active consumer eager to translate information into product purchases. In short, nutritionism contributes to the manufacturing or construction of (false) needs. Specifically, individuals are led to believe they need and require specific nutrients for a healthy life, which necessitates the creation of functional foods. Nutritionism assumes that consumers are up-to-date on the latest nutritional research and will incorporate the appropriate changes to their diet. Most importantly, nutritionism may lead to a *nutritionalized self* (Scrinis 2008a) and encourages people to self-regulate, self-empower and self-help.

The assumption is that all types of functional products are beneficial, and their consumption is encouraged for all, yet this "myth of nutritional precision" (Scrinis 2013) exaggerates the agreement in the scientific community surrounding the benefits of functional foods. For instance, although Becel<sup>®</sup> proactiv<sup>®</sup> margarine with plant sterols can lower your cholesterol by 10% in 3 weeks, it is unclear if everyone is a viable candidate for such cholesterol-lowering products. The Health Council of Netherlands states that they "discourage the use of plant sterols by consumers who do not benefit from a cholesterol-lowering effect, especially children and pregnant women." (Health Council of Netherlands 2001) Yet, functional

foods are increasingly being targeted to women (who are more often the ones making grocery and food prep decisions) (see AFC 2011:6). Because of the premium price that functional food products charge, the marketing is streamlined specifically to certain demographics such as women and an aging population (cholesterol lowering products), and parents concerned with their children's health (Omega-3 DHA-enriched products for brain development). Since FF are more expensive, and are considered premium products in the grocery stores, they have much higher margins and larger profits than conventional non-FF products and represent a new venue for food corporations to maximize profit in a highly competitive and saturated food market (Siro et al, 2008).

Other criticisms of functional foods include that they lend themselves to a medicalization of food along with a reductionist approach to eating (Lawrence and Germov 2008). Dietitians have criticized functional foods as part of a larger exploitation of lax food advertising rules (Katan and De Roos 2004) that attempt to reposition junk food as healthy food which simply increases consumer confusion (Nestle 2007). Part of these aforementioned criticisms have their roots in food regimes and the role of healthism, health promotion and the ideology of neoliberalism and self-responsibility for health, to which I now turn.

## **2. Food Discourses**

### *2A. Healthism*

Healthism, coined by Crawford (1980:365) "...situates the problem of health and disease at the level of the individual." The problem, cause and solution of health issues are all found to reside within the individual and can lead to an increased preoccupation with personal health (which may be a middle-class affliction) (Crawford 1980; 2006). Nutritionism plays a part in this new level of health consciousness whereby people's concerns, anxieties and worries about their diets, nutritional intake and overall health are in constant flux. Nutritionism, like healthism, promotes the ideal that change is within the capabilities of individuals and that people can choose health, control their diets and make better lifestyle choices.

This new type of medicalized thinking about health can subconsciously alter people's behavior, making their new dietary choices seem normal (Crawford 1980). The solution to health, dietary and nutritional woes is localized both within the individual and through the functionalized food market, not in the "...reordering of the social, political and environmental circumstances in which the individual exists" (Crawford 1980:373). Healthism is reductionist and the extreme focus on personal responsibility is challenging because it assumes individual accountability is sufficient enough to enlist changes, while verging on victim-blaming and ignoring the broader social and political contexts that structure behavior and through patterns (Crawford 1980).

The failure to be healthy can be seen as complicit, somehow shirking one's obligation to maintain good health. To this end, all inappropriate behaviors (i.e. the wrong food choices) can be medicalized, instilling a moral duty to uphold one's level of health, which is tied to victim-

blaming and creates a circular ideology which continues to reinforce individual level focus and responsibility. In this hyper health conscious state of mind, "...healthy behaviors become the paradigm for good living" (Crawford 1980:380). Healthism can potentially create a divide between people where they are at once alienated and alienating by their specific choice of foods. A hierarchy quickly merges where all things health and food related are appropriately slotted and personal responsibility and accountability for health is paramount and omnipresent (Crawford 1980).

Acknowledging that the social cannot be taken out of the individual and that there is always meaning behind people's behaviors, healthism then fails to understand the socially constructed contexts of people's lives and "...promotes a new moralism" (Crawford 1980:385). Being healthy, pursuing health and consuming the correct healthy foods (i.e. functional foods) is viewed as salvation, the pursuit of the good life and are qualities embedded within the "modern identity" (Crawford 2006:402). Healthism turns the body into a project or task to effectively demonstrate discipline and self-restraint which masquerades into intolerance and judgment of others who are not as health conscious or disciplined (Crawford 2006). Healthism can be seen in Canadian health discourses such as health promotion which I will now discuss.

## *2B. Health promotion*

Health promotion as originally documented in the Ottawa Charter for Health Promotion (WHO 1986) is

...the process of enabling people to increase control over, and to improve improve their health...to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life...health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being.

Health promotion developed out of the new rise of public health education beginning with the LaLonde Report (1974) which was the first major document by a developed country to address factors that influence health beyond the availability of health care services, to include human biology, the environment (physical and social), and lifestyles. Some of these health-influencing factors would later be identified as the social determinants of health (Low and Theriault 2008; O'Neill, Pederson, Rootman, & Dupere 2007). However, it was the inclusion of the 'lifestyle' factor in the Lalonde report that marked the obsessive focus on personal behaviors and choices that would appear in health promotion programs and policies in Canada for decades (Legowski & McKay 2000). The antithesis of the lifestyle focus is the idea of the social determinants of health, which figured dominantly in the next two health promotion documents.

The Ottawa Charter for Health Promotion (WHO 1986), and the Epp Report (Epp 1986), both highlighted how important community health care and a reduction in inequity was for health promotion. The Epp report in particular emphasized the links between health and socio-economic status and is reiterated by countless other research (Navarro and Shi 2001; Wilkinson and Pickett 2010). In fact, socio-economic status is only one of many prerequisites for health, the others being peace, shelter, education, food, social justice and equity (WHO 1986).

Contemporary research on the social determinants of health (SDOH) include fourteen factors which can be seen in Table 5 (Mikkonen & Raphael 2010). The importance of the SDOH cannot be overstated, they include the:

economic and social conditions that shape the health of individuals, communities, and jurisdictions as a whole. They are the primary determinants of whether individuals stay healthy or become ill. Social determinants of health determine the extent to which a person possesses the physical, social, and personal resources to identify and achieve personal aspirations, satisfy needs, and cope with the environment (Raphael 2009:2).

Table 5. List of the Social Determinants of Health

- **Aboriginal Status**
- **Disability Status**
- **Early Life**
- **Education**
- **Employment and working conditions**
- **Food security**
- **Gender**
- **Health care services**
- **Housing**
- **Income and its distribution**
- **Race**
- **Social safety net**
- **Social exclusion**
- **Unemployment and employment security**

Source: Mikkonen, J. & Raphael, D. (2010).

Although Canada consistently produces internationally well-received public health documents and "...may be regarded as a world leader in health promotion...there is a large gap between the international reputation of the federal government and the actual practice of health promotion provincially." (O'Neill, Pederson, Rootman & Dupere 2007:8) By the mid 1990s there was a marked shift towards a more conservative economic politics (i.e. neoliberalism, which will be discussed in the next section), with the dismantling of the welfare state, social services and federal responsibility for health and inequity (Coburn 2000; Coburn and Coburn 2007). Health promotion then turned into a "set of discourses and practices concerned with individual behaviours, attitudes, dispositions or lifestyles choices said to effect health," (Crawford 2000:219) which Korp (2010) labels the "healthy lifestyle discourse." Health policies and guidelines previously centering on prevention shifted to the promotion of health through lifestyle choices such as diet and exercise. Unfortunately, this individual-level reduction ignores the broader SDOH while overestimating people's capability for change (Korp 2010; Low and Theriault 2008).

### *2C. Neoliberalism and the role of the Healthy lifestyle discourse*

The premise that personal and behavioural characteristics are modifiable is the basis for the healthy lifestyle discourse and also a key concept of neoliberal restructuring of the economy which has shown to increase health inequalities (Beckfield and Kreiger 2009; Wilkinson and Pickett 2010). Neoliberalism is premised upon three key tenants: individualism; privatization and deregulation; and decentralization (McGregor 2001). Specifically, neoliberal health policies emphasize: (a) decentralization to regional or local health sectors; (b) cost-cutting measures with

increased alternative market choices; (c) increased reliance on insurance-based health care services ; (d) privatization of care; (e) transformation of patients into consumers; (f) increased personal responsibility for health; (g) an emphasis on lifestyle and behavioral changes; (h) short-term policy initiatives for long-term health promotion problems; and (i) the autonomous nature of individuals (Coburn 2001; Collins and Hayes 2007; McGregor 2001; Navarro 2009).

Critics argue neoliberal health policies produce a one-size-fits-all solution whereby all problems benefit from neoliberal restructuring. Neoliberalism also ignores the complex relationships between the economy, and the social, political, geographic, and cultural contexts of people's lives. Neoliberal economic policy *is* neoliberal social, political and health policy, one does not exist without the other. Lastly, neoliberalism conflates economic growth with individual growth (Coburn 2000; Coburn 2001). Both healthism and nutritionism it can be argued are "...vehicles for the implementation of neoliberalism...[and have] enabled a neo-liberal form of self-governance, in which proper citizens are expected to govern their own choices and everyday practices in conformity with the latest health and nutrition information..." (Brady, Gingras & Power 2012:124). Neoliberalism both produces the problem of high cholesterol (via marketing of cholesterol-lowering Ff) and by promoting the solution as individually-based. This neo-liberal focus on individual health however, is deeply embedded with the notions of the healthy lifestyle discourse and has drawn the ire of many.

There are several problems with the healthy lifestyle discourse whereby "...individual level 'choices' become the primary means of altering behaviours and health related outcomes." (Korp 2010:800). Sociologists have criticized this new singular focus on lifestyle and behaviour modification for; its lack of contextualization of the broader social determinants of health; victim blaming; a "lack of theoretical grounding" (Korp 2010:801); its ineffectiveness in ameliorating



health problems; the stigmatization of the ill; the prejudices and discrimination against people who cannot maintain good health; the racial/ethnic and gender dynamics involved in health inequities; the disregard of the cultural context of television and brand advertising; the trivialization of the difficulty people have in making long-term changes in their lives; and lastly, for excusing government responsibility by assigning premature blame upon individuals for their poor eating and exercise habits (Alvaro, Jackson, Kork, McHugh, Hughes, Chircop and Lyons 2011; Minkler 1999; Raphael and Farrell 2002).

Lifestyle and behavior modification's particular focus clouds the difference between life conduct (life choices) and life chances, and the "probability of realizing those choices" (Korp 2010:803). This type of focus has shifted away from the *symptoms* of an individual to the *behavior* and lifestyle habits of the person (Nettleton 1997:316). New health promotion (i.e. the healthy lifestyle discourse) is the theoretical lens through which risks are now framed. Nettleton (1997) writes "...it is also evident that so called lifestyle or behavioral factors such as the holy trinity of risks--diet, smoking and exercise, receive a disproportionate amount of attention." (p.319) However, risk is never an individual experience, it is always a collective risk spread across populations, but the emphasis on personal risk is part of the downstream approach to health care management and prevention. Downstream health policies focus on the superficial individual-based solutions, while upstream policies are akin to the social determinants of health and includes a contextualization of people's lives (McKinlay 1994). However, what the healthy lifestyle discourse encourages is the belief that individuals can radically alter their health status through the holy trinity, and secondly, that the responsibility for health and prevention of illness is individualized and personalized (Nettleton 1997:320; Prior 1995:140).

2D. *Food corporations and food advertising*

As mentioned earlier, functional foods are being promoted as vehicles for wellness, not only for nutrition and development, but more importantly as a way to promote proactive health and self-regulation. The decisions surrounding food choices are rife with confusion and anxiety entangled in issues of food safety (Pollan 2008), risk (Lupton 1996), and concerns with various cardiovascular diseases. Dietitians, nutritionists, scientists and food corporations all give conflicting advice about what to eat, when and how much. In fact Nestle (2006) named her latest book "*What to eat?*" because the average consumer is still so confused about healthy eating. Fishler (1980) terms this state of confusion "gastro-anomy" as a way to describe the inherent increased responsibility on individuals for food choices at the same time that they are unqualified to make an informed decision, which simply adds to their anxiety. The other aspect of "gastro-anomy" is the current 'loosening' of social connections, with modern citizenry "...atomized, isolated, less and less constrained and sustained by [social] networks..." (p. 948).

Because of the increasing confusion surrounding what to eat, consumers look to experts (Fishler 1980). However, all this choice, and 'hyperchoice' as Mick, Broniarczyk & Haidt 2004 argue, leads to a veiled sense of empowerment. Since in the end, consumers rely on nutritionists, scientists, and experts in the field for guidance on food and diet issues. This overwhelming amount of choice has been termed *restless consumption* by Lezaun and Schneider (2012) to describe being in "a permanent situation of choice--a state of limited knowledge, unlimited desire, elastic rules of action and a constant obligation to choose." (p.386). This *restless consumption* is reinforced (or even manufactured) by the collusion of food corporations and nutritional experts (and in the case of Becel<sup>®</sup> proactiv<sup>®</sup> margarine, health agencies such as the Heart and Stroke Foundation)--who come together to "covertly recommend specific brands of

products." (Schneider and Davis 2010:37) They label this collusion the *diet-making-nexus* (DMN), a term borrowed from the original diets-making-complex (DMC) by Dixon and Banwell (2004) to draw attention to the power players and key interests involved in promoting specific food products. Specifically, they define DMN as the "...many instances of the industry joining hands with scientific research and with nutritional experts." (Schneider and Davis 2010:36). The diets-making-complex "...creates and fulfils the consumer's need for normative regulation in food consumption...[where] risk and anxiety in food consumption, as well as the solutions offered [are all] by the same nexus of groups." (Schneider and Davis 2010:40) This notion of powerful corporations with vested interests in promoting certain high-margin foods is disconcerting and certainly worthy of future research.

However, it is worth noting that some research on lay understandings of health (not specifically on FF) show that some consumers are increasingly skeptical of expert/scientific opinions of food products specifically because of "double agendas" (the need to secure funding to publish and ulterior motives) along with a narrow focus on the conceptualization of what health means (very biomedical approach to health) (Holm 2003:539). Similar to Holm's study (2003), Niva (2007) found that interpretations of functional foods and healthy eating were a complex entanglement of notions of self-responsibility for health, and the acknowledgment that nutritional advice is at times contradictory and that there are daily constraints involved in healthy eating that FF cannot address. This parallels research done by Weiner (2010; 2011) on the various interpretations of FF and phytosterols; and the competing conditions of medical regimes and everyday life struggles with elevated cholesterol (Hoel Felde 2010); and the numerous ways consumers appropriate functional foods through a food-medicine lens (Jauho and Niva (2013).

The continuous reinforcement of the link between health and nutrition or diet and disease is what Petr Skrabenek (1994) refers to as "*lifestylism*". This is the view that "...most diseases are the result of unhealthy habits or behaviors, which in turn goes hand in hand with 'healthism', defined as government's coercion to establish norms of health and attempts to impose norms of a healthy lifestyle." (Koteyko and Nerlich 2007:28) These authors argue that the functional food landscape has created a new 'moral imperative' (Petersen and Lupton 1996) or trend, whereby consumers have "...more responsibility to seek knowledge about benefits rather than just avoid risks...[and] there is an emphasis on consuming foods which contain a range of or a maximal level of nutrients." (Koteyko and Nerlich 2007: 28) No longer about consciously proactively avoiding bad ingredients (i.e. trans fats), it is more important to seek out foods with added components to maximize nutritional intakes (such as Omega-3's and plant sterols). Consumption of these highly visible health foods with added functionalized components heralds to others that you are healthy and in control of your life. This sense of control has more to do with proper dietary supplementation through FF use (to help lower cholesterol or improve immunity), rather than control the previously vilified nutritional demons of fat, sugar and salt (Koteyko and Nerlich 2007).

This is all a way of showing that "food and eating are central to our subjectivity, or our sense of self" (Lupton 1996:1). Part of this tied to the way "...health-related values are built into..." (Koteyko 2009:121) functional food products and their advertising. Koteyko and Nerlich (2007) describe functional food advertising (using a case study of probiotics) as one of "deontic modality" (p.24) which focuses on issues of obligation and permission to entice consumers into purchasing these novel foods. This type of obligation to purchase premium functional food products tends to "create artificial needs of potential consumers" (Koteyko and Nerlich 2007:24),

which then "...make frequent use of the imperative...in the form of a voice which appears to be speaking personally to the reader" (Goddard 2002:24 as cited in Koteyko and Nerlich 2007:24).

While advertising is a form of "persuasive communication" in general (Russell and Lane 2001:22), functional food advertising in particular communicates in a certain way. FF ads tend to follow a script of product introduction, validation of the science behind the product and advice on healthy living (Koteyko and Nerlich 2007; Kotekho 2009). Research done on probiotic web advertisements shows a similar focus on 'self-care and self-improvement' that characterizes cholesterol lowering products. The friendly bacteria found in probiotic products and the need to improve gut immunity is framed in comparable ways to the imperative to decrease cholesterol via plant sterols in margarine both of which use a self-help regime. According to Rimke (2000), self-help is based "...upon notions such as choice, autonomy and freedom, [and] relies upon the principle of individuality and entails self-modification and 'improvement'" (p.62). These notions of self-help, deeply rooted in the neoliberal ideology are prominently displayed in functional food advertising (i.e. *"Make Becel<sup>®</sup> Proactiv<sup>®</sup> part of a healthy lifestyle"*) which employ 'empowerment techniques' (*"It's easy to add it to your daily routine"*). As Rimke (2000) notes, these empowerment techniques rest on the idea that the individual is the sole "...reservoir of power...suggesting an intense accountability, responsibility, and sense of obligation that can be enlisted for choices and decisions" (p.64).

As Davis and Schneider (2008) note, the regimes of self-help/self-care are aptly employed alongside the regimes of science (as referred to earlier as the diets-making-complex). In their study of fifty years of advertising in a Australian women's journal, the authors find a "shifting responsibility of care using science as an ally and industry as a facilitator" (Davis and Schneider 2008:52). Interestingly, they also note the increasing pressure directed to self-care, but

specifically found responsibility for care was solicited to mothers and housewives as caregivers for their families. I now turn to a discussion of gender and the consumption of healthy and/or functional foods.

### **3. Gender & Food**

Feminist scholarship highlights how women's relationship with food is complicated and layered with notions of gendered ideologies, neoliberalism and food panics (e.g. fat panic, obesity panic, high cholesterol panic, gluten-free panic, peanut panics, childhood allergy panics, etc.). As Brady, Gingras and Power (2012) note, "...food is never just about nutrition but carries multiple levels of emotional, social, cultural, and political meanings, intertwined with taste, memory, tradition and ritual." (p.122) There is a much needed feminist perspective on the study of food that is newly emerging and showcases how 'personal is the political' in terms of women and foodwork (Brady, Gingras and Power 2012).

Closely tied to the feminist perspectives on food and food work is fat studies. Fat studies is a body of literature that resists the moral panic surrounding fatness and obesity as national epidemics (Guthman 2011; Guthman and Dupuis 2006; Kirkland 2011; LeBesco 2011). We can apply a critical fat studies/obesity studies perspective to the current cholesterol panic that is encouraged (and I argue even manufactured) by functional foods, food corporations and health care agencies, such as the Heart and Stroke Foundation. Just as the public health arguments against fatness/obesity can be seen as moralizing, so too can the arguments that the cholesterol campaign make (e.g. *Death is waiting for you* campaign by the Heart and Stroke Foundation of Canada). The public health arguments against high cholesterol as the preeminent risk factor is

objectifying and marginalizes the very people most affected (lower income people). The women most likely to be afflicted with high cholesterol and heart disease are marked by low-income and yet they are also admonished for not readily adopting health-promoting behaviors. Kirkland (2011) argues that "well meant efforts to improve poor women's living conditions at a collective level often end up as intrusive, moralizing and punitive" (p. 464), and this dissertation is an example of these collective attempts to educate and inform the masses.

Fat studies is a unique lens which asks different types of questions related to women, food and foodwork. Such as, why is high cholesterol such a problem now? Why is it so problematic for women in particular? Why are we so fixated on high cholesterol as the most important risk factor for heart disease? Why are the SDOH so poorly understood by Canadians? Lastly, why is it assumed that low SES individuals do not know either what healthy eating is or how to achieve it?

### *3A. Gender and care work*

There are inherent contradictions involved in gendered foodwork. We know for instance, that women continue to bear responsibility for homecare, childcare, eldercare and foodcare (Ochs and Kremer-Sadlik 2013). The contradictions involved in gendered foodcare specifically, shows that while women carry sole responsibility for all types and manners of foodwork, they hold little control or authority in actual agri-food systems (corporate, policy, production, industry, etc.) (Allen and Sachs 2007). Another contradiction is that "...although women bear responsibility for nourishing others they often do not adequately nourish themselves" (Allen and

Sachs 2007:1). These contradictions and complexities involved in gendered food politics have led some to call for a feminist food studies field (Avakian and Haber 2006).

The feminist perspective calls attention to the unrecognized, under-valued and unpaid foodwork that women do that 'feed the family', both nutritionally, economically and socially (DeVault 1991). Foodwork literature draws attention to the ways gender-based oppression exists at every level within the food system from production and distribution to the micro dynamics of food prep (Brady, Gingras and Power 2012:126). Feminist scholars have argued against the dichotomous ideology of private-versus-public-spheres that highlights the inherent gendered processes involved in foodwork (Brady, Gingras and Power 2012). This ideology relegates men to the public realm that is typically associated with "...independence, power, paid employment and financial support of the family" (p.127). Whereas women are relegated to the private sphere, associated with notions of "...dependence, vulnerability, caregiving and feeding the family (Brady, Gingras and Power 2012: 127).

Kemmer (2000) argues that foodwork within this private realm is not conflict free and that women experience both internal conflicts with themselves (Allen and Sachs 2007:10; Luxton 1980; Purcell 1996:177) and external conflicts in terms of family and relationship tensions (Hoshschild 1989:11). These conflicts over the workload involved with the emotional burden of caring has led to increased time pressures on women who attempt to 'do it all'. The resolution is found in greater purchases of processed and convenience foods or in the hiring out of house/food work. This transfer of food/house/care work usually means marginalized visible minority women are hired to do the labor of upper-middle class white women which simply reproduces gender inequalities of labor (Duffy 2005; Julier 2006). This reproduction of gender inequalities is just one of many future research areas to be included in foodwork research.



The future of foodwork Kemmer (2000) argues, should also include men, for their current exclusion both "...undermines men's contribution and reinforces the identity of cooking as feminine." (p.330) Lastly, Kemmer (2000) argues that women's gains in both the paid workforce, education and the delay of childbirth has intensified pressure on women's traditional home/food/child care roles that should not be under-emphasized (p.330). However, Canadian research by Beagan, Chapman, D'Sylva and Bassett (2009) documents the unchanging statistics of the gendered division of labor. Even though men are doing more work within the home, women continue to hold primary responsibility for house and food work. Interestingly, family members generally perceive this division as fair. Their study highlights how gender roles remain stubbornly bifurcated into traditional private-public realms despite changes in education and employment trends for Canadian women.

### *3B. Women and healthy eating*

Healthy eating messages are rampant in Canadian media from functional food advertisements to the Heart and Stroke Foundation to the Canadian Diabetes Association. Despite fifty years of remarkably consistent nutritional advice on healthy eating that encourages us to eat more fruits and vegetables and less meats and dairy (i.e. a more plant based diet), people are still confused about how to eat in a healthy manner (Campbell and Campbell 2006; Robbins 2007; Willcox, Willcox and Suzuki 2001). Yet the idea that knowledge about nutrition and diet can be easily translated into healthy behaviors and different lifestyles choices continues to be a long-held belief (Wansink 2005).

In general, the healthy eating discourse constructs certain foods as healthy (fruits and vegetables, whole grains) and others as unhealthy (trans fats, cookies, etc). This dominant healthy lifestyle discourse in Western society is bi-directional however. So, while this discourse is prevalent and influences what and how individuals eat, it is also true that individuals exert agency in either accepting or rejecting the healthy lifestyle discourse (Beagan and Chapman 2012). In Chapman and Beagan's (2003) research they found three different perspectives on healthy eating. The first is "mainstream" (fruits and vegetables consumption, low-fat meats). The second is "traditional" (more natural, unprocessed foods and home-cooked meals). The last is the "alternative" which focuses on the avoiding pollutants and chemical toxins in food production and consumption.

These findings highlight the multiple and diverse understandings of what healthy eating means. For an excellent review of qualitative contribution to the healthy eating discourse see Bisogni, Jastran, Seligson, and Thompson (2012). Canadian research shows that the 'mainstream' notions of the healthy eating discourse that Chapman and Beagan (2003) note are in fact "...widely known and understood in Canada, among adults, youth, and children as young as 11 years." (Beagan and Chapman 2012:139). The difficulty lies not in understanding how to eat healthy or what healthy foods are, but in having the material resources to do so (Clark, Duncan, Trevoy, Heath, and Chan 2011; Power 2005). The messages of 'eat less' that generally stem from health/nutrition professionals is in direct contrast to the onslaught of eat/drink-more initiatives of the food industry, whose entire business model is predicated on people's over consumption of food products (Beagan and Chapman 2012). Accordingly, whenever healthy lifestyle discourses affect food sales, the industry response has been to increase health claims and alter foods via

fortification and supplementation. These health claims in generally have a gendered aspect to them.

While food practices are generally understood as gendered, the healthy eating discourse and women in particular, revolves around the idea of *responsibility* for the family's nutrition. This includes educating children about nutrition and feeding them accordingly. Within families, the role of enforcer of healthy eating is usually women. It is generally expected that women will educate, prepare, nourish and advise family members on all issues related to diet and nutrition (Rjstovski-Slijepcevic, Chapman and Beagan 2010). This notion of familial responsibility for health is akin to DeVault's (1991) research on 'feeding the family'. It becomes a way for women to construct their role and identity within families as both women and mothers.

The contemporary idea of what a good mother is goes beyond simply providing sustenance, but has morphed into what Susan Douglas (2004) has termed 'new momism' or intensive motherhood. Whereby mothers are expected to not only put their children's needs above their own (wants), but to *anticipate* their children's needs. This entails taking on the role of mother, dietitian, nutritionist, exercise expert, allergist, health researcher and cook, --all of which are not assumed by husbands or fathers. This concept of new momism is exemplified in Crawford, Brown, Nerlich and Koteyko's (2010) work on FF discourses. Their research shows that participants, especially women drew on an interpretive repertoire they call '*nutritional altruism*'. This concept was used to explain how food preparation, including the inclusion of probiotics was beneficial to their children. Nutritional altruism was a way for mothers to showcase their carework and nutritional responsibilities in getting family members to optimize their health through the intake of FF. Women in this study drew upon the gendered neoliberal moral imperatives of responsibility for self, but more importantly, as mothers, to be responsible

for others. The sense of obligation was seen in how mothers educated themselves on the benefits of probiotics, the diligence required to shop for the 'right' probiotics among a grocery store shelf of dozens. The conscious and conscientious decision to purchase probiotics for the family was seen as part of a mother's inherent carework. The issues related to healthy eating are made more complex by the intersections of class.

Being able to follow the mainstream ideals of healthy eating have long been known to be influenced by social class and income. High income Canadians are generally able to adhere to the healthy lifestyle and healthy eating discourses (Ricciuto and Tarasuk 2007). Research has consistently shown that low-income people do not lack the dietary knowledge to eat well, but instead do not have sufficient income or resources to ensure they do (Darman and Drewnowski 2008). While low income individuals usually suffer from food deserts (Walker, Keane and Burke 2010), high income individuals are a part of a growing trend of cultural omnivores. This concept of cultural omnivores showcases how elites can be demarcated from others by their preferences in high-brow food aesthetics and appreciations (Veenstra 2010). Chapman and Wu's (2013) research confirms class differences not only in taste and preferences, but bodily types also. Women with the highest incomes had the healthiest diets (high rates of fruit, vegetable and whole grain consumption), and were better able to cultivate the ideal body type. These women had the luxury of resources (time, money and health care coverage). Conversely, women at the bottom of the income ladder suffered more lifestyle conditions (such as diabetes) and had the unhealthiest diets that were necessarily constrained by income.

### *3C. Women and advertising*

Research relating to women and food advertising focuses on women's complex relationship with and obsession with food (Bordo 2003). Pursuing the thin ideal or the ultra-healthy body showcases the growing dissatisfaction with one's body (Allaz, Berstein, Rouget, Arch and Morabia 1998). This contradictory food environment that values thinness yet actively promotes the gluttonous consumption of food products in order to maintain health and ward off disease contributes to this bodily discontent. Paquette and Raine's (2004) research reveals that the media's influence upon women's body images is mediated by external social networks including their partners, other women and health care professionals. These networks reinforce thin ideals and perpetuate bodily discontent. Advertising has long been blamed for women's poor body images (Bordo 2003), however Paquette and Raine (2004) argue that it is not solely the media that can exert this negative influence over women. It is the dual impact of both external influencers (spouses, health professionals), alongside women's internal contexts (how they internalize and interpret the meanings of others comments on their bodies), that makes the biggest impact.

Literature on food advertising tends to focus on the key areas of unhealthy foods (i.e. junk foods) and healthy foods (Nestle 2007; Batada, Seitz, Wootan, and Story 2008). Increasingly however, food advertising has focused on the latter,--the promotion of foods with health and nutrition claims (i.e. reduced cholesterol, increased immunity). This type of food advertising is what Zwier (2009) calls the medicalization of food advertising, or foods being represented as medicine. These advertisements increasingly feature functional foods which have the ability to "...render images of the body and mind as malfunctioning, unless remedied by the use of the advertized food product." (Zwier 2009:113) For instance, not only will your

cholesterol levels decrease with the inclusion of Becel<sup>®</sup> proactiv<sup>®</sup> margarine in your everyday life, but your cholesterol levels and therefore your heart disease risk could increase without this product. Allen and Sachs (2007), in line with Paquette and Raine's (2004) research of both internal and external constraints, argue, that "women's body images are disciplined, not by force, but through their own and others critical gaze and surveillance." (p.3)

de Solier (2013) argues that lifestyle media in particular (media that focuses on self-improvement) "...operates as a neoliberal technology of the self." (p.34) Where the emphasis is on the potentiality of transformation, of *who* consumers can be. This self-actualization process is aided by the inherent consumption of material objects such as food products. Such commodity consumption is promoted via the idea that a particular food product will improve you, your life and your health (de Solier 2013). In line with this thought, Bordo (2003) argues that the postmodern body is fed on "fantasies of rearranging, transforming and correcting limitless improvement and change..." (p.xvi). Every advertised image of a woman is now digitally altered to unattainable versions of perfection. This onslaught of digital modification of every image women see is "...teaching us how to see, filtered, smoothed, polished, softened, sharpened, re-arranged...teaching us what to expect from the flesh and blood." (p.xviii)

Bordo's (2003) work reminds us of the importance of taking cultural imagery seriously, that "...images ...are never just pictures...[but the] ads spreads powerful lessons in how to see and evaluate bodies, but also they offer fantasies of safety, self...they speak about how to become what the dominant culture admires." (p.xxii). Just as a "size zero is a status symbol" (Bordo 2003:xxvii), so too is the neoliberal ideal of a fit, healthy body. Images that Bordo calls homogenized representations that "normalize...against which the self continually measures, judges, disciplines and corrects itself." (p.25) This new way of viewing the body as capable of

great transformations through a self-improvement project highlights the changing "discourse that is gradually changing our conception and experience of our bodies, a discourse that encourages us to imagine the possibilities." (Bordo 2003:39) In the words of Becel<sup>®</sup> pro.activ<sup>®</sup>, advertisements, it is just about "*making an easy adjustment*" through the possibilities of dietary and lifestyle changes (Becel Figure 3 and 6).

This concludes the literature review section of this dissertation. After the references, I turn to the main research questions and the research design of the study.

## References for literature review

- ADA. (2009). Position of the American Dietetic Association: Functional Foods. *Journal of the American Dietetic Association*. 109(4): 735-746.
- AGR. (2011). Agriculture and Agri-Food Canada. Health and Wellness Trends for Canada and the World. October 2011.
- AGR. (2009). Agriculture and Agri-Food Canada What are Functional Foods?
- Allaz, A.F., Berstein, M., Rouget, P., Arch, M., & Morabia, A. (1998). Body weight preoccupation in middle-aged and ageing women: a general population survey. *International Journal of Eating Disorders*. 23:287-294.
- Allen, P., and Sachs, C. (2007). Women and food chains: the gendered politics of food. *International Journal of Sociology of Food and Agriculture*, 15(1):1-23.
- Alvaro, C., Jackson, L.A., Kirk, S., McHugh, T.L., Hughes, J., Chircop, A., & Lyons, R.F. (2011). Moving governmental policies beyond a focus on individual lifestyle: Some insights from complexity and critical theories. *Health Promotion International*, 26(1): 91-99. doi: 10.1093/heapro/daq052
- Avakian, A.V., and Haber, B. (2006). Feminist food studies: a brief history. In A.V. Avakian and B. Haber *From Betty Crocker to Feminist Food Studies: Critical Perspectives on Women and Food* (Eds.), (Pp. 1-26). Amherst, MA: University of Massachusetts Press.



- Batada, A., Seitz, M.D., Wootan, M.G., and Story, M. (2008). Nine out of 10 food advertisements shown during Saturday morning children's television programming are for foods high in fat, sodium, or added sugars, or low in nutrients. *Journal of the American Dietetic Association*, 108:673-678.
- BDA. (2006). Functional Foods. British Dietetic Association. [www.bda.uk.com](http://www.bda.uk.com)
- Beagan, B., and Chapman, G. (2012). Healthy eating/constructing self. In A. Winson, J. Sumner, and M. Koc (Eds.), *Critical Perspectives in Food Studies*, (Pp. 136-154). Toronto, ON: Oxford University Press Canada.
- Beagan, B., Chapman, G., D'Sylva, A., and Bassett, B.R. (2008). It's just easier for me to do it: rationalizing the family division of foodwork. *Sociology*, 42(4):653-672.
- Bech-Larsen, T., Grunert, K.G. (2003). The perceived healthiness of functional foods--A conjoint study of Danish, Finnish and American consumers' perception of functional foods. *Appetite*, 40:9-14.
- Beckfield, J., and Kreiger, N. Epi + demos + cracy: A Critical Review of Empirical Research Linking Political Systems and Priorities to the Magnitude of Health Inequities. *Epidemiologic Reviews* [Internet]. 2009;31(1):152-177.
- Bisogni, C.A., Jastran, M., Seligson, M., and Thompson, A. (2012). How people interpret healthy eating: contributions of qualitative research. *Journal of Nutrition Education and Behavior*, 44(4):281-301.
- Bordo, S. (2003). *Unbearable Weight: feminism, Western culture, and the body, 10th edition.* Berkeley, CA: University of California Press.

- Bordo, S. (2002). Hunger as ideology. In David Bartholomae and Anthony Petrosky (Eds.), *Ways of reading: an anthology for writers. 6th edition.* (Pp. 138-174). Boston, MA: Bedford St. Martin's Press.
- Brady, J., Gingras, J., and Power, E. (2012). Still Hungry: a feminist perspective on food, foodwork, the body, and food studies. In A. Winson, J. Sumner, and M. Koc (Eds.), *Critical Perspectives in Food Studies*, (Pp. 122-135). Toronto, ON: Oxford University Press Canada.
- Campbell, T.C. and Campbell, T.M. (2006). *The China Study: The Most Comprehensive Study of Nutrition Ever Conducted and the Startling Implications for Diet, Weight Loss and Long-term Health.* Dallas, Texas: Benbella Books.
- Canadian Food Inspection Agency. (2011). Guide to Food Labelling and Food Advertising. Chapter 8 - Health Claims. September 21, 2011.  
<http://www.inspection.gc.ca/english/fssa/labeti/guide/ch8e.shtml>
- Chapman, G.E., and Beagan, B. (2003). Women's perspectives on nutrition, health and breast cancer. *J Nutr Educ Behav*, 35(3):135-141.
- Chapman, G.E., and Wu, LT. (2013). Food, class, and health: the role of the perceived body in the social reproduction of health. *Health Communication*, 28(4):341-350.
- Chrysochou, P., Askegaard, S., Grunert, K.G., and Kristensen, D.B. (2010). Social discourses of healthy eating: a market segmentation approach. *Appetite*, 55:288-297.

- Cinnamon, B. 2009. *Results from the Functional Foods and Natural Health Products Survey - 2007*. Working Paper: Business Special Surveys and Technological Statistics Division Working Papers. Catalogue no. 88F0006X, no.1
- Clark, A.M., Duncan, A.S., Trevoy, J.E., Heath, S., and Chan, M. (2011). Healthy diet in Canadians of low socioeconomic status with coronary heart disease: not just a matter of knowledge and choice. *Heart and Lung*, 40:156-163.
- Coburn, D., and Coburn, E. (2007). Health and health inequalities in a neo-liberal global world. In (Pp. 13-35).D. McIntyre, Di, & G. Mooney (Eds.), *The Economics of Health Equity*. 1<sup>st</sup> ed. Cambridge: Cambridge University Press, 2007. *Cambridge Books Online*. Web. 08 March 2014. <http://dx.doi.org/10.1017/CBO9780511544460>
- Coburn, D. (2001). Health, health care, and neo-liberalism, in P. Armstrong, H. Armstrong and D. Coburn (eds.) *Unhealthy Times: The Political Economy of Health and Care in Canada*, pp.45-65, Toronto: Oxford University Press.
- Coburn, D. (2000). Income inequality, social cohesion and the health status of populations: the role of neo-liberalism. *Social Science and Medicine*, 51 (1): 35-46.
- Collins, P., and Hayes, M. (2007). Twenty years since Ottawa and Epp: Researchers' reflections on challenges, gains, and future prospects for reducing health inequities in Canada. *Health Promotion International*, 22(4):337-345.
- Cornish, L.S. (2012). It's good for me: It has added fibre! An exploration of the role of different categories of functional foods in consumer diets. *Journal of Consumer Behavior*, 11:292-302.

- Counihan, C.M. (1998). What does it mean to be fat, thin, and female in the United States: a review essay. In Carol. M. Counihan and Steven L. Kaplan (Eds.), *Food and Gender: identity and power*. (Pp. 145-162). Amsterdam, Netherlands: Harwood Academic Publishers.
- Crawford, P., Brown, B., Nerlich, B., and Kotevko, N. (2010). Nutritional altruism and functional food: lay discourses on probiotics. *Sociology of Health and Illness*. 32(5):745-760.
- Crawford, R. (2006). Health as a meaningful social practice. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, 10(4):401-402.
- Crawford, R. (2000). The ritual of health promotion. P. 219-235 in *Health, Medicine and Society: Key Theories, Future Agendas*, edited by C. J. Williams, J. Gabe, and M. Calman. London, UK: Routledge.
- Crawford, R. (1980). Healthism and the medicalization of everyday life. *International Journal of Health Services*, 10(3):365-389.
- Darmon, N., and Drewnowski, A. (2008). Does social class predict diet quality? *American Journal of Clinical Nutrition*, 87:1107-1117.
- Davis, T., and Schneider, T. (2008). Making sense of health foods: a historical analysis of food advertising in the Australian women's weekly in the three post-war decades. In *Interdisciplinary Perspectives in Food Studies, Revised edition*. Toronto, ON: McGraw Hill Ryerson Limited.

- de Solier, I. (2013). *Food and the self: consumption, production and material culture*. New York, NY: Bloomsbury.
- DeVault, M.L. (1991). *Feeding the family: the social organization of caring as gendered work*. Chicago, IL: University of Chicago Press.
- Dixon, J. (2009). From the imperial to the empty calorie: how nutrition relations underpin food regime transitions. *Agricultural and Human Values*, 26:321-333.
- Dixon, J., and Banwell, C. (2004). Re-embedding trust: unravelling the construction of modern diets. *Critical Public Health*, 14(2):117131.
- Duffy, M. (2005). Reproducing labor inequalities: challenges from feminists conceptualizing care at the intersections of gender, race and class. *Gender & Society*, 19(1):66-82.
- Douglas, S.J. (2004). *The Mommy Myth: the idealization of motherhood and how it has undermined women*. New York, NY: Free Press.
- Epp, J. (1986). *Achieving Health for all: A framework for health promotion*. Ottawa: Health and Welfare Canada.
- Erickson, R.J. (2005). Why emotion work matters: sex, gender, and the division of household labor. *Journal of Marriage and Family* 67:337-351.
- EUFIC. (n.d.) Backgrounder on Functional Foods. European Food Information Council.  
[www.eufic.org](http://www.eufic.org)
- Fishler, C. (1980). Food Habits, social change and the nature/culture dilemma. *Social Science Information*, 19(6):937-953.

Goddard, A. (2002). *The Language of Advertising*. London/New York: Routledge.

Guthman, J. (2011). *Weighing IN: Obesity, food justice, and the limits of capitalism*. Berkeley, CA: University of California Press.

Guthman, J., and Dupuis, M. (2006). Embodying Neoliberalism: economy, culture and the politics of fat. *Environment & Planning D: Society and Space*.24:427-448.

Hailu, G., Boecker, A., Henson, S., and Cranfield, J. (2009). Consumer valuation of functional foods and nutraceuticals in Canada. A conjoint study using probiotics. *Appetite*, 52:257-265.

Health Canada. 2010, February. *It's Your Health - Heart Disease - Heart Truth*. Catalogue # H13-7/72-2010E-PDF.

Health Canada. 1998. Nutraceuticals/functional foods and health claims on foods". Therapeutic Products Programme and the Food Directorate from the Health Protection Branch, Section 2.2.

Health Council of the Netherlands. (2001). Committee on the Safety Assessment of Novel Foods Phytosterols (2). Publication no. 2001104VNV.2001

Heasman, M., & Mellentin, J. (2001). *The functional foods revolution. Healthy people, healthy profits?* London and Sterling: Earthscan Publications Ltd.

Herath, D., Cranfield, J., and Henson, S. (2008). Who consumes functional foods and nutraceuticals in Canada? Results of cluster analysis of the 2006 survey of *Canadians' Demand for Food Products Supporting Health and Wellness*. *Appetite*, 51:256-265.

- Hochschild, A. (1989). *The Second Shift: working parents and the revolution at home*. London, UK: Judy Piatkus.
- Hoel Felde, L.K. (2010). 'I take a small amount of the real product': elevated cholesterol and everyday medical reasoning in liminal space. *health: a journal for the Social Study of Health, Illness and Medicine Interdisciplinary Journal*. 15(6):604-619.
- Holm, L. (2003). Food health policies and ethics: lay perspectives on functional foods. *Journal of Agricultural and Environmental Ethics*, 16:531-544.
- IFIC. (2008). *Food and health survey: Consumer attitudes toward food, nutrition, and health*. International Food Information Council. [www.ific.org](http://www.ific.org)
- IFIC. (2007). *Functional Foods*. International Food Information Council Foundation. February 2007. <http://ific.org>
- IFIC. (2002). The consumer view on functional foods: Yesterday and today. *Food Insight*, (May/June).
- IFIC. (2000). *Functional foods. Attitudinal research*. Washington, DC: International Food Information Council Foundation, IFIC.
- Invest In Canada. 2012. *Functional Foods and Natural Health Products: Canada's Competitive Advantage*. Foreign Affairs and International Trade Canada. Ottawa, Canada. Catalogue #: FR5-38/19-2012E.
- Jauho, M., and Niva, M. (2013). Lay understandings of functional foods as hybrids of food and medicine. *Food, Culture & Society*. 16(1):43-63.

- Jones, P. J. (2002). Clinical nutrition: Functional foods --more than just nutrition. *Canadian Medical Association Journal*. 166(12): 1555-1563.
- Julier, A. (2006). Hiding gender and race in the discourse of commercial food consumption. In A.V. Avakian, and B. Haber (Eds.), *From Betty Crocker to feminist food studies: critical perspectives on women and food*. (Pp.27-46). Amherst, MA: University of Massachusetts Press.
- Katan, M.B., and De Roos, N.M. (2004). Promises and Problems of Functional Foods. *Critical Reviews in Food Science and Nutrition* 44:369-377.
- Kemmer, D. (2000). Tradition and change in domestic roles and food preparation. *Sociology*, 34(2):323-333.
- Kirkland, A. (2011). The environmental account for obesity: a case for feminist skepticism, *Signs: Journal of Women in Culture and Society*, 36(2):463-485.
- Korp, P. (2010). Problems of the healthy lifestyle discourse. *Sociology Compass* 4(9): 800-810.  
DOI: 10.1111/j.1751-9020.2010.00313.x
- Korzen-Bohr, S., and O'Doherty Jensen, K. (2006). Heart disease among post-menopausal women: acceptability of functional foods as a preventive measure. *Appetite*, 46:152-163.
- Koteyko, N., and Nerlich, B. (2007). Multimodal Discourse Analysis of Probiotic Web Advertising. *The International Journal of Language Society and Culture*, 23:20-31.
- Koteyko, N. (2009). 'I am a very happy, lucky lady, and I am full of Vitality!' Analysis of promotional strategies on the websites of probiotic yoghurt producers. *Critical Discourse Studies*, 6(2):111-125.



- Lalonde, M. (1974). *A new perspective on the health of Canadians*. Ottawa: Government of Canada.
- Landstrom, E., Hursti, UK., and Magnusson, M. (2009). Functional foods compensate for an unhealthy lifestyle. Some Swedish consumers' impressions and perceived need of functional foods. *Appetite*, 54:34-43.
- Lawrence, M. and Germov J. (2008). Functional Foods and Public Health Nutrition Policy. In: Germov, J., and Williams, L. (eds) *A Sociology of Food and Nutrition: The Social Appetite Third Edition*. South Melbourne: Oxford University Press, pp. 147-175.
- Larue, B., West, G.E., Gendron, C., & Lambert, R. (2004). Consumer response to functional foods produced by conventional, organic, or genetic manipulation. *Agribusiness*, 20:155-166.
- LeBesco, K. (2011). Neoliberalism, public health, and the moral perils of fatness. *Critical Public Health*. 21(2): 153-164. DOI: 10.1080/09581596.2010.529422
- Legowski, B., & McKay, L. (2000). *Health beyond healthcare: twenty-five years of federal health policy development*. CPRN Discussion Paper no. H04. Ottawa: Canadian Policy Research Networks.
- Lehenkari, J. (2003). On the borderline of food and drug: constructing credibility and markets for a functional food product. *Science as Culture*, 12(4):499-525).
- Lezaun, J., and Schneider, T. (2012). Endless qualifications, restless consumption: the governance of novel foods in Europe. *Science as Culture*, 21(3):365-391.

- Low, J. and Theriault, L. (2008). Health promotion policy in Canada: lessons forgotten, lessons still to learn. *Health Promotion International*, 23(2): 200-206.
- Lupton, D. (1996). *Food, the Body and the Self*. London: SAGE Publications.
- Luxton, M. (1980). *More than a labor of love: three generations of women's work in the home*. Toronto: The Women's Press.
- Malla, S., Hobbs, J., Sogah, E.K., and Yeung, M.T. 2013, April. Assessing the functional foods and natural health products industry: a comparative overview and literature review. *Canadian Agricultural Innovation and Regulation (CAIRN) Network*.
- Makela, J., & Niva, M. (2002). *Changing views of healthy eating: Cultural acceptability of functional foods in Finland*. Nordisk Sociologkongress, Iceland: Reykjavic.
- McGregor, S.L.T. (2001). Neoliberalism and health care. *International Journal of Consumer Studies - Special edition on 'Consumers and Health'*, 25(2), 82-89.
- McKinlay, J. B. (1994). "A Case for Refocusing Upstream: The Political Economy of Illness" in Conrad, P. (ed). *The Sociology of Health & Illness: Critical Perspectives, 7th edition*. New York: Worth Publishers. Pp. 551-561.
- Mick, DG., Broniarczyk, S., and Haidt, J. (2004). Choose, choose, choose, choose, choose choose, choose: Emerging and prospective research on the deleterious effects of living in consumer hyperchoice. *Journal of Business Ethics*, 52(2):207-211.
- Mikkonen, J. & Raphael, D. (2010). *Social Determinants of Health: The Canadian Facts*. Retrieved from [www.thecanadianfacts.org](http://www.thecanadianfacts.org)

- Minkler, M. (1999). Personal Responsibility for Health? a Review of the Arguments and Evidence at Century's End. *Health Education and Behavior*, 26(1): 121-141.  
doi: 10.1177/109019819902600110
- Navarro, V. (2009). What do we mean by the social determinants of health? *Global Health Promotion*, 16(1): 5-16. DOI: 10.1177/1757975908100746
- Navarro, V., and Shi, L. (2001). The political context of social inequities and health. *Social Science & Medicine*, 52: 481-491.
- Nestle, M. (2007). *Food Politics: how the food industry influences nutrition and health. Expanded and revised edition*. Berkeley, California: University of California Press.
- Nestle, M. (2006). *What to Eat?* New York, NY: North Point Press.
- Nettleton, S. (1997). 'Surveillance, Health Promotion and the Formation of a Risk Identity' in M. Sidell, L. Jones, J. Katz and A. Peberdy (eds.) *Debates and Dilemmas in Promoting Health: a Reader*. London, Macmillan. (pp.314-324).
- Niva, M. (2007). 'All foods affect health': Understandings of functional foods and healthy eating among health-oriented Finns. *Appetite*, 48:384-393.
- Ochs, E., and Kremer-Sadlik, T. (2013). *Fast-forward family: home, work, and relationships in middle-class America*. Berkeley, CA: University of California Press.
- O'Neill, M., Pederson, A., Rootman, I., & Dupere, S. (Eds.). (2007). *Health Promotion in Canada: Critical perspectives*. Toronto: Canadian Scholar's Press.

- Paquette, MC., and Raine, K. (2004). Sociocultural context of women's body image. *Social Science & Medicine*, 59:1047-1058.
- Petersen, A., and Lupton, D. (1996). *The New Public Health: Health and Self in the Age of Risk*. Sydney: Allen & Unwin.
- Pollan, M. (2008). In *Defense of Food: the Myth of Nutrition and the Pleasures of Eating*. London: Allen Lane & Penguin Books.
- Power, E.M. (2005). The determinants of healthy eating among low-income Canadians. *Canadian Journal of Public Health*, 96:S37-S42.
- Prior, L. (1999). Chance and modernity: accidents as a public health problem. In R. Bunton, S. Nettleton, and R. Burrows (eds.) *The sociology of health promotion: Critical analyses of consumption, lifestyle and risk*. London, UK: Routledge. Chapter 11, pp. 133-144.
- Purcell, K. (1996). Researching value-loaded issues: the management of food in households. In L. Morris and E. Stina Lyon (Eds.), *Gender Relations in public and private*. London, UK: Macmillan.
- Raphael, D. (2009). *Social Determinants of Health 2nd edition*. Toronto, ON: Canadian Scholars Press.
- Raphael, D., and Farrell, E. S. (2002). Beyond medicine and lifestyle: Addressing the societal determinants of cardiovascular disease in North America. *Leadership in Health Services*, 15: 1-5.

- Ricciuto, L., and Tarasuk, V.S. (2007). An examination of income-related disparities in the nutritional quality of food selections among Canadian households from 1986-2001. *Social Science & Medicine*, 64:186-198.
- Rimke, H.M. (2000). Governing citizens through self-help literature. *Cultural Studies*, 14(1):61-78.
- Ristovski-Slijepsevic, S., and Chapman, G.E. (2005). Integration and individuality in healthy eating meanings, values, and approaches of childless dual earner couples. *Journal of Human Nutrition and Dietetics*, 18:301-319.
- Robbins, J. (2007). *Healthy at 100: The Scientifically Proven Secrets of the World's Healthiest and Longest-Lived Peoples*. New York, NY: Ballantine Books.
- Russell, J.T., and Lane, W.R. (2001). *Kleppner's Advertising Procedure 15th edition*. New York: Prentice Hall.
- Schneider, T., and Davis, T. (2010). Advertising food in Australia: Between antinomies and gastro-anomy. *Consumption Markets & Culture*, 13(1):31-41.
- Scrinis, G. (2013). *Nutritionism: the science and politics of dietary advice*. New York, NY: Columbia University Press.
- Scrinis, G. (2008a). On the ideology of Nutritionism. *Gastronomica*, 8(3):39-48.
- Scrinis, G. (2008b). Invited Commentary: Functional foods or functionally marketed foods? A critique of, and alternatives to, the category of 'functional foods'. *Public Health Nutrition*, 11(5): 541-545.

- Scrinis, G. (2002). Sorry, Marge. *Meanjin*, 61(4):108-116.
- Shahidi, F. (2009). Nutraceuticals and functional foods: whole *versus* processed foods. *Trends in Food Science & Technology*, 20:376-387.
- Simon, M. (2006). *Appetite for profit: how the food industry undermines our health and how to fight back*. New York, NY: Nation Books.
- Siro, I., Kapolna, E., Kapolna, B., Lugasi, A. (2008). Functional Food. Product development, marketing and consumer acceptance --A review. *Appetite*, 51:456-467.
- Skrabanek, P. (1994). *The death of humane medicine and the rise of coercive healthism*. Bury Saint Edmunds, England: Social Affairs Unit, St. Edmundsbury Press.
- Subirade, M. (2007). *Report on Functional Foods*. Food and Agriculture Organization of the United Nations (FAO). November.
- Urala, N., and Lahteenmaki, L. (2007). Consumers' changing attitudes towards functional foods. *Food Quality and Preference*, 18:1-12.
- Urala, N., and Lahteenmaki, L. (2004). Attitudes behind consumers' willingness to use functional foods. *Food Quality and Preference* 15:793-803.
- Urala, N., and Lahteenmaki, L. (2003). Reasons behind consumers' functional food choices. *Nutrition & Food Science*, 33:148-158.
- Veenstra, G. (2010). Culture and class in Canada. *Canadian Journal of Sociology*, 35:355-373.
- Walker, R.E., Keane, C.R., and Burke, J.G. (2010). Disparities and access to healthy food in the United States: a review of food deserts literature. *Health & Place*, 16:876-884.

- Wansink, B. (2005). *Marketing nutrition: soy, functional foods, biotechnology and obesity*. Chicago, IL: University of Illinois Press.
- Weiner, K. (2011). The subject of functional foods: accounts of using foods containing phytosterols. *Sociological Research online*, 16(2).
- Weiner, K. (2010). Configuring users of cholesterol lowering foods: a review of biomedical discourse. *Social Science & Medicine*, 71:1541-1547.
- West, G.E., Gendron, C., Larue, B., & Lambert, R. (2002). Consumers' valuation of functional properties of foods: results from a Canada-wide survey. *Canadian Journal of Agricultural Economics*, 50:541-558.
- WHO. (1986). *Ottawa Charter for Health Promotion*. Ottawa: World Health Organization, Health and Welfare Canada, Canadian Public Health Association.
- Wilkinson, R., and Pickett, J. (2010). *The Spirit Level: Why Equality is Better for Everyone*. London, UK: Penguin Books.
- Willcox, B.J., Willcox, D.C., and Suzuki, M. (2001). *The Okinawa Program: How the world's longest-lived people achieve everlasting health --and how you can too*. New York, NY: Clarkson Potter Publishing.
- Zwier, S. (2009). Medicalization of food advertising: nutrition and health claims in magazine food advertisements 1990-2008. *Social Science & Medicine*, 53:109-113.

## CHAPTER 3: RESEARCH DESIGN

### *Methodology*

For this dissertation I want to contribute to the discussions about how the sociology of diagnosis, women's health, nutrition and health promotion activities can all be examined together. To facilitate this process a case study approach was used. As Creswell (2007) notes there is disagreement over whether or not a case study is simply a choice of what is studied versus a strategy of inquiry, a research strategy or methodology. However, I employ Creswell's (2007) definition and use the case study as a methodology and "product of the inquiry" (Creswell 2007: 73). Accordingly, case studies can be defined as a qualitative approach exploring "...a bounded system (a *case*) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving **multiple sources of information** (e.g. observations, interviews, audiovisual materials and documents and reports), and reports a case **description** and case-based themes" (Creswell 2007:73). Of the three variations of case studies (e.g. single, collective/multiple or intrinsic case study), this study focuses on collective or multiple case studies, whereby one concern (e.g. *Is high cholesterol a disease?*) is selected and multiple cases are used to illustrate the issue (e.g. *Content and document analysis via the Becel<sup>®</sup> pro.activ<sup>®</sup> advertising campaign, and the Heart and Stroke Foundation of Canada's reports; interviews with women concerned with cholesterol; reports and documentation about the rise of functional foods directed towards cholesterol; and the rise and popularity of the Lipitor drug*).

The case study method was ideal for illustrating different perspectives on the 'problem' of high cholesterol for women (e.g. As a corporate marketing campaign with functional foods, as a claim supported by various health agencies, and as an issue participants provided feedback on). In particular, I focused on a "*holistic analysis of the entire case*" by providing a detailed history of



the case and its rise in prominence, a chronology of events and then a discussion of how the issue of high cholesterol is understood including the affective and embodied dimensions of women's everyday reactions (Creswell 2007:75).

My research is also interdisciplinary and speaks to the fields of sociology (e.g. sociology of health, illness and medicine and the sociology of diagnosis), food studies (e.g. food and nutrition discourses, food politics, food narratives in advertising and popular culture, and food consumption and identity), and health studies (e.g. health promotion and health policy). As a sociologist by-training some might argue that it is better served to remain faithful to one discipline, (especially when trying to publish in discipline-specific journals or applying for faculty positions within sociology departments);--however, I truly believe that the interdisciplinary nature of my educational background, my research and data analysis strengthens my work and my 'sociological lens' by allowing me to gain experience and breadth in a variety of health and food-related issues.

### ***Methods***

The qualitative methods of content analysis and semi-structured in-depth interviews was the most appropriate option for my research for several reasons and is based on Creswell's (2007) work. First, the *natural setting* involved in qualitative methods facilitates a face-to-face interaction with participants and when dealing with sensitive health and illness type questions, establishing rapport and trust is paramount and this was made possible through the use of in-depth interviews. Secondly, on a *personal note*, I quite enjoy talking to people and learning about their experiences and beliefs on a variety of topics. I find myself constantly discovering new research possibilities when out-and-about in my daily life and keep a growing list of future research topics for life after the dissertation. Thirdly, qualitative methods allow for a more

*holistic account* in developing an intricate and layered analysis of the phenomenon under study.

A holistic account includes: the history of functional foods; a content analysis of a functional food campaign; an examination of the synergistic relationship between Becel<sup>®</sup> margarine and the Heart and Stroke Foundation; an analysis of health promotion policies for heart disease; an examination of statin drugs; plus the importance of *participants' meanings* derived from the in-depth interview data. Without these *multiple sources of data*, --I would not be able to present a holistic account. Fourth, qualitative methods allows me to use an emerging *theoretical lens* of the sociology of diagnosis to view the issue of the social construction of disease and diagnosis for women's health. Fifth, the *emergent design* ensures a certain degree of fluidity in the design process, and rather than adhering to a rigid prescription, I amended and revised my techniques, my questions and my analysis throughout the process. Lastly, there is a gap in the literature of functional foods and women's health and a qualitative method allows for a more nuanced appreciation of the narratives involved not only in an advertising campaign and public health agency documents, but also through the exploration of how women understand these cholesterol issues in their own lives (Creswell 2007).

In the sections below I highlight the various qualitative research tools used in this research: (1) content analysis of functional food advertisements; (2) Socio-demographic information survey; and (3) semi-structured in-depth interviews.

### ***Content analysis of functional food advertising***

This study was conducted in two parts. The first consisted of a content analysis of functional food advertisements using the *Magazine Publishers of America (MPA)* website in January 2011 for a listing of the *Top 100 Audit Bureau of Circulations (ABC)* magazines. Using only the 2010 listings of magazines I searched the top American titles, and then used the *Masthead Special*

*Report 2011* for a listing of the top Canadian magazines. I looked only at English language magazines and of all these North-American based magazines I narrowed down the titles to the top 3 magazines by circulation in eight different categories including: (1) American General Interest; (2) Canadian General Interest; (3) Women's General Interest; (4) Women's Health; (5) Men's Health; (6) Older (40+); (7) Home; and (8) Parenting. Each category contained the top 3 magazines by circulation in 2010 for a total of 24 magazines. (See Table 6 for a breakdown of these magazines).

Hardcopies of the magazines for the entire 2010 year were obtained through the purchasing of back issues, sourcing issues through local libraries, magazine subscriptions and also on-line through specific magazine websites. Functional food advertisements were then chosen if they fit one of two criteria: (1) the food was naturally functional (i.e. almonds) and linked to a health condition (lowered cholesterol); and/or (2) the food contained an added ingredient that functionalized the product (e.g. Plant Sterols in Margarine, Probiotics in Yogurt). The advertisements highlighted the functionality of the food and related it to the prevention of an illness or disease (e.g. Plant Sterols in Margarine can reduce cholesterol and prevent heart disease).

**Table 6. North American Magazines with the highest circulation in eight categories**

<b>Type of Magazine</b>	<b>Magazine</b>	<b>Weekly (W) or Monthly (M)</b>
General Interest (U.S.)	People	W (53)
	Reader's Digest**	M (10)
	Prevention	M (12)
General Interest (Canadian)	Chatelaine	M (12)
	Canadian Living	M (12)
	Flare	M (12)
Older/Middle-Aged	AARP the Magazine	M (6)*
	MORE	M (10)
	Zoomer	M (9)
Women's -General (U.S.)	Good Housekeeping	M (12)
	Ladies Home Journal	M (11)
	Women's Day	M (16)
Women's Health	Shape	M (12)
	SELF	M (12)
	Health	M (10)
Parenting	Today's Parent	M (12)
	Parents	M (12)
	Parenting –early years	M (11)
Men's -General	Men's Health	M (10)
	Sport's Illustrated	W (56)
	GQ	M (12)
Home/Style	Canadian House & Home	M (12)
	Style at Home	M (12)
	Better Homes and Gardens	M (12)

\*The number in parentheses denotes the number of issues published per year.

\*\* This magazine is in the top listings for both Canada and the US, although it is a U.S.-based magazine, it ranks 3<sup>rd</sup> in Canada and 4<sup>th</sup> in the U.S. for readership.

An initial search of these 24 magazines uncovered 520 ads, which was reduced upon a second analysis to a new total of 351 functional food advertisements. Of the 351 ads a total of 46 different functional food types were found, of which I examined the top 5 (California Almonds, Kellogg's All bran, Becel<sup>®</sup> pro.activ<sup>®</sup> Margarine, Campbell's Heart Healthy Soup, and Planters Nuts). Four out of five of these functional food advertisements focused on heart disease and high cholesterol, and Becel's<sup>®</sup> pro.activ<sup>®</sup> campaign directly targeted women and high cholesterol.

**Table 7. Top 5 Functional Food advertisements in 24 North American Magazines**

Ranking	Brand	# of ads	%	Health Claim	Symbol	# of magazines ads featured in
1	California Almonds <sup>®</sup>	61	17.4%	Heart Disease/Cholesterol	Yes	13
2	Kellogg's <sup>®</sup> All Bran Buds*	45	12.8%	Fibre/Regularity	No	11
3	Becel <sup>®</sup> Margarine	29	8.3%	Heart Disease/Cholesterol	Yes	7
4	Campbell's <sup>®</sup> Soup	28	8.1%	Heart Disease/Cholesterol	Yes	10
5	Planters <sup>®</sup> Nuts	20	5.7%	Heart Disease/Cholesterol	Yes	6
Total		183**	52.1%			

\* Kellogg's<sup>®</sup> All-Bran Buds has recently changed the packing of their products to reflect that "diets low in saturated fat and cholesterol that include 7 grams of soluble fiber per day from psyllium may reduce the risk of heart disease". This health claims now carries a 'heart healthy selection' symbol also.

\*\*183 of the 351 total functional food advertisements are comprised of the top five brands above.

The top five types of functional food advertisements shown in Table 7 reveal that 4 out of 5 (80%) focus on heart disease and cholesterol related issues. The same four types of advertisements also contain a health symbol or checkmark to denote a heart focused food product. These symbols were usually part of a cross promotion with a sponsored institution (i.e. cause marketing or corporate philanthropy), and include the *Canadian Heart and Stroke Foundation*, the *American Heart Association* and *Love Your Heart* symbols. Although the Becel<sup>®</sup> brand is well associated with heart health, I did not focus on their two other campaigns

("Love your heart" and "The Heart Truth") to ensure a streamlined focus. Instead I examined only one functional food campaign, --Becel<sup>®</sup> pro.activ<sup>®</sup> margarine because of the complexity of their campaign, the focus on women and high cholesterol, the obvious narrative in the advertisements and Becel's<sup>®</sup> involvement as a major sponsor of the Heart and Stroke Foundation, Canada's leading heart authority. Although this campaign also included two advertorials geared towards people over the age of 60 (featured in *Zoomer* magazine), I did not examine them as they were a distinctly different campaign targeting a much older demographic.

### ***Becel<sup>®</sup> pro.activ<sup>®</sup> advertising campaign***

The Becel<sup>®</sup> pro.activ<sup>®</sup> advertising campaign includes six specific advertisements in chronological order starting with September 2010, and each successive advertisement is a continuation of the previous narrative and characters introduced and include stories about cholesterol concerns with everyday narratives from women. Becel<sup>®</sup> pro.activ<sup>®</sup> advertisements were featured in two women's-only Canadian magazines, *Canadian Living* (general interest for women) and *More* (women over age 40). *Canadian Living* is Canada's second most widely read magazine with an average readership of 3.8 million and publishes 12 issues a year. (Masthead 2010). Their editorial aim is to be a source of "relevant lifestyle and food information and inspiration for busy women" (Canadian Living Media Kit 2012: 3). *More* magazine's mission statement is to be the "...leading voice of an affluent, influential community for women of style and substance...", (More Media Kit 2012:1) and indeed their average reader is affluent with a median household income of \$100,000 and an average age of 51. *More* has a circulation of 1.3 million and publishes 10 issues a year. The Becel<sup>®</sup> pro.activ<sup>®</sup> campaign which was exclusively

printed only in *Canadian Living* and *More* magazines, fits seamlessly with the magazines 'sisterhood' narrative and "can-do" spirit showcasing personal stories of weight loss and healthy lifestyles in the hope that women can balance career and family obligations while having a "...stylish perspective and youthful energy" (More Media Kit 2010: 2).

### ***Socio-Demographic Information Survey***

Before every in-depth interview began, participants were given a self-administered questionnaire that asked basic demographic questions such as age, occupation, education and income levels, country of birth, ethnicity (of which they self-identified), and detailed job title. This information was crucial in order to accurately classify my participants into social class categories at a later date. Each participant was reminded that the survey was entirely voluntary and they could refuse to answer any question. Two women declined to answer the income question, but I was able to ascertain their class background nevertheless based on information gleaned during the interview alongside the information on education, occupation and detailed job title given in the survey. Due to the sensitivity of education and income questions, it was prudent to provide participants with an opportunity to answer these questions in writing rather than in person, especially while audio recording. All survey data was eventually categorized and entered into an Excel sheet to keep track of how many participants I had in each class group.

### ***Semi-Structured In-depth Interviews***

The second step was an in-depth interview that took approximately 45-90 minutes and was tape-recorded with consent in order to transcribe at a later date. I also took field notes immediately after the interviews so as not to interfere with the conversational manner of the interviews. I tried to maintain a casual tone and atmosphere and felt that jotting down notes in front of participants might make them feel 'studied', and I did not want their answers to be couched or influenced by

how much or how furiously I was writing down notes. Immediately after the interview I spent 10-15 minutes debriefing and writing my field notes which detailed everything that could not be captured by an audio recording such as: living conditions, body language and mood of participants, interesting revelations, location of the interview, type of neighborhood, and my own personal reflections. I met with participants wherever it was convenient for them, which was usually in their home or at a local coffee shop near their home.

The in-depth semi-structured interviews consisted of 32 questions divided into three main sections (personal eating habits and functional foods; food marketing and cholesterol; and health and illness). See Appendix D for the full interview guide. The first set of questions ascertained what participants knew or understood about functional foods and their opinions on whether they believed in them and used them. The second set of questions included their views on the entire Becel<sup>®</sup> pro.activ<sup>®</sup> campaign (rather than just functional foods in general), questions regarding their knowledge of cholesterol, and their opinions or worries about cholesterol and heart disease. Since I was asking participants about the Becel<sup>®</sup> campaign (and gave them time to adequately look through the advertisements), great care was taken to strategically ask questions in an appropriate order so as not to prime the participants or influence their answers. Although I cannot guarantee this, it is possible their answers would have differed if they were shown the Becel<sup>®</sup> ads at the very start or at the end of the study. The third set of questions revolved around health and illness and included their thoughts on cholesterol-lowering medication, the social determinants of health, the causes and solutions to high cholesterol and their own health regimes. All participants were briefed on the purpose of the study and assured that I was not a medical professional, nor would I be giving any medical or nutritional advice and that I was not affiliated with Becel<sup>®</sup> margarine or any grocery store selling the product. The participants then spent 10-15



minutes reading a letter of information and signed the consent form. All interviews were tape-recorded with consent which I later transcribed using *Scribe* transcription software (this is a professional audio player transcription software for PCs). All aspects of the study were reviewed and approved by McMaster University's Research Ethics Board and all participants were coded numerically and with a pseudonym, no personal identifiers were used. Participation was always voluntary and the women knew that they could stop (withdraw) at any time or refuse to answer any questions (although this did not happen). In fact, many women chose to leave their contact information in order to receive a brief summary of the results when completed.

As is traditional in case studies, the number of cases needed is unknown until saturation becomes obvious. Therefore, interviews were conducted for 49 women including an additional 5 pilot interviews (which did not factor into the final data analysis). I feel confident that saturation was reached whereby the last few interviews provided little new information that was either surprising or revealing (Small 2009).

### ***Qualitative Interview Methods***

The semi-structured in-depth interview is simply *one way* of understanding people, or women in particular and their health beliefs. It is not the only way, but is strengthened and made more coherent when used in conjunction with other methods (such as surveys and content analysis).

To comprehend the meaning and significance behind women's understanding of high cholesterol as disease or lifestyle, and the causes and solutions to high cholesterol it would only make sense to ask women what they think, and to do so in a manner that allows them to speak on their own

terms and "...in a depth which addresses the rich context that is the substance of their meaning" (Jones 2004).

In order to obtain authentic and rich data it is essential that participants trust me enough to believe that their words and thoughts will be accurately represented, that their intimate views and opinions will not be ridiculed or disparaged, and that the tone and atmosphere during the interview is casual and open enough for them to readily speak their minds. As a qualitative researcher I have interviewed over 200 people during my RA experience, Master's and Doctorate programs, and I have become attuned to non-verbal communications (body language) including: posture, intonation, eye contact and eye movements, hand gestures, facial expressions, appearance, and so on, that communicate a myriad of feelings such as, indifference, boredom, interest, enthusiasm, coldness or warmth (Jones 2004).

As there are inherent power differentials in interviewer/interviewee situations, every attempt was made to create a safe environment for women whose views were to be respected. I made a very conscious effort to downplay my educational background, my nutritional knowledge (I am also a Registered Holistic Nutritionist, a vegan and a competitive runner) and my own views on functional foods. This carried through to my self-presentation in how I was dressed (typically like a 'student' on a budget wearing a backpack, jeans and hikers), and being cognizant of what I was eating or drinking during our interviews (mainly water, tea or non-threatening food choices such as granola bars, sandwiches, and cookies). Although I disclosed the aims of the research and my role in it during the beginning of every interview, I felt that if my vegan and exercise status and education in nutrition were known, it could potentially create pressure on participants to come up with the 'right answer' or to minimize their food habits, and overemphasize their

exercise regimes so as to seem more competent or 'healthy', or at the very least make them feel judged.

Part of the role as an interviewer is also being aware of when you are being manipulated or deceived in terms of participants' responses (whether seemingly over-rehearsed or purposely vague). Thus my interview "style" was adapted per participant and reflected the changes and developments in each respective interview. Although feminist researchers (Oakley 2004) would argue that finding out about people and their lives is best served in non-hierarchical relationships where the interviewer reveals or exposes more detailed personal information about themselves, -- I could not fully invest myself, in the fear that I would unduly influence my participants (which was confirmed during the pilot interviews when the initial participants thought I worked for Becel<sup>®</sup> or were eager to show me the contents of their fridge to confirm that "great minds think alike"). Having said that, I felt a tremendous sense of rapport with my participants and was pleasantly surprised (and shocked at times) with not only their answers, but with the openness of their responses. Many participants sent me emails afterwards to thank me, to compliment my "personable nature", or to request a follow-up regarding the final dissertation and dissemination of findings. Some participants sent me video clips on 'healthy eating', recommended food blogs or simply wanted to wish me good luck with the research.

### ***Recruitment***

While the first stage of the research was the content analysis of the functional food campaign, the second stage consisted of in-depth interviews with 49 women. I was specifically looking for women over the age of 40, since this was Becel's<sup>®</sup> target audience, and women who were either concerned with high cholesterol and heart disease or who were diagnosed with either one of these conditions. Although twelve of my participants were taking cholesterol-lowering

medications (also known as Statin drugs or statins), it was not a requirement either way. Women who saw the advertisement and wanted to participate either emailed or phoned a local cell number specifically purchased for the duration of the study. To ensure women met my research criteria, during these initial emails or phone conversations I spent a few minutes describing the purpose of the study, answering questions and determining their participation suitability.

I made a conscious decision at the outset to obtain a sample that was as socio-demographically diverse as possible. I was looking for women who were retired, single, married, stay-at-home mothers, professional women, and women on government assistance. Once I had successfully recruited and interviewed a few women from the working poor or underclass backgrounds I employed a snowball sampling technique for further recruits. Although I was aiming for an equally diverse sample in terms of ethnicity, this proved to be quite challenging and I completed the study with 49 participants in total, 5 of whom identified themselves as Middle Eastern and recent immigrants, 2 Black Canadians, 2 Asian Canadians and 3 Jewish women. The remainder identified themselves as 'Canadian'; 'Caucasian'; 'WASP'; 'British/Celtic'; 'Scottish', 'English'; 'Italian' or 'White'.<sup>1</sup>

For my recruitment strategies these female participants were self-selected based on advertisements placed on the front page of *Kijiji* (an on-line community that posts on-line classified advertisements). To ensure maximum exposure I paid a weekly fee to have my advertisement guaranteed on the front page of *Kijiji's* website. Recruitment posters were also placed 'off-line' on all local public posts in Oakville, Ontario (and this city was chosen as both a convenient and cost-saving strategy). Over 100 posters were placed in a variety of yoga studios,

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<sup>1</sup> For brevity reasons, I am not listing all 37 self-described ethnicities, suffice to say, these 37 women self-identified as various non-visible minorities (i.e. Polish, Italian, German, Dutch, etc.).

fitness centres, Starbucks, laundry mats, and apartment building bulletin board residences in the cities of Oakville, Hamilton, and Toronto. An additional 100 posters were also placed on mailboxes in the Oakville area. The advertisements went up on March 1st 2012 and interviews began immediately and ended on June 13th 2012 after the last four or five interviews did not garner much new information and I had reached saturation. (See appendix A for recruitment poster). Table 8 below is a breakdown of how many participants were recruited via *Kijiji*, referrals (snowballing) and local signage (mailboxes, Starbucks, fitness centres etc). Snowballing techniques worked well and I asked each participant for potential recruits, gave them multiple copies of the recruitment poster and letter of information. Many participants openly volunteered to place my advertisement in their apartment building or work office and many even asked if their friend, colleague or family member could participate. I also informed everyone in my own social network of family and friends, co-workers, neighbours and acquaintances about my study and asked them to 'spread the word' to anyone who might be interested in participating.<sup>2</sup>

**Table 8. Breakdown of where participants were recruited from**

# of participants	Kijiji website	Local ads in cities*	Referral from friend
N = 49	6	24	19

\*Cities included Oakville, Hamilton and Toronto

I initially conducted 5 pilot interviews that were helpful in eliminating and re-organizing certain interview questions. These pilot interviews were instrumental in restructuring my interview guide as the initial participants were confused about my relationship with Becel and were under

<sup>2</sup> Even though I solicited help from people who knew me, I was very clear on not interviewing anyone that I knew, even on a mild social level. As can be seen from Table 3, the local ads placed in various cities was the most successful recruitment strategy. No participants were yielded from my network or contacts of friends and acquaintances.

the impression that I either worked for Becel<sup>®</sup>, or they assumed they had to purchase and consume Becel<sup>®</sup> pro.activ<sup>®</sup> margarine as part of a marketing and advertising test group. Because of this initial confusion, I took extra time at the beginning of each interview to clearly explain the purpose of the research and my role in it. I gave participants 10-15 minutes to carefully read the letter of information and consent and answered their questions before the official interview began. Although initially the remuneration was \$10.00, I quickly discovered it was an inadequate amount to recruit participants and was in fact told so during my initial phone screening and email exchanges. I then decided to increase the amount and each female participant was given a \$20.00 gift card to one of 3 local coffee shops (Starbucks, Tim Horton's or Second Cup). All interviews were conducted wherever participants felt most comfortable (either in their homes or a local coffee shop or eatery), and the interviews occurred in a variety of different cities, part of the Greater Toronto Area (GTA), and Halton. The first step of the interview process was a self-administered survey that asked basic demographic questions (age, gender, occupation, education, income), and the second part was in-depth interviews.

### *Sample*

There was a diversity of social class backgrounds with 20 women in the working poor /underclass group, 9 women in the working class, 5 women in the lower middle class, and 15 women in the upper middle classes. While 18/20 working poor /underclass group were on some form of disability or government subsidies, 13/15 of the upper middle class women made over \$90,000 annually. A total of 12 women were currently on statin drugs while an additional 2 women recently stopped taking their medications and were attempting to lower their cholesterol on their own via diet and exercise modifications. All 20 of the working poor/underclass were

either divorced, single, separated or widowed. Not one was married or common-law. Whereas in the upper middle class only 2 of the 15 were single or separated. The working poor/underclass participants were either retired, on disability for a variety of mental or physical ailments or were working in precarious and unstable contract and part-time work. The WP women had more limited education (typically high school and a few had only elementary school), but there were also 5 women in this group with BAs, and one of them even had an MBA. But after job loss, unemployment, health scares, mental health issues, and lack of family support, these women found themselves on disability or subsidies. Whereas in the upper middle class, every woman had at least a B.A., with many holding graduate degrees in education, social work and the humanities.

### *Analysis*

As a preamble to the data analysis section that follows, a certain set of assumptions have guided my analysis efforts: (1) there is no one *truth or knowledge*, but rather a multiplicity of possible truths and this research speaks to the knowledge of my participants as best as they could articulate and as best as I could understand and accurately represent their views (Maxwell 1996); (2) there is also no one standard set of data analysis procedures or techniques to enhance the goal of validating knowledge, instead there are a plethora of possible techniques that can be incorporated (Creswell 2007); (3) as a researcher I have an ethical obligation to "...demonstrate integrity and rigor of scientific judgments balanced with the artfulness associated with discovering meaning in context" (Whittemore, Chase and Mandle 2001:528); and (4) even though there is disagreement over the process, the need nevertheless remains for validation strategies in qualitative analysis (Ibid).

In my dissertation proposal I initially discussed possible theories or themes related to my topic of high cholesterol and functional foods (e.g. healthism, nutritionism, and social determinants of health),--but it was the theoretical development of theory *prior* to data collection and analysis, specifically the sociology of diagnosis that informed and guided my research from start to finish. Unlike methods such as grounded theory (Corbin & Strauss 2007; Charmaz 2009) or ethnography (Van Maanen 1988), with case studies "...theory development as part of the design phase is essential" (Yin 2009:35). This does not mean that I incorporated the sociology of diagnosis as a grand theory, but rather, I used it as a "blueprint" for my study and it was and continues to be an integral element of my dissertation (Yin 2009). The development of theory prior to data collection for a case study is a time consuming and methodical process that was occasionally challenging to rein in and keep the sandwich thesis focused on the overall research problem and to keep each individual article very narrowly focused so as not to dilute the findings. Since I had a large amount of data I was careful to parcel out my findings incrementally throughout not only the 3 articles submitted for this dissertation but for the 4-6 other future articles that can now be written with the remaining data.

When initiating the process of theory development I reviewed enormous amounts of literature before settling on the sociology of diagnosis as one which complements my research and is a field where I can make a contribution to the social construction of women's health diagnosis. Once I had thoroughly reviewed all the literature on the sociology of diagnosis I further discussed this topic with my supervisory and various committee members and colleagues to illicit their feedback. This was also a reflective process whereby I continually challenged myself by asking what my research was adding to the greater body of literature, what *exactly* was I



trying to figure out with this research, and did my research questions align with the overall goal of the study?

To begin the process of data analysis I transcribed the audio-recorded interviews verbatim using *Scribe*, a computer assisted transcription software. I then read through each transcript and began the coding process. To facilitate this process I "played" with my data continuously in various forms as influenced by Miles and Huberman (1994). This included making a variety of data displays, --graphics and flowcharts both manually and computer assisted, organizing the data in chronological order, developing categories and codes both based on the different literature reviews (e.g. sociology of diagnosis, healthism, nutritionism, social determinants of health, healthy lifestyle, nutritionism, etc.), and themes that came directly from the participants (e.g. Othering, poor bashing, diagnosis as disease versus diagnosis as lifestyle, and personal responsibility). I identified and revised the codes throughout the process, going back continuously to re-read certain transcripts or specific answers to certain questions.

For chapter 4/article 1 I used content and frame analysis. Content analysis was used as a way to document the representation of both women and dominant themes such as cholesterol, heart disease and lifestyle promotion part of the Becel<sup>®</sup> pro.activ<sup>®</sup> functional food campaign. Frame analysis focused attention on the dominant problem frame within the Becel<sup>®</sup> campaign, (i.e. high cholesterol) and how this problem is described, diagnosed, scrutinized and given remedy for. Frame analysis was helpful for examining three key propositions: (1) that high cholesterol is a disease-state; (2) that the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign frightens and empowers women simultaneously; and (3) that Becel sells the individualized notion of personal responsibility for health. A more in-depth discussion of the various limitations of both content and frame analysis can be found in the concluding chapter.

For chapters 5-6/articles 2-3 I first began the analysis by categorizing the participants' class into four groups based on Gilbert's (2011) schema. If there was doubt about how a certain participant should be classified I remained true to Gilbert's scheme and always emphasized the *source* of the income over the amount of income. The upper-middle class (UMC = 15) consisted of managers and professionals with university educations and possessed valuable credentials and skills and represents the 'privileged classes'. The lower-middle classes (LMC = 5) consisted of lower-tiered managers and administrators; lower-status white collar and some highly-skilled blue collar people. These people were high school educated and usually had some college or diploma credentials, and mainly worked in sales, retail, and craft-skills. What differentiated the LMC and the working class was the level of education, skill and autonomy at work. The working classes (WC = 9) included women who worked in low-skill manual, retail and clerical work (both blue and pink collar), and their jobs required less formal skills, education or training. These workers had relatively stable income but the work was routinized, involved less autonomy and they were usually only high school educated. The working poor and underclass (WP = 20) were combined to make one category and these women had the most precarious work, had insecure incomes that fell below the poverty line as defined by Statistics Canada's low income-cut off (LICO) and relied on government subsidies either in the form of disability payments or subsidized housing. The underclass element of this WP group had limited or erratic participation in the labour force and looser connections with the world, while the working poor element were generally labourers with unsteady incomes.

While there is vigorous debate surrounding the use of validation strategies in qualitative work or using quantitative terminology to assess qualitative work, -I rely on Whittemore, Chase and Mandle (2001) for their validation strategies (which total 29 forms). These authors categorize the

criteria of validity into two areas, *primary* and *secondary criteria*. For primary criteria *authenticity* was achieved by representing the emic perspective (i.e. the insider's view) in such a way that "subtle differences in the voices of all participants" were heard (Whittemore, Chase and Mandle 2001:534). This included checking the meaning of what participants said rather than assuming I already knew or that I understood (Jones 2004). *Credibility* is about establishing confidence that the interpretation of the meaning of the data is truthful and that the findings truly reflect the lived experiences, emotions and beliefs of the participants. Elements of *criticality* were achieved by making a deliberate and conscious effort at the outset to articulate my data analysis procedures, read through the literature on case study analysis and other methods on qualitative data analysis to ensure I was working within the right framework. Being reflexive and open to all possibilities in data interpretation was a part of criticality as well. I also incorporated *expert checking* whereby I emailed sociology of diagnosis experts and asked for clarification on issues that arose from the data. Analysing *negative cases* was another strategy to strengthen the criticality of my research and ensure that I was not finding simply what I was looking for. Lastly, *integrity* was about obtaining a self-critical inquiry by repeatedly checking and rechecking my interpretations and verifying that my interpretations are valid and anchored in the data. Integrity was being cognizant of discrepant data or alternative viewpoints and interpretations in a humble manner (Whittemore, Chase and Mandle 2001:531).

As for *secondary criteria of validity*, I incorporated *vividness* through the use of rich, thick descriptions (i.e. appropriate quotes) in order to highlight a particular theme without overwhelming the lay audience with theoretical jargon. I believe all three of my articles can be read and understood by an interdisciplinary audience with no previous knowledge of the sociology of diagnosis or the social determinants of health. I have chosen the most salient quotes

to demonstrate in 'vividness' the phenomenon of women's high cholesterol diagnosis. Closely aligned to vividness is *thoroughness*, and rather than presenting a long list of themes, I have spent time drawing the connections between them in an exhaustive manner. Attention to detail and the complexity of each theme and the interconnectedness of the themes assisted in creating a more 'complete' picture. Lastly, *sensitivity* was adhered to by being cognizant of the various socio-economic, cultural and social contexts of my participants, especially when meeting them in their homes. As a white middle-class woman who is highly educated I am well aware of the potentiality for power differentials to exist when as a researcher and academic I interview people in precarious employment and living circumstances, or interview women of colour, and women who may not be fully aware of or articulate in their nutritional and health perspectives. I approached all my interviews with integrity and sensitivity and showed the participants the respect and dignity they deserve. Without participants much of the sociological research would cease to exist so I am very appreciative of the time, energy and honesty my female participants showed me.

From issues of validity I now move to issues of evaluation. When evaluating the case study I referred to both Stake (1995) and Creswell (2007) for a case study 'checklist' approach to assess and strengthen the final written report for articles 2 and 3. As there are over thirty criteria I will only mention a handful here that informed my final written analysis. For instance:

- *"Is the case adequately defined?*
- *Is there a clear description of the case?*
- *Are themes identified for the case?*
- *Are assertions or generalizations made from the case analysis?*
- *Is there a sense of story to the presentation?*
- *Have quotations been used effectively?*
- *Has the writer made sound assertions, neither over-nor under-interpreting?*
- *Has adequate attention been paid to various contexts?*
- *Is empathy shown for all sides?*
- *Are personal intentions examined? Is the researcher reflexive or self-disclosing about her position in the study?"*

Source: Creswell (2007) and Stake (1995).

This concludes the research design section and I now turn to introducing the three journal articles.

### **Concluding Remarks**

In the following three chapters are the above described articles in either the format they are published in or their most recent revisions. Chapter 4 contains the first article, chapter 5 is article 2, and chapter 6 is article 3. I then provide a brief concluding chapter which synthesizes the key findings found across all three articles. I discuss the contributions of this study, the strengths and limitations, future research directions and some concluding remarks.

## References for research design

- ADA (American Dietetic Association). 2009. Position of the American Dietetic Association: Functional Foods. *Journal of the American Dietetic Association* April 2009: 735-746.
- Aiello, M. 2011. Functional Foods: Between New Consumption Trends and Renewed Perceptions of Health. *Italian Sociological Review*, 1(3): 45-58.
- Agriculture and Agri-Food Canada. 2009, December. *Consumer Trends: Functional Foods*. International Markets Bureau, Market Analysis Report.
- Blaxter, M. 2009. The Case of the Vanishing Patient? Image and experience. *Sociology of Health & Illness*, 31: 762-778.
- Blaxter, M. 1978. Diagnosis as category and process: the case of alcoholism, *Social Science and Medicine*, 47(8):1067-1076.
- Charmaz, K. 2009. *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. California: Sage.
- Cinnamon, B. 2009. *Results from the Functional Foods and Natural Health Products Survey - 2007*. Working Paper: Business Special Surveys and Technological Statistics Division Working Papers. Catalogue no. 88F0006X, no.1
- Clark, A.M., Duncan, A.S., Trevoy, J.E., Heath, S., and Chan, M. 2010. Healthy diet in Canadians of low socioeconomic status with coronary heart disease: Not just a matter of knowledge and choice. *Heart & Lung*. 40:156-163.
- Corbin, J., & Strauss, A. 2007. *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, CA: Sage.
- Cornish, L.S. 2012. It's good for me: It has added fibre! An exploration of the role of different categories of functional foods in consumer diets. *Journal of Consumer Behaviour*, 11:292-302.

- Creswell, J.W. 2007. *Qualitative Inquiry & Research Design: Choosing Among Five Approaches*. (2nd ed.). California: Sage.
- Crawford, P., Brown, B., Nerlich, B., and Kotevko, N. 2010. Nutritional altruism and functional food: lay discourses on probiotics. *Sociology of Health and Illness* 32(5):745-760.
- Dragicevich, H., Williams, P., and Ridges, L. 2006. Survey of health claims for Australian foods made on Internet sites. *Nutrition & Dietetics* 63:139-147.
- Ebeling, M. 2011. 'Get with the Program!': Pharmaceutical marketing, symptom checklists and self-diagnosis. *Social Science & Medicine*, 73: 825-832.
- Frances, A. 2013. *Saving Normal: an insider's revolt against out-of-control psychiatric diagnosis, DSM-5, big pharma, and the medicalization of ordinary life*. NY: HarperCollins.
- Gardner, J., Dew, K., Stubbe, M., Dowell, T., & Macdonald, L. 2011. Patchwork diagnoses: The production of coherence, uncertainty, and manageable bodies. *Social Science & Medicine*, 73:843-850.
- Gilbert, D. 2011. *The American Class Structure in an Age of Growing Inequality*. (8th ed.). California: Sage, (Chapter 11).
- Hailu, G., Boecker, A., Henson, S., and Cranfield, J. 2009. Consumer valuation of functional foods and nutraceuticals in Canada. A conjoint study using probiotics. *Appetite*, 52:257-265.
- Hasler, C. M. 2002. Functional Foods: Benefits, Concerns and Challenges—A Position Paper from the American Council on Science and Health. *Journal of Nutrition* 132: 3772-3781.

Health Canada. 2010, February. *It's Your Health - Heart Disease - Heart Truth*. Catalogue # H13-7/72-2010E-PDF.

Health Canada. 1998. Nutraceuticals/functional foods and health claims on foods". Therapeutic Products Programme and the Food Directorate from the Health Protection Branch, Section 2.2.

Heasman, M., and Mellentin, J. 2001. *The Functional Foods Revolution: Healthy people, healthy profits?* London: Earthscan Publications Ltd.

Herath, D., Cranfield, J., and Henson, S. 2008. Who consumes functional foods and nutraceuticals in Canada? Results of cluster analysis of the 2006 survey of *Canadians' Demand for Food Products Supporting Health and Wellness*. *Appetite*, 51:256-265.

Holm, L. 2003. Food Health Policies and Ethics: Lay Perspectives on Functional Foods. *Journal of Agricultural and Environmental Ethics*, 16:531-544.

IFIC. 2007. (International Food Information Council Foundation). Consumer Attitudes toward Functional Foods/Foods for Health. <http://ific.org>

IFT (Institute of Food Technologists). 2005. Expert Report: Functional Foods: Opportunities and Challenges. March 24<sup>th</sup> 2005. [www.ift.org](http://www.ift.org)

Invest In Canada. 2012. *Functional Foods and Natural Health Products: Canada's Competitive Advantage*. Foreign Affairs and International Trade Canada. Ottawa, Canada. Catalogue #: FR5-38/19-2012E.

Jaoho, M., and Niva, M. 2013. Lay Understandings of Functional Foods as Hybrids of Food and Medicine. *Food, Culture & Society*, 16(1): 43-63.

Jones, P. J. 2002. Clinical Nutrition: 7. Functional foods—more than just nutrition. *CMAJ*, June 11 2002; 166(12): 1555-1563.



- Jones, S. 2004. Depth Interviewing. In C. Seale. Editor, *Social Research Methods: A Reader* (pp. 257-260).
- Katan, M.R., and de Roos, N.M. 2004. Promises and Problems of Functional Foods. *Critical Review in Food Science and Nutrition*, 44:369-377.
- Kim, H. 2013. Functional foods and the biomedicalisation of everyday life: a case of germinated brown rice. *Sociology of Health & Illness*, 35(6):842-857.
- Korp, Peter. 2010. Problems of the Healthy Discourse. *Sociology Compass* 4(9):800-810.
- Koteyko, N. 2010. Balancing the good, the bad and the better: A discursive perspective on probiotics and health eating. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, 14(6):585-602.
- Landstrom, E., Koivisto-Hursti, U-L., and Magnusson, M. 2009. Functional foods compensate for an unhealthy lifestyle: Some Swedish consumers' impressions and perceived need of functional foods. *Appetite* 53:34-43.
- Lupton, D. 1996. *Food, the Body and the Self*. London: Sage.
- Jutel, A. 2010. Framing disease: The example of female hypoactive sexual desire disorder. *Social Science & Medicine*, 70: 1084-1090.
- Jutel, A. 2006. The emergence of overweight as a disease entity: Measuring up normality", *Social Science & Medicine*, 63:2268-2276.
- Malla, S., Hobbs, J., Sogah, E.K., and Yeung, M.T. 2013, April. Assessing the functional foods and natural health products industry: a comparative overview and literature review. *Canadian Agricultural Innovation and Regulation (CAIRN) Network*.
- Maxwell, J.A. 1996. *Qualitative research design: An interactive approach*. Thousand Oaks, CA: Sage.

Miles, M.B., & Huberman, A.M. 1994. *Qualitative data analysis: An expanded sourcebook*.

Thousand Oaks, CA: Sage.

Moynihan, R. and Cassels A. 2005. *Selling Sickness: How the World's Biggest*

*Pharmaceutical Companies are Turning us all into Patients*. Toronto: Greystone Books.

NCABR - North Carolina Association for Biomedical Research. 2007. Issue Brief:

Nutraceuticals. July 2007. <http://www.aboutbioscience.org/pdfs/Nutraceuticals.pdf>

Accessed: November 1st 2010.

Nettleton, Sarah. 2004. The emergence of e-scaped medicine, *Sociology*, 38(4):661-679.

Oakley, A. 2004. Interviewing women: A contradiction in terms. In C. Seale. Editor, *Social*

*Research Methods: A Reader* (pp. 261-268).

Ostberg, J. 2003. Functional Foods: A Health Simulacrum. *Advances in Consumer Research*,

30:129-134.

Payer, L. 1992. *Disease Mongers: How Doctors, Drug Companies and Insurers Are Making*

*You Feel Sick*. New York: John Wiley & Sons, Inc.

PHAC - Public Health Agency of Canada. 2013. Chronic Disease Risk Factors.

PriceWaterhouseCoopers. 2009, August. Leveraging growth in the emerging functional foods

industry: Trends and market opportunities.

Scrinis, G. 2008. Invited commentary: Functional Foods or functionally marketed foods? A

critique of, and alternatives to, the category of 'functional foods'. *Public Health*

*Nutrition*, 11(5):541-545.

Shahidi, F. 2009. Nutraceuticals and functional foods: whole foods versus processed

Foods. *Trends in Food Science & Technology* 20: 376-387.

- Slater, C. I., Howe, A., McDaid, L., Blacklock, J., Lenaghan, E., & Shepstone, L. 2011. Risk, significance and biomedicalization of a new population: older women's experience of osteoporosis screening. *Social Science & Medicine*, 73: 808-815.
- Small, M.L. 2004. 'How many cases do I need?' - On science and the logic of case selection in field-based research. *Ethnography*, 10(1): 5-38.
- Snow, D. A., and Benford, R.D. 1988. Ideology, Frame Resonance, and Participant Mobilization. *International Social Movement Research* 1:197-217.
- Stake, R. 1995. *The art of case study research*. Thousand Oaks, CA: Sage.
- Subirade, M. 2007. Report on Functional Foods November 2007. Prepared for Food Quality and Standards Service (AGNS), Food and Agriculture Organization of the United Nations (FAO). University of Laval, Quebec, Canada.
- Van Maanen, J. 1988. *Tales of the field: On Writing ethnography*. Chicago: University of Chicago Press.
- Yin, R.K. 2009. *Case Study Research: Design and Methods* (4th Ed.). California: Sage.
- Wansink, B. 2005. *Marketing Nutrition: Soy, Functional Foods, Biotechnology, and Obesity*. Chicago: University of Illinois Press.
- Welch, G. H., Schwartz, L. M., and Woloshin, S. 2011. *Overdiagnosed: Making People Sick in the Pursuit of Health*, Boston: Beacon Press.
- Weiner, K. 2010. Configuring users of cholesterol lowering foods: A review of biomedical discourse. *Social Science & Medicine*, 71:1541-1547.
- Whittemore, R., Chase, S., K., & Mandle, C.L. 2001. Validity in qualitative research. *Qualitative Health Research*, 11, 552-537.

**Chapter 4/Article 1**

**Abstract**

This paper explores the narrative behind Becel's<sup>®</sup> pro.activ<sup>®</sup> calorie-reduced margarine advertising campaign. Becel<sup>®</sup> pro.activ<sup>®</sup> is a new functional food product developed with plant sterols that claims to lower cholesterol and is the first food product available for purchase in Canada with plant sterols. The campaign consists of six advertisements specifically targeted to women in two Canadian magazines (Chatelaine and More) over the course of six months from September 2010 to February 2011. Using a sociology of diagnosis framework (Jutel 2011), I argue these advertisements create a false sense of urgency and empowerment surrounding high cholesterol for women, and reinforces the 'healthy lifestyle discourse' which individualizes the responsibility for health potentially disenfranchising the individual, patient and consumer. Using frame analysis as developed by Snow and Benford (1988), I argue Becel's<sup>®</sup> pro.activ<sup>®</sup> campaign constructs high cholesterol as a disease; simultaneously frightens and empowers women; and lastly, privileges and promotes the individual notion of personal responsibility for health.

Obesity, diabetes and cardiovascular heart disease (CVD) are the top killers in North America (Birmingham, Muller, Palepue, Spinelli and Anis 1999; CCHS 2004; Katzmarzyk 2002; Ohinmaa, Jacobs, Simpson and Johnson 2004; Tjepkema 2005) frightening consumers into taking active responsibility for their health. Part of this responsibility is tied to 'choice' and consuming the 'right' types of food to ward off disease. In particular, foods known as *nutraceuticals* and *functional foods*<sup>3</sup> have emerged as a panacea for people's health woes. The sociology of diagnosis literature is useful for examining these types of functional foods, especially the Becel<sup>®</sup> pro.activ<sup>®</sup> margarine advertising campaign since it concentrates on the categorization, process and consequences of the diagnosis label and experience.

Functional foods are being touted as having the potential to prevent illness and contribute to health while obscuring the greater social, political and economic contexts and abilities of consumers to attain and maintain 'good health' (Crawford 2006; Scrinis 2008; Korp 2010). I am interested in the overall construction of functional foods as seen through Becel's<sup>®</sup> pro.activ<sup>®</sup> margarine with Plant Sterols. In particular, I examine three specific questions: (1) how these Becel<sup>®</sup> advertisements construct cholesterol as a disease; (2) how this particular Becel<sup>®</sup> campaign frightens and empowers women at the same time; and (3) how these Becel<sup>®</sup> advertisements sell the individual notion of personal responsibility for health.

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<sup>3</sup> Throughout the literature the term 'functional foods' dominates, and therefore for the purpose of this paper, I employ the terminology of functional foods.

## Functional Foods Background

Functional foods extend health benefits beyond the basic nutritional value of the food (Nestle 2002). For instance, Omega-3 fortified eggs claim to lower cholesterol, flax seed products may reduce inflammation and risk of cancer and fibre-enriched cereals may reduce high cholesterol and blood glucose levels (Patterson 2008). According to Health Canada and Agriculture and Agri-Food Canada, a functional food is “similar in appearance to, or may be, a conventional food that is consumed as part of a usual diet, and is demonstrated to have physiological benefits and/or reduce the risk of chronic disease beyond basic nutritional functions...” (Health Canada 2009). Foods are no longer about correcting nutritional deficiencies or following dietary guidelines, but instead are used as a vehicle for wellness. The role of food is not merely to ensure proper growth and development but is framed in such a way as to promote health and self-regulation (Scrinis 2008; 2002; Crawford 2006; 2000).

This particular state of confusion and anxiety over food choices and food risks (Lupton 1996) has increasingly focused on high cholesterol<sup>4</sup> and the risk of developing heart disease and can be seen in a variety of functional food products such as cereals, margarine, eggs, oatmeal, snack bars, juices, and granola bars. These foods advertise personal responsibility for health through the consumption of functional foods. Studies of functional foods tend to focus on: (a) *lay*

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<sup>4</sup> Cholesterol is a waxy fat-like substance found in your blood and is manufactured mainly by the liver and secondarily from the foods we consume. Cholesterol is vital for cell membrane functions, vitamin D synthesis and hormone production. High cholesterol is one of the risk factors for developing cardiovascular disease (CVD) which are disease of the cardiovascular system including the heart and surrounding blood vessels. The most serious and costly form of CVD is heart disease which is the leading cause of death in both Canada and the United States (PHAC 2009, CDC 2011). There are two main types of cholesterol; *low-density lipoprotein (LDL)* often referred to as "bad cholesterol" since high levels can lead to clogged arteries. *High-density lipoprotein (HDL)* is also referred to as "good cholesterol" since it draws cholesterol away from the arteries and can help diminish plaque build-up.

*discourses about functional foods* (Crawford, Brown, Nerlich and Koteyko 2010); (b) *analysis of health claims* (Dragicevich, Williams and Ridges 2006); (c) *consumer preferences, impressions and attitudes towards functional foods* (Childs 1998; Hailu, Boecker, Henson and Cranfield 2009; IFIC 2007; Landstrum, Koivisto-Hursti and Magnusson 2009); (d) *consumption patterns and habits for functional foods* (Herath, Cranfield and Henson 2008); (e) *definitions and developments* (ADA 2009; Subirade 2007; Heasman and Mellentin 2001; IFIC 2007; IFT 2005; Kalra 2003; NCABR 2007; Wansink 2005); (f) *benefits* (Hasler 2002; Jones 2002; Patterson 2008; Shahidi 2009); and (g) *market opportunities* (PriceWaterhouseCoopers 2009). Functional foods have not been discussed through the narrative of an advertising campaign and in this case study I analyze how these narratives create anxiety and fear while reinforcing the individual responsibility for health. These narratives are constructed to increase consumer demand rather than convey accurate information about disease prevalence and risk factors for high cholesterol in women, and that is the goal of this paper.

By examining the narratives behind the cholesterolization of women's health, the sociology of diagnosis can identify the various stakeholders involved in the categorization of high cholesterol as a separate disease entity. By continually changing the definition and threshold of high cholesterol levels<sup>5</sup>, I argue that the expectation of normalcy has also been altered by the continual self-scrutinization by individuals. This paper discusses how high cholesterol becomes identified as a pseudo-disease and how this process is intensified for women through the

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<sup>5</sup> The definition for what constitutes high cholesterol has been continuously broadened to increase the potential catchment area. The U.S. based National Institute of Health's (NIH) cholesterol guidelines set in the 1990s meant 13 million Americans were eligible to be labeled as having high cholesterol. In 2001 those guidelines were rewritten so that 36 million Americans now had high cholesterol. In 2004 new guidelines emerged again with 40 million Americans now classified as having high cholesterol. (Moynihan and Cassels 2005:3; Welch, Schwartz and Woloshin 2011).

functional food narratives found in the Becel<sup>®</sup> pro.activ<sup>®</sup> advertisements. I first discuss how the sociology of diagnosis is a prism<sup>6</sup> from which to analyze the key social contexts and people involved in the construction and exploitation of high cholesterol and women's health. I then analyze the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign using both content analysis and the framing processes developed by Benford and Snow (2000). I conclude with a discussion on how intimately connected functional foods are with the neoliberal citizen and give future considerations on the topic.

### **Sociology of Diagnosis**

Phil Brown (1995) first called for a sociology of diagnosis separated from the coattails of medical sociology in order to provide insight into how people understand and respond to their health and illness based on their personal circumstances, biographies, beliefs and concepts (p.47). By isolating the sociology of diagnosis on its own, topics such as doctor-patient interaction, medicalization, the medical-industrial-complex, disease labels and illness experience, the role of the pharmaceutical industry and health-based activist movements can be undertaken from multiple perspectives (Jutel 2011:5). Sociology of diagnosis allows for a richer understanding of the role of power and its fluidity within the diagnostic label, recognition and experience. What gets diagnosed and how this diagnosis unfolds is structured by powerful relationships within the medical-industrial-complex (MIC). Diagnosis is not just performed or enacted by medical doctors and professionals, but is also done by the self and this is an important growing trend, certainly identifiable within the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign and direct-to-

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<sup>6</sup> The use of the term 'prism' to describe how the sociology of diagnosis analyzes the various stakeholders and contexts of illness and disease was relayed to me via an email from Annemarie Jutel December 9th 2011.



consumer marketing (Ebeling 2011) and various health care policies (Alvaro et al. 2010; Crawford 2006).

The sociology of diagnosis extends beyond the micro-level explanations of illness and disease categorization and locates the individual and their disease within both macro and meso-level social structures (Brown, Lyson & Jenkins 2011:942). It provides a useful backdrop to not only explain the ramifications of diagnosing an individual, but more importantly, the organizational and institutional powers embedded in the diagnostic process. Most useful is the ability of the sociology of diagnosis to examine the medicalized approach to cholesterol and heart disease, which I argue both individualizes and depoliticizes the problem, potentially disenfranchising the individual, patient and consumer.

Preventive medical advice is now imbued with a fresh sense of urgency and prideful responsibility. Prevention is no longer strictly used with biomedical and evidentiary symptoms and markers, but is considerably more nebulous with its risk of 'border-line' or pseudo-conditions (Moynihan and Cassels 2005; Welch 2011; Payer 1992). Instead of diabetes, we now have pre-diabetics; instead of heart disease there is high cholesterol; and instead of high blood pressure there is borderline hypertension. A family history of high cholesterol is now framed as 'Familial Hypercholesterolaemia' (FM) (Goldberg et al., 2011). A sociology of diagnosis approach can examine the social construction of high cholesterol and the social political contexts influencing how health, illness, disease and preventive care are structured (Brown 1995).

Diagnosis has the power to confer legitimacy upon a labeled sickness or to direct responsibility for healing. Diseases and their social 'discovery' and subsequent labelling are part of a great complex of social, political, economic, pharmaceutical and medical contexts. Exploring these

contexts "...provides a greater understanding of both the fluidity and fallibility of the diagnosis" (Jutel 2011:13). Diagnosis is known for being both a category and process (Blaxter 1978), a process and label, a set of classification tools (Jutel 2009), and even marketing tools for corporations (Ebeling 2011).

Diagnosis both organizes and structures illness and disease, providing or guiding treatment, prognosis, resource allocation and responsibility for care. There is no doubt diagnosis can result in positive outcomes such as legitimizing illness, conferring a new identity for patients, providing structure for prognosis, treatment and insurance claims. However, how these disease categories are manufactured and maintained through broader social and political contexts are not always beneficial for the actual patient or consumer (Jutel 2006:2275). Formally recognizing a disease or set of symptoms at the exclusion of others defines which health priorities and government policies will be followed. For a certain condition to be classified as a medical disease, Jutel (2011) argues it must be both "visible to medicine", agreed upon and is used to simplify conditions in order to organize, research and analyze medical data (p.16-17). This classification then determines the course of action for both patients, doctors, food corporations, pharmaceuticals and marketing campaigns. It is this focus on the fluid *process* of diagnosis, rather than the static classification that is the aim of this paper.

The sociology of diagnosis surrounding various illnesses and diseases examines the dismantling of a strictly binary relationship of sickness and wellness, health or illness. Now, there is a scale, or continuum where people can always become 'healthier', and the co-existence of pre-disease and preventive care is used to ward off potentially new diseases. But this state of optimum health is never fully achieved, since people are "perpetually becoming" (Armstrong 1995:402), constantly in the state of reforming, refining and re-assessing themselves. Armstrong notes, "the

real significance lies in the way in which a surveillance machinery deployed throughout a population to monitor precarious normality delineates a new temporal risk identity" (1995:403). Charles Rosenberg (2002) labels this the "tyranny of diagnosis", arguing that people are never completely ill or healthy, but occupy an intermediary position, which is a fluid accumulation of their experiences (p.256-258).

It is no coincidence that the functional food market has blossomed in recent years spawning an increasing array of foods that have either been newly created or rebranded towards lowering cholesterol. These include *Quaker*<sup>®</sup> *Oatmeal Squares Cereal*, *Kellogg's*<sup>®</sup> *All Bran-Buds*, *Cheerios*<sup>®</sup> *Cereal*, *Campbell's*<sup>®</sup> *Heart Healthy Soup*, *California Almonds*<sup>®</sup>, *Smart Balance*<sup>®</sup> *Buttery Spread* and *Minute Maid*<sup>®</sup> *Heart Wise orange juice*. The message now is that, through the consumption of foods fortified with plant sterols<sup>7</sup> (like *Becel's*<sup>®</sup> *pro.activ*<sup>®</sup> margarine), individuals can steer their own health-directed vessels.

As a result, what has occurred is a "liberalizing of the disease concept" (Blaxter 1978:10). While health agencies (such as the Heart and Stroke Foundation, Health Canada, American Heart & Lung Association, WHO and CDC), and food corporations have acknowledged the multi-casual pathways for heart disease, the emphasis remains on the politically palatable notion of personal lifestyle and behavioural modifications. What has increasingly occurred with the co-rise of functional foods and the lifestyle focus is the formation of the 'pre-disease' state where risk factors for diseases become disease-states themselves. And the medical-industrial-complex

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<sup>7</sup> Plant sterols are "...natural, fat-like compounds structurally similar to cholesterol. Plant Sterols can be commonly found in vegetables, fruits, legumes, unrefined vegetable oils and tall oil..." (Agriculture and Agri-Food Canada August 2008: 1). Plant sterols "provide safe additional cholesterol lowering effect with statins...and may reduce the risk of coronary heart disease by reducing blood cholesterol levels as part of a diet low in saturated fat and cholesterol (p.2).

(MIC) including pharmaceuticals, biotechnology and food corporations have been the primary supporters of this new age of medicalization (Jutel and Nettleton 2011:795). The seemingly healthy person devoid of obvious medical symptoms can now with the aid of lowered cholesterol target ranges, be newly diagnosed as "at-risk-of" or "pre-diseased". This new identity blurs the boundaries between actual disease and *disease-in-waiting*.<sup>8</sup>

This rise of the new social identity of 'pre-disease' is sociologically important as diagnosis now extends beyond actual diseases to include the risk factors, thereby creating a completely new category of patients, and is a significant dimension of this new modern form of advertising. This new social identity of pre-everything is worthy of sociological attention for it is premised on a neoliberal concept of social individual empowerment and freedom of choice, while circumventing the responsibility for structural and social issues back upon the individual.

The increasing tendency to target everyone is a feature of what David Armstrong (1995) calls 'surveillance medicine', which "involves a fundamental remapping of the spaces of illness [whereby] the very nature of illness is reconstructed" (p.395). As 'normal' is increasingly being re-defined, intervention and surveillance necessarily extends beyond the hospital and medical establishments to include new techniques of individualized self-scrutinization such as symptom checklists, risk assessment tests and food advertisements. The extension of this type of

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<sup>8</sup> New illnesses are constantly emerging including former conditions like shyness, rechristened into "*social anxiety disorder*"; leg cramps into "*restless leg syndrome*"; premenstrual cramps becomes "*premenstrual dysphoric disorder (PMDD)*" (Ebeling 2011); adults with short attention spans like their children are now known as *CHADD (Children and Adults with Attention-Deficit/Hyperactivity Disorder)*"; digestive upset is now "*Irritable bowel syndrome*" (Moynihan and Cassels 2005); and low sex drive in women is now called "*Female sexual dysfunction*" or FSD (Moynihan and Mintzes 2010).

surveillance into "extracorporal space" (Armstrong 1995)<sup>9</sup> -is indicative of the prominence of lifestyle and diet modifications favoured by both food corporations and government health policies (Jutel and Nettleton 2011:795). This new mode of surveillance attempts to anticipate and prevent all forms of abnormality, but simultaneously generates a growing body of risks (Castel 1991:288-289). This is why the sociology of diagnosis is so fruitful here, because high cholesterol can be 'invisible' (i.e. symptomless), and therein lies the danger, because this normative state is being increasingly scrutinized, screened and surveyed by both the medical community, food corporations and individuals themselves.

Novas and Rose (2000) state this is a new type of 'somatic individual' (external and internal government of the body), where there is a duty, an obligation and moral imperative to take care of oneself, to be well and avoid sickness, which creates the "obligation to act now to avoid future illness" and also "creates new ethical responsibilities" for individuals (Novas and Rose 2000:486-487). But diagnosis cannot be isolated from human agency and individuals are not passive, but actively participate in this forum of governmentality and surveillance through questionnaires, risk assessments tests, exercising, the reading of ingredient labels, seeking alternative medical advice, challenging medical authority and eating healthy foods (i.e. functional foods). This new individual is more informed and consistently seeking new information on health (Jutel 2011:39; Novas and Rose 2000:489). In fact, Nettleton (2004) terms this surge of readily available medical information 'e-scaped medicine', where "the spaces, sites and locations of the production of medical knowledge are now more diffuse and are invariably

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<sup>9</sup> "Extracorporeal space" (Armstrong 1995) delineates a space beyond the body, to aspects that are generally less tangible such as health behaviour or healthy lifestyles. Body surveillance both from an individual, government and corporate perspective is now viewed across time and space to encompass less medically-based risk factors such as obesity or diabetes, and encroach upon an individual's dietary and behavioral habits.

mediated by means of digital technologies" (p.673). There is a convergence of the spaces of illness defined by checklists and tests, and the spaces where knowledge is produced in advertisements, such that illness and knowledge occur simultaneously in the ads. Nettleton (2004) argues medical knowledge has 'escaped' the traditional medical confines of bureaucracy and now permeates our everyday lives. Individuals can access information about their health or potential risk factors through direct-to-consumer advertising, food ads, television commercials, magazines, newspaper articles and the internet. Identity formation in this hyped-stated of cholesterol fear is both "plural and multiple", as people can occupy multiple roles simultaneously. For instance, an individual can identify as both a woman, someone at risk of developing heart disease and a family caregiver. As social and personal as diagnosis may be, it is always a 'bureaucratic event', "linking the individual to the social system" (Rosenberg 2000:255).

## **Methods**

### **Magazine Selection**

I searched the *Magazine Publishers of America* (MPA) website in January 2011 for a listing of the *Top 100 Audit Bureau of Circulations (ABC)* magazines. I included only the 2010 listing of magazines and looked for functional food advertisements in the top American titles. For Canadian magazines I used the *Masthead Special Report* for a listing of the top 50 magazines, of which I looked at the top 10 English-language magazines. Of these top North American based magazines I narrowed the titles down to the top three magazines by circulation in eight different categories including: (1) American General Interest; (2) Women's Health; (3) Men's General Interest; (4) Older (40+); (5) Women's General Interest; (6) Home; (7) Canadian General Interest; and (8) Parenting. Each category contained the top 3 magazines by circulation for a total of 24 magazines.

Hardcopies of the magazines for the entire 2010 year were obtained through magazine subscriptions, purchasing of back issues and sourcing issues through local libraries and on-line through the specific magazine websites. Functional food advertisements were chosen if they fit one of two criteria: (1) the food was naturally functional (i.e. almonds) and linked to a health condition; and/or (2) the food contained an added ingredient thereby functionalizing the product (i.e. Probiotics in Yogurt, Plant Sterols in Margarine). The advertisements presented the functionality of the food and related it to the prevention of an illness or disease (e.g. Plant Sterols in margarine can reduce cholesterol and help prevent heart disease). Of the 24 magazines, an initial search uncovered 520 ads, which was further reduced upon a more critical second analysis to a new total of 351 functional food advertisements.

**Table 9. Top 5 functional food advertisements in 24 North American magazines**

Ranking	Brand	# of ads	%	Health Claim	Symbol	# of magazines ads featured in
1	California Almonds <sup>®</sup>	61	17.4%	Heart Disease/Cholesterol	Yes	13
2	Kellogg's <sup>®</sup> All Bran Buds*	45	12.8%	Fibre/Regularity	No	11
3	Becel <sup>®</sup> Margarine	29	8.3%	Heart Disease/Cholesterol	Yes	7
4	Campbell's <sup>®</sup> Soup	28	8.1%	Heart Disease/Cholesterol	Yes	10
5	Planters <sup>®</sup> Nuts	20	5.7%	Heart Disease/Cholesterol	Yes	6
Total		183**	52.1%			

\* Kellogg's<sup>®</sup> All-Bran Buds has recently changed the packing of their products to reflect that "diets low in saturated fat and cholesterol that include 7 grams of soluble fiber per day from psyllium may reduce the risk of heart disease". This health claims now carries a 'heart healthy selection' symbol also.

\*\*183 of the 351 total functional food advertisements are comprised of the top five brands above.

A total of 46 different functional food types were found in the 351 advertisements, of which I examined the top 5 as seen in Table 9. The top five types of functional food advertisements shown in Table 1 reveal that 4 out of 5 (80%) focus on heart disease and cholesterol related issues. The same four types of advertisements also contain a health symbol or checkmark to denote a heart focused food product. These symbols were usually part of a cross promotion with a sponsored institution (i.e. cause marketing or corporate philanthropy), and include the *Canadian Heart and Stroke Foundation*, the *American Heart Association* and *Love Your Heart* symbols. Although the Becel<sup>®</sup> brand is well associated with heart health, I did not focus on their two other campaigns ("Love your heart" and "The Heart Truth") to ensure a streamlined focus, and instead I examined only one functional food campaign, --Becel<sup>®</sup> pro.activ<sup>®</sup> margarine because of the complexity of their campaign, the focus on women and high cholesterol, the obvious narrative in the advertisements and Becel's<sup>®</sup> involvement as a major sponsor of the Heart and Stroke Foundation, Canada's leading heart authority. The Becel<sup>®</sup> pro.activ<sup>®</sup> advertising campaign includes six specific advertisements in chronological order starting in September 2010, and each successive advertisement is a continuation of the previous narrative and characters introduced and include stories about cholesterol concerns with everyday narratives from women. Becel<sup>®</sup> pro.activ<sup>®</sup> advertisements were featured in two women's-only Canadian magazines, *Canadian Living* (general interest for women) and *More* (women over age 40).<sup>10</sup> *Canadian Living* is Canada's second most widely read magazine with an average readership of 3.8 million and publishes 12 issues a year. (Masthead 2010). Their editorial aim to

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<sup>10</sup> These advertisements were featured in the September 2010, October 2010 and November 2010 issues for *Canadian Living magazine* and the November 2010, December 2010/Jan2011, and February/March 2011 issues for *More magazine*. Although the last advertisement (Feb/March 2011) falls outside the year 2010, it was chosen because it was the last advertisement that was part of the Becel pro.activ campaign.



be a source of "relevant lifestyle and food information and inspiration for busy women" (Canadian Living Media Kit 2012: 3). *More* magazine's mission statement is to be the "...leading voice of an affluent, influential community for women of style and substance...", (More Media Kit 2012:1) and indeed their average reader is affluent with a median household income of \$100,000 and an average age of 51. *More* has a circulation of 1.3 million and publishes 10 issues a year. The Becel *pro.activ* campaign which was exclusively printed only in *Canadian Living* and *More* magazines, fits seamlessly with the magazines 'sisterhood' narrative and "can-do" spirit showcasing personal stories of weight loss and healthy lifestyles in the hope that women can balance career and family obligations while having a "...stylish perspective and youthful energy" (More Media Kit 2010: 2).

Engaging consumers in a meaningful way is becoming increasingly more difficult due to the multiple media platforms inundating consumers on a regular basis, and engagement is vital for transforming the branded message (i.e. high cholesterol) into an action (purchasing a product, visiting a website, or telling a friend) and maintaining an on-going relationship between brand and consumer (brand loyalty). Accordingly, Unilever Canada, which owns Becel<sup>®</sup> spent \$12,730,226 in advertising specifically for Canadian magazines in 2010, which was a 33% increase from 2009 (Magazines Canada 2011:23). The money was well spent as Becel<sup>®</sup> won Bronze in the "Best Brand Awareness and Trial Campaign" by the internationally recognized *Globes* in 2011. Since magazines have become reliable sources of go-to information for health and wellness for the average consumer, these targeted Becel<sup>®</sup> ads are framed as credible and trustworthy -by their very placement in such iconic Canadian magazines, and Becel<sup>®</sup> *pro.activ*<sup>®</sup> targets the very same demographics as the magazines (women aged 25-54). The successful launch of Becel<sup>®</sup> *pro.activ*<sup>®</sup> according to the *Globes* is due to the health care professional

audiences selected (physicians, dietitians and pharmacists), and the innate sense of security deriving from a medical professional's recommendation which is reinforced by the seal of approval of *Canadian Living* and *More* magazines, which pride themselves on helping their readers "...take charge and make smart health, wellness and nutrition decisions for themselves and their families" (Canadian Living Media Kit 2011: 8).

### **Content and Frame Analysis**

Content analysis was used as a way to document the representation of both women and dominant themes such as cholesterol, heart disease and lifestyle promotion. However, content analysis while focusing on individual categories prevents a holistic picture from emerging. The attention to the denotative level also obscures the important connotative meanings behind the images.

Lastly, the complexity and intricateness of the advertisements is not fully appreciated because of the tendency to "average or universalize meaning" (Leiss, Kline, Jhally and Botterill 2005:163).

Frame analysis focuses attention on the dominant problem frame within the Becel<sup>®</sup> campaign, (i.e. high cholesterol) and how this problem is described, diagnosed, morally scrutinized and given remedy for. The first step of this frame analysis is to identify how high cholesterol is described as problematic for women (the dominant problem frame) and this is accomplished by salience, "making a piece of information more noticeable, meaningful, or memorable to audiences. An increase of salience enhances the probability that receivers will perceive the information, discern meaning and thus process it, and store it in memory" (Entman 1993:53).

Frame analysis is helpful in examining three propositions: (1) that high cholesterol is a disease-state; (2) that the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign frightens and empowers women simultaneously; and (3) that Becel<sup>®</sup> sells the individual notion of personal responsibility for health.

## **Introducing Becel<sup>®</sup> pro.activ<sup>®</sup> to the consumer**

On June 1st 2010, Becel<sup>®</sup> launched their new pro.activ calorie-reduced margarine with plant sterols, which fits the current trending demographic of the health conscious consumer. (Unilever Press Release 2010). The Becel<sup>®</sup> pro.activ<sup>®</sup> campaign includes six specific advertisements that follow the story of two young Canadian women (Katie and Tara), struggling with high cholesterol and the registered dietitian Maria Ricupero who provides her medical expertise in helping these women lower their cholesterol. Although the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign included two advertorials featured in *Zoomer Magazine*, this paper will not address them as they are a distinctly different campaign geared towards an older clientele. Becel's<sup>®</sup> website links the rising trend of high cholesterol with lifestyle choices and encourages people to make healthier dietary options:

Becel<sup>®</sup> pro.activ<sup>®</sup> is the first food with plant sterols available in Canada. Becel<sup>®</sup> pro.activ<sup>®</sup> contains plant sterols which help to lower cholesterol. 2 teaspoons (10g) of Becel<sup>®</sup> pro.activ<sup>®</sup> provides 40% of the daily amount of plant sterols shown to help lower cholesterol in adults. High cholesterol is a risk factor for heart disease. By adding plant sterols contained in Becel<sup>®</sup> pro.activ<sup>®</sup>, as part of an everyday heart healthy diet and lifestyle, Canadians can help lower their cholesterol. ([www.loveyourheart.ca](http://www.loveyourheart.ca))

Becel then narrows its target audience for these advertisements by focusing specifically on women:

Heart disease and stroke is the leading cause of death for women in Canada, but most don't know it.

The good news is that cardiovascular disease is often preventable. Women can reduce their risk by as much as 80 percent by making lifestyle changes. Taking a look at your risk factors and your current lifestyle, you can make small positive changes to everyday habits.

Like many women, you may be so busy taking care of others that you don't always look after yourself. Yet enjoying a long and healthy life is the best gift you can give to those you love. ([www.becel.ca](http://www.becel.ca))

The Becel<sup>®</sup> pro.activ<sup>®</sup> campaign consistently conveyed two overarching messages: (1) the sense of urgency directed towards women and heart disease, which has transformed high cholesterol into a disease, rather than a risk factor; and (2) the emphasis on lifestyle and behavioural modifications as a personal solution to heart disease. While heart disease and stroke may be the leading cause of death of women in Canada, an important fact is excluded in this campaign--it is mediated by age. In fact, "...in Canada, it is not until women are in their 80s that heart disease becomes the number one cause of death. Women between the ages of 30 and 79 are most likely to die of cancer, not heart disease" (Lippman 2006:3; Statistics Canada 2006:57-58). This omission of age-mediated risk not only changes the sense of urgency, but it falsely creates it. Interestingly, the other functional food advertisements (California Almonds, Campbell's Soup and Planter Nuts) also make no mention of the age mediated risk for heart disease. These ads mainly featured in U.S. based magazines do however have a disclaimer reading: *"while many factors affect heart disease, diets low in saturated fat and cholesterol may reduce the risk of heart disease"*.

### **Diagnostic Framing**

Snow and Benford (1988) define diagnostic framing as the "identification of a problem and the attribution of blame or causality" (p.200), and while consensus is usually achieved around the initial identification and declaration of a problem, views may differ on where the blame lies. Becel's<sup>®</sup> introductory declaration of a problem (i.e. high cholesterol) is authoritatively stated in Figure One -which introduces the new Becel<sup>®</sup> pro.activ<sup>®</sup> margarine as *"one giant leap for heartkind"*, an attempt to associate it with the moon landing ("that's one small step for man, one giant step for mankind"), and this bold assertion sets the tone for the entire campaign. The pro.activ term itself is an indexical sign for activity, with connotations of health, wellness and

exercise. The word 'pro' pre-fixed to any word denotes a positive attribute, and the 'pro.activ' in this case indicates support for health and activity. Like many previously "discovered" diseases (menopause, restless leg syndrome), a solution is presented *first*, (Becel<sup>®</sup> pro.activ<sup>®</sup> with plant sterols to lower cholesterol), followed by the second advertisement which introduces the problem (*Concerned about cholesterol?*), with the remaining advertisements building upon this assumption (*Be proactive with Becel<sup>®</sup> ...For many Canadians managing cholesterol is one important way to stay heart healthy*). The assumption is made that: (1) cholesterol is indeed a problem or at the very least a concern for Canadians; (2) your cholesterol needs to be managed or "kept in check"; and (3) Becel<sup>®</sup> is the solution or answer to your cholesterol worries. The high cholesterol 'problem' must be carefully framed in a diagnostic manner so as to elicit enough concern to mobilize action, but not framed so problematically as to render the situation hopeless (Benford and Snow 1988:203).

The Becel<sup>®</sup> ads convincingly state the cholesterol threat to women (by showcasing only women, using a female medical expert and linking to [www.loveyourheart.ca](http://www.loveyourheart.ca) a co-sponsored fundraising effort with the Heart and Stroke Foundation). The fact that high cholesterol is only *one* of many risk factors for heart disease receives little notice in these ads. (Health Canada 2010; PHAC 2009). The elevation of one cause over others is common practice in social movement organizations and each risk factor for heart disease has its own advocates and important consequences for the prognostic ability to mobilize consensus (Snow and Benford 1988). The believability of the diagnostic framing stage is integral to the success of the prognostic phase, and elevating the risk factor of high cholesterol to a disease state is imperative to this successful transition. The premier stage of diagnosis whereby high cholesterol is deemed problematic, lends legitimacy to the newly minted disease and helps direct not only personal responsibility for it,

but also the future strategies and tactics to deal with said problem. By linking directly to a food product for consumption and detailing ways to personally accept responsibility for one's disease, certain health priorities are encouraged at the expense of others, as exemplified through the prognostic phase.

### **Prognostic Framing**

Snow and Benford (1988) describe prognostic framing as "...not only to suggest solutions to the problem but also to identify strategies, tactics, and targets" (p.201). Prognostic framing asks "what is to be done"? (p.201), and although not always, prognostic framing usually flows directly from the diagnostic efforts. In the Becel<sup>®</sup> campaign we see the prognostic framing (i.e. solutions) to high cholesterol through diet and behavior modification, and those who adhere to this "healthy lifestyle" approach tend to use a formulaic approach that continually emphasizes the same core issues. Namely, (1) the problem of high cholesterol resides within you as does the solution; (2) greater knowledge about nutrition and exercise will result in health transformations; (3) the solutions presented are realistic and achievable for the average Canadian; and (4) there is a sense of urgency to implement these tactics in order to avoid further problems.

The 'healthy lifestyle discourse' (Korp 2010) is common practice amongst health care agencies, government health policies, corporate initiatives, and medical advice. Who among us would not benefit from following the sage advice offered by Becel's<sup>®</sup> health expert Maria Ricupero, (e.g. *"eat a balanced diet, include plant sterols in your diet, focus on healthier fats, keep active, give up smoking"* - Figure 3)? I am not suggesting that avoidance of smoking and saturated fats are not helpful to one's health --simply that these proposed solutions take precedence over broader socio-political and economic determinants of health and this framing of healthy lifestyle and consumption effectively minimizes a public discourse of other options. When cholesterol is

diagnosed as a disease in need of management, a litany of strategies and tactics that predominantly features personal responsibility and accountability follow. One of the most powerful strategies employed in the prognostic framing efforts of Becel's<sup>®</sup> campaign is the play on fear, "*High cholesterol is a risk factor for heart disease*" - Figure 1, --and the relative easy solution, "*Consuming 2-3 servings per day of plant sterol fortified foods, like Becel<sup>®</sup> pro.activ<sup>®</sup> can help lower your cholesterol by 10% starting within 3 weeks*" - Figure 3. These claims help reinforce the relative ease with which you can lower your cholesterol, and these numerical pronouncements almost declare victory against high cholesterol before you've even purchased a container of margarine. Again the solution is presented as within your grasp, all the consumer needs is 2 tsp of Becel<sup>®</sup> daily to begin seeing results. And for the extra vigilant 'proactive' consumer, "*find out more at [www.loveyourheart.ca](http://www.loveyourheart.ca)*", which links to the Heart and Stroke Foundation's website regarding heart disease and high cholesterol literature. This link espouses the benefits of self-scrutinization, calling attention to the personal (through diet and exercise) ways you can reduce your cholesterol risks while also enjoying the benefits of Becel<sup>®</sup> margarine. In these advertisements knowledge and illness occur simultaneously. Women can find out about this cholesterol problem while also learning how to change their diet and exercise habits.

Typical procedures in prognostic framing tactics is to clearly identify the strategy (healthy lifestyle, being proactive, taking responsibility), and the target goal (lowering your cholesterol by 10%). As can be seen in Table 10 -each of the six advertisements include multiple mentions of high cholesterol as the risk factor for heart disease and lifestyle modifications as the solution.

**Table 10. Predominant themes in the six Becel® Advertisements**

Themes	Number of occurrences
Pro.activ® *	57
Cholesterol	103
Heart Disease	25
Plant Sterols	57
Lifestyle & Behavioral Modifications	81

\* Pro.activ® is the registered trademarked name for Becel®'s new margarine; it is a play on the word "proactive" and is dominantly featured in the campaign.

Fear is continually reinforced as a motivator for action and Becel's® decision to feature two young women struggling with high cholesterol is not an accident. Tara is only 25 years old, while Katie is 42. They look like average women (seemingly like you or I), to garner wider appeal to viewers who may identify with their struggles. Changing the view that high cholesterol only affects older women, is part of the strategy to increase the consumer base so that more women, -purchase a product designated for heart disease prevention. The Becel® campaign is noteworthy for its ability to simultaneously create a fear surrounding cholesterol yet empower women to "*keep their cholesterol in check*" and "*tackle their cholesterol concerns*" (Figure 1). Figure 2 announces that Becel® has selected volunteers to "*take charge of their health*", through healthier eating habits and lifestyle changes, while Figure 3 introduces the two main characters of this narrative, Katie and Tara, who relay their cholesterol concerns and lifestyle habits. Katie says, "*I was shocked to discover I had elevated cholesterol levels. I'm hoping to get my cholesterol back in check*". The ad notifies us that Katie is an "admitted junk food junkie, with a diet high in fast foods and snacks" --placing blame on Katie's unfortunate dietary habits. We then learn that Tara, age 25 has "*struggled to lower her cholesterol for years*", Tara exclaims, "*I hope that dietary changes and regular exercise will help lower my cholesterol levels*".



Katie and Tara, armed with their diagnosis of high cholesterol, are resilient in their commitment to "making an easy adjustment" (Figure 3) and taking personal responsibility for their health. Recommendations include "exercising 30-60 minutes daily, giving up smoking, and controlling stress levels" (Figure 3). These ads implore the reader with realistic adjustments, --adding 2 tsp of Becel<sup>®</sup> pro.activ<sup>®</sup> everyday, eating a varied diet as laid out by Canada's Food Guide and eating heart-healthy foods can lower your cholesterol by 10%. Although their picture is not a narrative in itself, the accompanying storyline is indeed narrative and effectively "naturalizes the content of the narrative itself" (Hodge and Kress 1988:230). It is a personal story, imbued with a sense of female empowerment, personal autonomy and responsibility. As the advertisements progress, we hear directly from Katie and Tara about their newfound heart healthy lifestyle: "*I knew I had to make changes.....I know that living a heart healthy lifestyle is important*". Their narrative stories in Figures 5 and 6 show an internalized responsibility for health, through dietary and behavioural changes and consumption.

Figure 4 is when the authority figure of Maria Ricupero is first introduced as a registered dietitian, specializing in heart disease. Maria explains what cholesterol is and how plant sterols (as found in Becel's<sup>®</sup> product) can lower your cholesterol. In Figure 5 Maria gives more recommendations that seem "easy" to implement (*increase your fibre, choose healthy fats, include plant sterols, chose lean cuts of meats*) --all of these tips are individual-based solutions to high cholesterol. The expert dietitian is always positioned in a separate box from Katie and Tara, to emphasize her distinct authority and expertise over that of the lay-person. Textually, this is further enforced by the use of the expert's full name (Maria Ricupero) while Katie and Tara are known only their first names. This medical expertise is evident not only in the powerful position allocated to the dietitian, but also to the numerous government authorities mentioned in the

advertisements and website for Becel<sup>®</sup>, such as Health Canada's Food Guide, the Heart and Stroke Foundation and Statistics Canada. Although the first two advertisements are written in an authoritative manner whereby high cholesterol is naturalized and assumed to be a general concern for Canadians, it is in Figures 3-6 that the use of experts is introduced as a way of enforcing the high cholesterol 'epidemic' and the need for medical expertise.

Katie and Tara confirm their disease status and wayward eating habits and in the end take personal responsibility for the role they played in the disease and how they will manage it in the future. In Figure 5, Katie says *"I knew I had to make changes"*, owning the responsibility for her health, Katie shares how easy it is to take control, *"I like Becel<sup>®</sup> pro.activ<sup>®</sup>--I'm using it instead of mayonnaise on my sandwiches..."*. Now Katie links her personal lifestyle choices to her mental outlook, *"with all these changes, I feel better"*. Tara tells us that *"I knew that living a heart healthy lifestyle is important"*. Tara details her commitment to a better life, *"I've been doing cardiovascular exercise. I've cut back on fatty foods...I've added Becel pro.activ to my veggies...and I'm excited to see the results of my hard work"*. A sense of equality is derived from the eye level of the represented participants, (Katie and Tara) who are neither seen from a high nor a low angle, but directly at eye level, suggesting an equal distribution of power and authority between them and the viewer. It forces the viewer to ask themselves, *if these two women can have high cholesterol, maybe I do too? If these women can change their health, maybe I can also.*

Becel's<sup>®</sup> advertisement campaign is reminiscent of government health campaigns (ParticipACTION)<sup>11</sup>,--which serve as public service announcements, highlighting the health

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<sup>11</sup> "ParticipACTION" is the longest running Canadian health promotion campaign, which encourages physical activity and healthy living through awareness and educational commercials and advertisements.

problem and acting as a way to morally induce personal responsibility for health and wellness. Nowhere in these ads is it mentioned that heart disease is age-mediated, that people in lower SES are more apt to have higher CVD, and that increased dietary knowledge does not translate into lower cholesterol rates (Clark, Duncan, Trevoy, Heath and Chan 2010). The prognostic framing of "what is to be done" is answered by the repeated tips and recommendations to personally change one's diet and exercise habits. There is little ambiguity between the linear framing of high cholesterol as a risk factor for heart disease along with Becel<sup>®</sup> pro.activ<sup>®</sup> and dietary and behavior modification to equal a heart healthy lifestyle. The Becel<sup>®</sup> campaign does not waiver in its formula of consumption of Becel<sup>®</sup> pro.activ<sup>®</sup> margarine along with a personal commitment to healthier living to reduce cholesterol levels.

The greater the alignment between the diagnostic and prognostic frames, the more successful the motivation frames (to mobilize action) can be, and certainly the more convincing the argument or veracity of the original high cholesterol diagnosis. Since the issue of high cholesterol is framed as a personal and individual problem for women with familiar narratives like Katie and Tara's, there seems little room for disagreement or debate on either the causes of high cholesterol (diagnosis) or the solutions (prognosis). This coincides with the burgeoning field of "healthism" (Crawford 1980), body projects (Shilling 1993), regulating the body (Lupton 1995) and the middle class agenda of working on oneself (Crawford 2000; 2006). The ideas espoused in Becel's campaign fits with the central tendency that health is a "supervalue", (Crawford 2006), a personal commodity to be worked on and pursued.

This Becel<sup>®</sup> pro.activ<sup>®</sup> campaign includes double-coded messages that simultaneously declare a problem (high cholesterol) while situating the solution within the individual. Specifically

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targeted to women this campaign encourages women to not only make healthier lifestyle choices for themselves, but also for their families. This emotional appeal for women to attend to their families' well-being fuses a gendered labour with love, and a 'caring dilemma' (Reverby 1994) is enforced whereby caring as an identity is conflated with a feminine obligation. These advertisements disarticulate the 'disease' of high cholesterol from the contexts of people's lives, and the promotion of margarine as a heart-healthy option excludes alternative ways of managing and reproducing health. (*"Like many women, you may be so busy taking care of others that you don't always look after yourself". www.becel.ca*)

In its entirety, the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign misrepresents the risk of heart disease for Canadian women by ignoring the age-mediated factors, and by over-emphasizing the role that cholesterol plays. It urges women to take personal control over their heart health through a self-help dictum of false empowerment, while situating the medical expertise well beyond the grasp of the individual. Becel<sup>®</sup> pro.activ<sup>®</sup> further encourages the medicalization of a hitherto unknown 'disease' of high cholesterol, while implicating the gendered ideal of caregiver as the naturalized solution.

### **Discussion: The Cholesterol Landscape**

These Becel<sup>®</sup> images reinforce personal responsibility and consumption as a means of preventing heart disease and high cholesterol. The real target of these Becel<sup>®</sup> advertisements are not the people most likely to get heart disease such as low income low-educated people (Franks, Winters, Tancredi and Fiscella 2011; Potvin, Richard and Edwards 2000; Choiniere, Lafontaine and Edwards 2000) -but the upper middle class most likely to spend disposable income on luxury functional foods products such as Becel<sup>®</sup> pro.activ<sup>®</sup> margarine. By encouraging the consumption of 'value-added foods' such as functional foods and behavior modification, rather

than ameliorating the circumstances responsible for high cholesterol and heart disease in the first place, such as income inequality and poverty, (among many others) (Evans, Barer and Marmor 1994), the Becel campaign shows "depoliticizing effects of the normalization of the disease" (King 2006:103) which allows Becel<sup>®</sup> to contribute to a heart disease culture that vilifies high cholesterol while simultaneously providing an anti-cholesterol product for consumption.

These advertisements call upon viewers to respond to the problem of high cholesterol by demanding more of themselves and less of the government. As Samantha King writes, Becel's<sup>®</sup> advertising and its association with the Heart and Stroke Foundation of Canada can be seen as "tools of the neoliberal governmentality" (2006:45). Becel's<sup>®</sup> ultimate customer is strikingly similar to the neoliberal persona-- a woman who is self aware, knowledgeable, motivated to change and willing to take personal responsibility instead of relying on government social assistance.

Cardiovascular diseases (CVD) disproportionately affect the poorest segments of the population (Clark, Duncan, Trevoy, Heath and Chan 2010) yet the functional food advertisements, along with all major Canadian health care agencies (PHAC 2009; Health Canada 2010; HSF 2012) highlight the middle-class initiatives for change. Lifestyle and behaviour modifications account for such a minimal change in the incidences of CVD (such as heart disease) yet they are seized upon by health policies and are further encouraged by food and pharmaceutical corporations (LaLonde 1974; Black, Morris, Smith and Townsend 1980; Raphael 2003). The risk factors of tobacco, alcohol and poor eating habits are traditionally income or education related and the more economically disadvantaged lack the resources to effect positive change (Link and Phelan 2005). While income and education have shown to have the greatest influence on CVD rates, high cholesterol is continually touted as having a direct and modifiable link (Choiniere,

Lafontaine and Edwards 2000). Health and lifestyle behaviours are not simply choices, but coping mechanisms shaped by people's "social and economic environments" to deal with the effects and stress of deprivation (Raphael and Farrell 2002:iii). Research has shown that "...the cumulative effects of social disadvantage across the life course adversely impact cardiovascular health" (Franks, Winters, Tancredi and Fiscella 2011:32). In fact, researchers have called for the inclusion of socioeconomic status as a risk factor for CVD (Franks et al 2011).

Simply acquiring the right information (which risk factors to avoid) and following suggestions to modify diet and lifestyle choices will not necessarily lead to lower cholesterol levels and risk of heart disease for women and belies a complex intersectionality of gender, income and health inequities that cannot be easily modified by individuals.

In the end, Becel<sup>®</sup> is in the business of selling products--margarine specifically, but associating itself with a cause (women's heart disease) allows its brand to be viewed altruistically (King 2006). The success of Becel<sup>®</sup> pro.activ<sup>®</sup> lies in its ability to recruit new customers and to make sure they believe that high cholesterol is a risk factor to be feared. This has produced a new hybrid person, what I call the *individual-consumer-citizen*.

## **Conclusion**

In this paper I have argued the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign constructs cholesterol as a disease, frightens and empowers women at the same time, and sells the individualized notion of personal responsibility for health. The narrative involved in Becel's<sup>®</sup> advertising campaign magnifies an already intensified state of anxiety surrounding the *potentiality* of risk and disease. This democratization of health for the lay public has turned into the cholesterolization of a nation, where personal culpability is transformed into a banner of consumer empowerment. The

connection between health and consumerism, a fantasy land of low-cholesterol living was not born in a vacuum but rather "draws its oxygen" (Douglas and Michaels 2004) from the social climate of risk, the medical imperative for cholesterol management, the approval of trustworthy Canadian magazines and the link to reputable heart-healthy corporations such as the Heart and Stroke Foundation. The incessant warnings of high cholesterol as a major risk factor for heart disease for women specifically, serve as a reinforcement of Becel's<sup>®</sup> attempt to capture and package the collective experience of women who are *at-risk* of developing high cholesterol, or perhaps already have the "disease" yet do not know it. Relying on the promise of reduced cholesterol to sell the product also relies on women buying into the cholesterol myth in the first place, and to such an extent that consumption of a \$6.00 margarine becomes a necessity. This advertising campaign can be seen as inflaming or exaggerating the problem in order to alarm women just enough to warrant a purchase to analyze their cholesterol risk factors and potentially to inquire about a pharmaceutical drug (Lipitor) in the future.

A more nuanced appreciation of the Becel<sup>®</sup> pro.activ<sup>®</sup> advertisements will come from a discussion of how actual consumers and people concerned with high cholesterol view and internalize the high cholesterol state of emergency and whether they see Becel<sup>®</sup> altruistically. Does a purchase of Becel<sup>®</sup> pro.activ<sup>®</sup> initiate an internal reflection of risk analysis, taking stock of one's lifestyle and nutritional intake? Do women who view these ads see themselves reflected in the personal stories of Katie and Tara? The need for constant vigilance surrounding the *potential* of high cholesterol for women stimulates an interesting discussion of our risk-saturated world, where the tone of these Becel<sup>®</sup> ads is not accusatory, nor condescending, yet strangely and falsely empowering, urging women to heed their warnings, to think about high cholesterol

on a daily basis, which reinforces a risk they themselves helped orchestrate, remembering the importance of being 'proactive' with Becel<sup>®</sup> to live a heart-healthy life.



**References for chapter 4/article 1**

- ADA (American Dietetic Association). 2009. Position of the American Dietetic Association: Functional Foods. *Journal of the American Dietetic Association* April 2009: 735-746.
- Agriculture and Agri-Food Canada. Phytosterols and Stanols: Complementing a healthy diet. C.A. Patterson, August 2008: 1-4.
- Alvaro, C., Jackson, L.A., Kirk, S., Mchugh, T.L., Hughes, J., Chircop, A., and Lyons, R.F. 2011. Moving governmental policies beyond a focus on individual lifestyle: some insights from complexity and critical theories. *Health Promotion International*, 26(1):91-99.
- Armstrong, D. 1995. The rise of surveillance medicine. *Sociology of Health & Illness* 17(3):393-404.
- Benford, R. D., and Snow, D.A. 2000. Framing Processes and Social Movements: An Overview and Assessment. *Annual Rev. Sociol.* 26:611-639.
- Berger, J.. 1973. *Ways of Seeing*, New York: The Viking Press.
- Birmingham, C. L., Muller, J.L., Palepu, A., Spinelli, J.J., and Anis, A.H. 1999. The costs of obesity in Canada. *Canadian Medical Association Journal* 160(4): 483-488.
- Black, D., Morris, J., Smith, C. and Townsend, P. 1980. *Inequalities in Health: Report for a Research Working Group*, Department of Health and Social Security.
- Blaxter, M. 1978. Diagnosis as category and process: the case of alcoholism, *Social Science and Medicine* 47(8):1067-1076.
- Brown, P. 1995. Naming and framing: the social construction of diagnosis and illness. *Journal of Health and Social Behavior (Extra Issue)*: 34-52.

- Brown, P., Lyson, M., and Jenkins, T. 2011. From diagnosis to social diagnosis. *Social Science & Medicine* 73:939-943.
- Canadian Community Health Survey Cycle 2.2: Nutrition (CCHS) 2004. Office of Nutrition Policy and Promotion Health Products and Food Branch. Health Canada. 2006. [http://www.hc-sc.gc.ca/fn-an/alt\\_formats/hpfb-dgpsa/pdf/surveill/cchs-guide-escc-eng.pdf](http://www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/surveill/cchs-guide-escc-eng.pdf).
- Canadian Living Media Kit. 2012. URL: Accessed August 1st, 2012. [http://transcontinentalpro.com/eng/pdf/canadianliving\\_mk\\_en.pdf](http://transcontinentalpro.com/eng/pdf/canadianliving_mk_en.pdf).
- Castel, R. 1991. From dangerousness to risk. In Burchell, G., Gordon C. and Miller P. (eds), *The Foucault Effect: Studies in Governmentality*. Brighton, Harvester Wheatsheaf.
- CDC. 2011. Heart Disease and Stroke Prevention at a Glance 2011. <http://www.cdc.gov/chronicdisease/resources/publications/aag/pdf/2011/Heart-Disease-and-Stroke-AAG-2011.pdf> Accessed July 1st 2011.
- Childs, N.M. 1998. Public policy approaches to establishing health claims for food labels: and international comparison. *British Food Journal* 100(4):191-200.
- Choiniere, R., Lafontaine, P., and Edwards, A.C. 2000. Distribution of cardiovascular disease risk factors by socioeconomic status among Canadian adults. *CMAJ* 162(9 Supple):S13-S24.
- Clark, A. M., Duncan, A.S., Trevoy, J. E., Heath, S., and Chan, M. 2010. Healthy diet in Canadians of low socioeconomic status with coronary heart disease: Not just a matter of knowledge and choice. *Heart & Lung*, 40:156-163.
- Crawford, R. 2006. Health as a meaningful social practice. *health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine* 10(4):401-420.

- Crawford, R. 2000. The ritual of health promotion. Pp. 219-235 in *Health, Medicine and Society: Key Theories, Future Agendas*, edited by C. J. Williams, J. Gabe, and M. Calman. London, UK: Routledge.
- Crawford, R. 1980. Healthism and the Medicalization of Everyday Life. *International Journal of Health Services* 10(3):365-389.
- Crawford, P., Brown, B., Nerlich, B., and Koteyko, N. 2010. Nutritional altruism and functional food: lay discourses on probiotics. *Sociology of Health and Illness* 32(5):745-760.
- Dragicevich, H., Williams, P., and Ridges, L. 2006. Survey of health claims for Australian foods made on Internet sites. *Nutrition & Dietetics* 63:139-147.
- Ebeling, M. 2011. 'Get with the Program!': Pharmaceutical marketing, symptom checklists and self-diagnosis. *Social Science & Medicine* 73:825-832.
- Entman, R. 1993. Framing: Toward Clarification of a Fractured Paradigm, *Journal of Communication* 43(4), Autumn:51-58.
- Evans, R.G., Barer, M.L. and Marmor, T.R. 1994. *Why are Some People Healthy and Others Not? The Determinants of Health of Populations*. Aldine de Gruyter, New York.
- Franks, P., Winters, P. C., Tancredi, D.J., and Fiscella, K.A. 2011. Do changes in traditional coronary heart disease risk factors over time explain the association between socio-economic status and coronary heart disease? *BMC Cardiovascular Disorders* 11:28-33.
- Goldberg, A.C., Toth, P.T., Rader, D.J., Danioels, S. R., Ito, M.K., Moriarty, P. M., and Ross, J. L. 2011. Familial Hypercholesterolemia: Screening, diagnosis, and management of pediatric and adult patients. *Journal of Clinical Lipidology* 5:S1-S8.
- Goffman, E. 1979. *Gender Advertisements*. New York, NY: Harper & Row Publishers.

- Hasler, C.M. 2002. Functional Foods: Benefits, Concerns and Challenges—A Position Paper from the American Council on Science and Health. *Journal of Nutrition* 132: 3772-3781.
- Health Canada. 2010. Heart Disease --Heart Truth. February 2010.  
[http://hc-sc.gc.ca/hl-vs/alt\\_formats/pdf/iyh-vsv/diseases-maladies/heart-coeur-eng.pdf](http://hc-sc.gc.ca/hl-vs/alt_formats/pdf/iyh-vsv/diseases-maladies/heart-coeur-eng.pdf)  
Accessed January 11th, 2011. Catalogue #H13-7/72-2010E-PDF
- Health Canada. 2009. What are Functional Foods and Nutraceuticals? Agriculture and Agri-Food Canada.
- Heart and Stroke Foundation. 2010. "Heart Disease Prevention". March 2010.  
[http://www.heartandstroke.on.ca/site/c.pvI3IeNWJwE/b.3581671/k.F14C/Heart\\_Disease\\_\\_Prevention\\_of\\_Risk\\_Factors.htm](http://www.heartandstroke.on.ca/site/c.pvI3IeNWJwE/b.3581671/k.F14C/Heart_Disease__Prevention_of_Risk_Factors.htm). Accessed January 11th, 2012.
- Heasman, M. and Mellentin, J. 2001. *The Functional Foods Revolution: Healthy people, healthy profits?* London: Earthscan Publications Ltd.
- Herath, D., Cranfield, J., and Henson, S. 2008. Who consumes functional foods and nutraceuticals in Canada? –Results of cluster analysis of the 2006 survey of Canadians' Demand for Food Products Supporting Health and Wellness. *Appetite* 51:256-265.
- Hodge, R. and Kress, G. 1988. *Social Semiotics*. Cambridge: Polity
- IFIC. 2007. (International Food Information Council Foundation). "Functional Foods".  
<http://ific.org>  
<http://www.foodinsight.org/Content/3842/Final%20Functional%20Foods%20Backgrounder.pdf>  
Accessed August 6th 2011.
- IFT (Institute of Food Technologists). 2005. Expert Report: Functional Foods: Opportunities and Challenges. March 24<sup>th</sup> 2005. [www.ift.org](http://www.ift.org)
- Jones, P. J. 2002. Clinical Nutrition: 7. Functional foods—more than just nutrition. *CMAJ*, June 11 2002; 166(12): 1555-1563.

- Jutel, A. 2011. *Putting a Name to It: Diagnosis in Contemporary Society*. Baltimore: Johns Hopkins University Press.
- Jutel, A. 2009. Sociology of diagnosis: a preliminary review. *Sociology of Health & Illness* 31(2):278-299.
- Jutel, A. 2006. The emergence of overweight as a disease entity: Measuring up normality, *Social Science & Medicine* 63:2268-2276.
- Jutel, A. and Nettleton, S. 2011. Towards a sociology of diagnosis: Reflections and opportunities. *Social Science & Medicine* 73:793-800.
- Kalra, E. K. 2003. Nutraceutical –Definition and Introduction. *AAPS PharmSci*, 5(3).
- Katzmarzyk, P.T. 2002. Commentary: The Canadian obesity epidemic, 1985-1998. *Canadian Medical Association Journal* 166(8): April 16<sup>th</sup>.
- King, S. 2006. *Pink Ribbon Inc: Breast Cancer and the Politics of Philanthropy*. Minneapolis: University of Minnesota Press.
- Korp, P. 2010. Problems of the Healthy Discourse. *Sociology Compass* 4(9):800-810.
- Lalonde, M. 1974. A New Perspective on the Health of Canadians: A Working Paper. Ministry of Supply Services Canada Ottawa.
- Landstrom, E., Koivisto-Hursti, UL., and Magnusson, M. 2009. Functional foods compensate for an unhealthy lifestyle: Some Swedish consumers' impressions and perceived need of functional foods. *Appetite* 53:34-43.
- Leiss, W., Kline, S., Jhally, S., and Botterill, J. 2005. *Social Communication in Advertising: Consumption in the Mediated Marketplace*, 3rd ed. New York, NY: Taylor & Francis Group.
- Link, B. G. and Phelan, J.C. 2005. Fundamental sources of health inequalities. in *Policy Challenges in Modern Health Care* Rutgers University Press, Piscataway: NJ.

- Lippman, A. 2006. The Inclusion of Women in Clinical Trials: Are We Asking the Right Questions? *Women and Health Protection*. March 2006. Pp 1.-38.  
<http://www.whp-apsf.ca/pdf/clinicalTrialsEN.pdf> Accessed: September 1st 2011.
- Lupton, D. 1996. *Food, the Body and the Self*. London: Sage Publications.
- Lupton, D. 1995. *The Imperative of Health: Public Health and the Regulated Body*. London: Sage Publications.
- Masthead. 2011. Masthead: The Top 50. Special Report, September 2011. [www.accessabc.ca](http://www.accessabc.ca)
- More Media Kit 2010. Accessed August 1st, 2012. [www.more.com](http://www.more.com)
- Moynihan, R. and Cassels A. 2005. *Selling Sickness: How the World's Biggest Pharmaceutical Companies are Turning us all into Patients*. Toronto: Greystone Books.
- Moynihan, R. and Mintzes, B. 2010. *Sex, Lies and Pharmaceuticals: How Drug Companies Plan to Profit from Female Sexual Dysfunction*. Vancouver: Greystone Books.
- NCABR - North Carolina Association for Biomedical Research. 2007. Issue Brief: Nutraceuticals. July 2007. <http://www.aboutbioscience.org/pdfs/Nutraceuticals.pdf>  
Accessed: November 1st 2010.
- Nestle, M. 2002. *Food Politics: How the Food Industry Influences Nutrition and Health*, Berkeley, CA: University of California Press.
- Nettleton, S. 2004. The emergence of e-scaped medicine, *Sociology* 38(4):661-679.
- Novas, C., and Rose, N. 2000. "Genetic risk and the birth of the somatic individual", *Economy and Society* 29(4):485-513.
- Ohinmaa, A., Jacobs, P., Simpson, S., and Johnson, J.A. 2004. The Projection of Prevalence and Cost of Diabetes in Canada 2000-2016. *Canadian Journal of Diabetes* 28(2):1-8.

- Patterson, C.A. 2008. Agriculture and Agri-Food Canada Fact Sheet on Functional Foods. August 2008.
- Payer, L. 1992. *Disease Mongers: How Doctors, Drug Companies and Insurers Are Making You Feel Sick*. New York: John Wiley & Sons, Inc.
- Potvin, L., Richard, L., and Edwards, A.C. 2000. Knowledge of cardiovascular disease risk factors among the Canadian population: relationships with indicators of socioeconomic status. *CMAJ* 162(9 Suppl):S4-S24.
- PriceWaterhouseCoopers. 2009. Leveraging growth in the emerging functional foods industry: Trends and market opportunities. August 2009.
- Public Health Agency of Canada. (PHAC). 2009. Minimizing the Risks of Cardiovascular Disease. <http://www.phac-aspc.gc.ca/cd-mc/cvd-mcv/risk-risques-eng.php> Accessed January 11th, 2012.
- Raphael, D. 2003. Bridging the gap between knowledge and action on the societal determinants of cardiovascular disease: how one Canadian community effort hit--and hurdled --the lifestyle wall. *Health Education* 103:177-189.
- Raphael, D. and Farrell, E.S.. 2002. Beyond medicine and lifestyle: addressing the societal determinants of cardiovascular disease in North America. *Leadership in Health Services* 15(4):i-v.
- Reverby, S. 1994. A Caring Dilemma: Womanhood and Nursing in Historical Perspective. Pp.210-221 in P. Conrad and R. Kern (Eds.). *The Sociology of Health and Illness: Critical Perspectives* Fourth Edition. New York: St. Martin's Press.
- Rosenberg, C. 2002. The Tyranny of Diagnosis: Specific Entities and Individual Experience. *The Millbank Quarterly* 80(2):237-260.

- Scrinis, G. 2008. Invited commentary: Functional Foods or functionally marketed foods? A critique of, and alternatives to, the category of 'functional foods'. *Public Health Nutrition* 11(5):541-545.
- Scrinis, G. 2002. Sorry, Marge. *Meanjin* 61(4):108-116.
- Shahidi, F. 2009. Nutraceuticals and functional foods: whole foods versus processed Foods. *Trends in Food Science & Technology* 20: 376-387.
- Shilling, C. 1993. *The Body and Social Theory*. London: Sage Publications.
- Snow, D.A., and Benford, R.D. 1988. Ideology, Frame Resonance, and Participant Mobilization. *International Social Movement Research* 1:197-217.
- Statistics Canada. 2006. Women in Canada: A Gender-based statistical report.
- Subirade, M. 2007. Report on Functional Foods November 2007. Prepared for Food Quality and Standards Service (AGNS), Food and Agriculture Organization of the United Nations (FAO). University of Laval, Quebec, Canada.
- Tjepkema, M. 2005. *Nutrition: Findings from the Canadian Community Health Survey, Issue no. 1*. Statistics Canada Catalogue no. 82-620-MWE. Ottawa. Measured Obesity: Adult Obesity in Canada Measured height and weight.  
<http://www.statcan.gc.ca/pub/82-620-m/2005001/pdf/4224906-eng.pdf>
- Unilever Press Release. 2010. Becel Launches First Food Fortified with Plant Sterols in Canada. June 1st, 2010. URL: <http://www.unilever.ca/aboutus/newsandmedia/pressreleases>  
Accessed on August 8th, 2011.
- Wansink, B. 2005. *Marketing Nutrition: Soy, Functional Foods, Biotechnology, and Obesity*. Chicago: University of Illinois Press.
- Welch, G. H., Schwartz, L.M., and Woloshin, S. 2011. *Overdiagnosed: Making People Sick in the Pursuit of Health*, Boston: Beacon Press.



**Chapter 5/Article 2**

**Abstract**

Using a sociology of diagnosis approach, this paper discusses the implication of high cholesterol being promoted as a disease rather than a risk factor for cardiovascular diseases. Drawing on data collected during the spring/summer of 2012 from 49 in-depth interviews with women over the age of forty concerned with high cholesterol in Ontario, Canada, I explore participants' understanding of the issue of high cholesterol as a disease. More specifically, I examine where blame and responsibility for high cholesterol are placed and if they vary by women's class background. My findings reveal that all the participants believed in and internalized the diagnosis of high cholesterol. However, the disease is blamed on 'lifestyle choices', and individual responsibilities, while women's awareness of the social determinants of health varies by class. I argue the sense of urgency surrounding high cholesterol is worrisome and the sole focus on lifestyle choice as both the cause and solution to high cholesterol is problematic for three reasons: it assumes that individual responsibility is adequate; it minimizes the socioeconomic constraints women face on a daily basis; and it reinforces the idea that individuals can be blamed for their health problems.

**Keywords:** Canada, High Cholesterol, Women's Health, Class, Sociology of Diagnosis.

### **Research Highlights:**

- Functional foods seen as panacea for women's high cholesterol and heart disease
- High cholesterol interpreted as a disease, rather than risk factor for CVD
- Women lack an understanding of how SDOH affect heart disease and high cholesterol
- High cholesterol blamed on women's poor lifestyle 'choices'
- Lifestyle and behaviour choices seen as both cause and solution to high cholesterol

### **Introduction**

Using the framework of sociology of diagnosis (Jutel 2009; 2011) this paper discusses the implication of high cholesterol being promoted to women as a disease in and of itself, rather than a risk factor for various cardiovascular diseases (CVD), such as heart disease. Drawing on data from 49 in-depth interviews with women over the age of forty concerned with high cholesterol, I explore participants' understanding of the issue of high cholesterol as a disease and examine: (a) how high cholesterol is understood as a disease; (b) how blame and responsibility for high cholesterol are attributed to women's 'poor lifestyle choices', as the chief cause of high cholesterol; and (c) how women's answers vary by class background. By elevating HC to a disease state, individualized solutions to HC are increasingly focused on personal responsibility and this is problematic for several reasons. Namely, that it assumes individual responsibility is adequate; it minimizes the socioeconomic constraints women face; and it reinforces the idea that women can be blamed for their own health problems.

Although cholesterol is a natural bodily occurrence, high cholesterol is continually redefined according to new and lower thresholds (Schwartz and Woloshin 1999). However, new technologies, products and services have emerged to detect these (ab)normalities before they have manifested as symptoms, thus encouraging the assumption that high cholesterol is a disease needing immediate attention. High cholesterol (HC) is in fact a risk factor among many others for heart disease (Health Canada 2010). Other risk factors beyond the individual-level focus include the social, economic, environmental and cultural factors that impact chronic diseases (PHAC 2013). However, the cholesterol landscape is currently dominated by the idea that HC is a disease and a health problem for women in particular. This ubiquity of this message can be linked to three key influences: functional food advertisements (specifically Becel<sup>®</sup> pro.activ<sup>®</sup> margarine); health promotion literature via the Heart and Stroke Foundation; and cholesterol-lowering medication, (e.g. Lipitor), otherwise known as statins. Since 2010, this trifecta of HC promotion has bombarded women with messages that encourage self-scrutinization and an individualized focus as both cause and solution for this new disease.

In the sections that follow I will briefly explain this trifecta of HC promotion in order to situate the present study of women's understanding of HC as a disease, as well as their understanding of where responsibility for HC is best located. I present the progression of HC as a disease via a brief account of functional foods, the Heart and Stroke Foundation literature, and the emergence of statin drugs. I then introduce the sociology of diagnosis and then discuss how HC relates to social class, by briefly describing key points in the social determinants of health (SDOH) literature as they relate to HC. Having presented this background, I discuss how my research participants understand HC, how they view the responsibility for the disease and how their awareness of the SDOH varies by class background.

### **The changing cholesterol landscape: A brief account**

In this study, I employ the sociology of diagnosis framework to examine how HC is magnified as an urgent health crisis for women and I identify three key stakeholders involved in keeping this message prominent. In particular, this next section highlights the role of functional foods, the Heart and Stroke Foundation of Canada and Becel<sup>®</sup> margarine, and the role of cholesterol-lowering medications.

#### ***Functional Foods***

The emergence of functional foods is a significant development and can be traced to the materialization of HC as a disease. Functional foods extend the health benefits of a food beyond the basic nutritional content. For instance, whole grain oats or soluble fiber-enriched cereals and Omega-3 eggs to lower cholesterol, or Probiotics in yogurt to improve bacterial culture and boost the immune system. According to Health Canada (1998:1), a functional food is "...similar to a conventional food, but demonstrates physiological benefits and/or reduces the risk of chronic diseases." Functional foods have exploded in popularity, with the global market for these products expected to exceed US\$130 billion by 2015--(Invest in Canada 2012). Canada is a major destination for functional food product development, and 40% of all foreign direct investments are related to functional and natural health products. In fact Kellogg's Mini Wheat breakfast cereals have invested \$43 million into functional food development in Canada. (Invest in Canada 2012).

Functional foods have emerged as a panacea for a variety of health conditions, in particular, high cholesterol and heart disease. Not only are functional foods being used as vehicles for wellness, but they are being touted as contributing to the prevention of chronic diseases, while blurring the

lines between 'choices' and 'abilities' for health maintenance. The rise of high cholesterol as a pseudo-disease (i.e. the social creation of a 'disease'), can be seen in the plethora of functional food products advertised with cholesterol-lowering properties, such as oatmeal and snack bars, to fruit juices and margarine and the co-rise of health promotion campaigns such as the Heart and Stroke Foundation of Canada.

### ***Heart and Stroke Foundation and Becel<sup>®</sup> Margarine***

Although cancer is consistently the top killer of most Canadian women,--(Statistics Canada 2012) health promotion literature via the Heart and Stroke Foundation of Canada (HSF) (which is a non-profit organization dedicated to consumer education about heart and stroke prevention),- -and Becel<sup>®</sup> margarine (specifically their pro.activ<sup>®</sup> margarine campaign) promotes the idea that heart disease is women's top concern. Becel<sup>®</sup> specifically focuses on high cholesterol as *the* key risk factor for all women, regardless of their age, income level, or living circumstances. Becel<sup>®</sup> is the founding sponsor of the Heart and Stroke Foundation's "*The Heart Truth*" campaign, and their "*Ride for Heart*" annual fundraiser, and endorses the idea that heart disease is an imminent danger for women in their award winning pro.activ<sup>®</sup> margarine campaign:

Heart disease and stroke are the leading cause of death for women in Canada--but most don't know it.

The good news is that cardiovascular disease is often preventable. Women can reduce their risk by as much as 80 percent by making lifestyle changes (Becel<sup>®</sup> 2011a).

Becel<sup>®</sup> squarely focuses its attention upon women:

Like many women, you may be so busy taking care of others that you don't always look after yourself. Yet enjoying a long and healthy life is the best gift you can give to those you love.

In 2011, the HSF faced a public relations problem as Canadian perceptions surrounding the danger of heart disease was dwindling. Believing that apathy had set in with Canadians, alongside fears that the HSF was losing relevancy and brand recognition (i.e. donation dollars), the Toronto ad agency *Lowe Roche* was hired to accomplish 3 goals: increase awareness of the HSF, ensure the heart disease message was perceived as important, and lastly, to ensure the HSF cause was deemed urgent (Cassies 2013). To accomplish this the "*Make Death Wait*" campaign was launched with television, magazine, radio and newspaper ads, alongside an intense digital media focus and multiple brand partnerships.

This particular campaign was ferociously debated in blogs and the media. In the ad a woman is seen wearing a bathing suit looking over her shoulder while the voice of a man personifying death hovers over and states "*you have no idea that I'm coming after you...heart disease and stroke is a woman's #1 killer*" (Cassies 2013). This campaign pushed viewers to the new website "*www.makehealthlast.ca*" where they could take a "*Heart and Stroke Risk Assessment*" -while also making a donation. This test gives women a personalized risk profile and tips for heart healthy living based on answers about family health history, healthy eating, exercise and stress habits. In the end, the "*Make Death Wait*" campaign was a success and increased HSF awareness by 87% and donations by 20%, -with donations reaching over \$2 million and more than 113,000 Canadians took the risk assessment (Cassies 2013). Both the "*Heart Truth*" -and the "*Make Death Wait*" campaigns were so successful that they each garnered an advertising award from Cassies. At the same time, Becel<sup>®</sup> joined forces with participating pharmacies across Canada for the "*Healthy Heart Check Test*" where Canadians could visit a pharmacy or mall to get their cholesterol and blood pressure checked, and a registered dietitian was on hand to provide "heart

healthy lifestyle tips". Since 2009, more than 34,000 Canadians participated in this campaign for high cholesterol prevention (Becel<sup>®</sup> 2011b).

### ***Statin drugs***

The idea of high cholesterol as a disease was also propelled into disease-status through the popularity of cholesterol-lowering medications, also known as statins. These are the most widely prescribed drugs in the world. In Canada, 30.3 million prescriptions were written in 2010 (Montreal Gazette 2011); and women account for half of the prescriptions for statins, with Lipitor being the top selling pharmaceutical drug in the country (Rosenberg and Allard 2007). At the same time Canadian health agencies such as Health Canada, the Public Health Agency of Canada, and the HSF released guidelines on heart disease prevention and Table 1 displays these agency recommendations on risk factors for heart disease. As this table suggests, it is the modifiable risk factors of behavior and lifestyle changes that is most widely promoted and disseminated through the public health discourse.

**Table 11. Canadian health agency recommendations for minimizing the risk of heart disease**

Heart & Stroke Foundation (2012)	Health Canada (2010)	Public Health Agency of Canada (2009)	Becel <sup>®</sup> Margarine*
<b>Don't smoke</b>	Don't smoke	Stop smoking	Don't smoke
<b>Be active</b>	Be active	Be active	Keep active
<b>Control weight</b>	Maintain healthy weight	Maintain healthy weight	Eat a balanced diet
<b>Control blood pressure</b>	Develop healthy eating habits	Reduce cholesterol levels	Include plant sterols
<b>Control cholesterol</b>	Consume recommended fruits & veggies	Limit fat intake	Eat healthy fats
<b>Control diabetes</b>	Avoid trans fats	Reduce blood pressure	Use Canada's Food Guide
<b>Avoid excessive alcohol</b>	Read nutritional labels	Reduce sodium	Decrease stress
<b>Manage stress</b>	Talk to health Provider	Manage stress	
	Teach your children about heart-healthy habits		
	Manage stress		

\*Becel<sup>®</sup> gives tips to lower cholesterol

Two issues to note are the lack of contextualization of heart disease and the age mediated risk in both the Becel<sup>®</sup> and HSF advertising and health promotion literature. Firstly, although high



cholesterol is one of the many risk factors for heart disease, it is framed as the paramount risk factor. High cholesterol falls into the individual-level risk factors of CVD, yet no mention is made of the social and economic conditions, the environment, culture or urbanization issues that influence health conditions, and are otherwise known as the social determinants of health (WHO 2011). Secondly, although heart disease is repeatedly mentioned as the top killer of women, it is in fact an age-mediated risk, --meaning heart disease is the leading cause of death, but for Canadians aged 85 and older. Cancer meanwhile is still the leading cause of death for Canadian women aged 45-84 (Statistics Canada 2009). The campaign to turn high cholesterol into a disease reveals how "...diagnosis is always a social creation" and the sociology of diagnosis is a timely set of "...classification tools that segments and organizes...human conditions", and is appropriate for this particular study (Jutel 2011:3-4).

### ***Sociology of Diagnosis***

Thus far, I have suggested that three major factors have contributed to the popular (but problematic) idea that high cholesterol is a disease and in need of remedy. The campaign to turn high cholesterol into a disease rests on the "...offering of anticipatory care" (Armstrong 1995:402) to women in 'need', and influences not only how "...we govern ourselves" but how we govern others (Novas and Rose 2000:485), while simultaneously being governed.

To analyze this phenomenon, I turn to the "sociology of diagnosis". As noted by other scholars, the sociology of diagnosis is not often employed by sociologists (Brown 1995; Jutel 2009; Jutel and Nettleton 2011), and certainly not with a focus on HC and women, however it has been used to analyze Lyme disease (Aronowitz 1991); alcoholism (Blaxter 1978); cancer and doctor-patient interaction (Blaxter 2009); overweight as a disease category (Jutel 2006); the emergence of

female hypoactive sexual desire disorder (Jutel 2011); direct-to-consumer marketing and self-diagnosis (Ebeling 2011); fibromyalgia and pharmaceutical industries (Barker 2011); genetic risk (Novas and Rose 2000); the psychiatric diagnosis of normality (Frances 2013); and the phenomenon of 'disease mongering' and 'selling sickness' (Payer 1992; Moynihan and Cassels 2005). In this particular study, the sociology of diagnosis framework is used to examine the narratives behind the cholesterolization of women's health and can identify the various stakeholders involved in keeping high cholesterol on the lay-person's radar. I argue the focus on high cholesterol-as-disease transforms women into patients and consumers, augmenting the "healthy lifestyle discourse" (Korp 2010) while ignoring the broader context of health and illness. Whereas medical information was once exclusively held by doctors and degrees, now in an age of 'escaped medicine' (Nettleton 2004), the control over information has been perforated by media, Pharma, food and the individual, in their 'healthism' quest (Crawford 1980) for self-diagnosis and treatment.

The problem with labeling high cholesterol as a disease is that it: (1) creates new norms, expectations, and obligations surrounding health and health maintenance; (2) it enriches the power of the medical-industrial-complex to delineate disease from pseudo-diseases that henceforth influence the everyday lives of people; (3) it creates a "bureaucratic imperative" whereby guidelines and new protocols are constantly developing; and (4) it informs the profit imperative where Pharma, medicine and functional foods are developed in competition for the at-risk-of-something-consumer (adopted from Rosenberg 2002:251-254). The multiplicity of players involved obscures the conflict-of-interest between them all. Diagnosis then, is really a social, political, economic and medical event, and becomes what Rosenberg (2002:256) calls the "tyranny of diagnosis".

Sociology of diagnosis allows for an examination of "how and why particular diseases are framed as they are and not in another way" (Jutel 2011:143). This study explores the various "forces and agents that interact to create diagnosis and their consequences", but none of these factors exist in isolation, they are each strengthened by the existence of others (Jutel 2011:143). What diagnosis explains is the social consequences of label creation, at times myth-making and "disease mongering", (Payer 1992), but certainly medicalized until saturation, whereby normalcy surrounding the disease label occurs, prompting a new search for future disorders. Armstrong (1995) calls this "...remapping of the spaces of illness" 'surveillance medicine' (p.395), whereby everyone is now targeted. Whereas, high cholesterol was traditionally understood as an affliction impacting older adults, -it is now commonly framed as a problem for everyone, from young adults to even children (Wall Street Journal 2011). High cholesterol as disease questions the boundaries between healthy and ill, framing people as never-healthy-enough, neither fully ill, nor ultra-healthy, but in a liminal state of "perpetually becoming" (Armstrong 1995:402). This state of potentiality is never fully reached, one is continually striving for ultimate health, on the lookout for every symptom, or irritation, so that *any* symptom or risk factor or questionable behaviors become the next criteria to scrutinize, critique and survey ones health and the health of others.

The urgency of high cholesterol promotes the obligation to act now to prevent future illnesses such as heart disease (Novas and Rose 2000). Where there is a duty, obligation, and moral imperative to take care of yourself, to be well, and avoid sickness, this creates "new ethical responsibilities" for citizens and consumers alike. (Novas and Rose 2000:487). Whereas shyness was once known as being introverted, it is now rechristened into "*social anxiety disorder*"; leg cramps into "*restless leg syndrome*" (Moynihan and Cassels 2005 ) and now at-risk-of high-

cholesterol, into high cholesterol-the-disease, and diagnosis "...once articulated and disseminated in practice and the culture generally, these conditions become emotional and clinical realities, occupying a position somewhere between warning signs and pathology" (Rosenberg 2002:254). As the title of this paper suggests, creating the 'dis-ease' of high cholesterol is about encouraging the anxiety and discomfort around the potentiality of having a high cholesterol disease diagnosis, in order to create the imperative for action (i.e. consumption of margarine or medication) as a personalized solution to an individualized problem. Having established the progression of HC as a disease, I now turn to the social determinants of health literature to show how the diagnosis of HC has a class dimension.

### ***Social Determinants of Health and Heart Disease***

The literature on the social determinants of health (SDOH) shows quite clearly that structural and environmental factors have a greater impact on people's health than lifestyle and behavioral factors (WHO 2008). However, lifestyle responses predominate in the lay perspective (and is reflected in this study),--as public perceptions surrounding the links between health and wealth are quite poorly understood (CPHI 2004; Reutter et al, 2006; Shankardass, Lofters, Kirst and Quinonez 2012). It is well documented that low income Canadians have higher rates of cardiovascular diseases (Sheth et al., 1999), have greater exposure to risk factors (Kreatsoulas and Anand 2010), and the accumulation of these risk factors over a lifetime worsens heart health for lower income people (Carson et al, 2007). Critics argue that a focus on lifestyle and behavioral factors for improving health alleviates the pressure off both the government and the media (Raphael 2008). Others argue that low SES should be seen as a risk factor on its own, for heart disease (Franks et al., 2011). While we know socio-economic status can impact cardiovascular health (Blais, Damel, and Rinfret, 2012), what is not known is how women's

awareness of the SDOH varies by class. Previous research has shown that in general Canadians have a poor understanding of the SDOH (CIHI 2005), but again, we do not know how this varies by class. This study adds to the literature by specifically examining women's awareness of the SDOH and high cholesterol by class.

## **Methods**

The research consisted of in-depth interviews with 49 women over the age of 40, who are concerned with high cholesterol and/or heart disease. Women were the sole focus of this study because they are the intended target audience in both the Becel<sup>®</sup> pro.activ<sup>®</sup> advertisements and the HSF health promotion literature and women also account for half of all the prescriptions for statins use. These female participants were self-selected based on advertisements placed on the front page of *Kijiji* (an on-line community that posts classified advertisements), and in a variety of different socioeconomic neighborhoods across three different cities in Ontario. The advertisement asked for participants who were over the age of 40, and were worried about cholesterol and heart disease. Potential participants either emailed or phoned a local cellular number specifically purchased for the duration of the study. Each female participant was given a \$20.00 gift card to a local coffee shop.

The first step was a self-administered questionnaire that asked basic demographic questions (age, occupation, education and income). The second step was an in-depth semi-structured interview that took approximately 60 minutes and was tape-recorded with consent and later transcribed. The interview consisted of 32 questions divided into 3 main sections (personal eating habits and functional foods; food marketing; and health and illness, specifically high cholesterol and heart disease). The participants were shown the Becel<sup>®</sup> pro.activ<sup>®</sup> margarine campaign after they answered the first section about functional foods so as not to influence or prime their answers.

After viewing the Becel<sup>®</sup> ads the women were asked two questions pertaining to Becel<sup>®</sup>.

Women were not asked about the HSF *Make Death Wait* campaign, as the broader focus of the data collection was on functional foods. While preventing bias was a concern, there is always the possibility that participants may have given different answers if the Becel<sup>®</sup> campaign was shown to them at the start of the interview or even as the last question.

All participants were briefed on the purpose of the study, given a letter of information and consent form and assured I was not a medical professional, I would not give any medical or nutritional advice. All aspects of the study were reviewed and cleared by the University's Research Ethics Board and all participants were coded numerically and with a pseudonym, no personal identifiers were used. Many women chose to leave their contact information in order to receive a brief summary of the results when completed. The women's ages ranged from 40-82 years and they self-identified as 37 Caucasian, 2 Black, 2 Asian, 3 Jewish and 5 Middle Eastern women. There was a diversity of income levels with 20 women either living on government disability subsidies or in subsidized housing, while 16 women had incomes over \$70,000 annually. Five pilot interviews were conducted to further refine and develop the interview guide, minimize observer bias and reform the order of questions, however this data was not used in the final report. Forty-nine interviews were then conducted until saturation was convincingly attained.

### *Limitations*

According to Statistics Canada's latest national household survey (2013), 19.1% of the Canadian population and 47% of the greater Toronto area population are visible minorities. My sample falls somewhat in the middle with 12 out of 49 women (or 25%) being non-Caucasian. Since this

paper had a very limited focus on sociology of diagnosis, heart disease and women, I choose not to speak to ethnic differences among health and nutrition knowledge (although differences were found along class lines, not ethnicity). Another limitation is that my participants could have wanted to appear favorably by echoing the health promotion dictum of responsibility and accountability for health, alongside the common-sense approach of lifestyle and behavioral modifications. Although measuring lifestyles was not a goal for this paper, the topic of 'lifestyles' and 'healthy lifestyles' was eventually reflected in the findings, and as Cockerham, Rutten and Abel (1997) note, lifestyles is a complex phenomenon that should not solely be measured at the individual level but must include a structural contextualization of how lifestyles occur within people's lives. Lastly, although explaining health related behavior was not the aim of my research, it is worth noting that there are indeed limitations as to how complete or thorough one's analysis can be of other's behaviors and explanations of said behaviors, when "what we do has more significance, than what we know" (Williams 1995:598). The difference between what people say and what they actually do in health research, is an incredibly complex and difficult undertaking for social scientists, and certainly future research will need to take this into account.

### *Data Analysis Techniques*

Participants' social class was classified into four categories following Gilbert's (2011) schema. The upper-middle class (UMC=15) consisted of managers and professionals with valuable credentials and represents the 'privileged classes'. The lower middle class (LMC=5) and working class (WC=9) consisted of the 'majority classes', the former included skill trade people, lower managers and administrators while the latter was occupied by low-skilled manual, retail and

clerical work. The last two groups were the 'lower classes', and were combined into one group, consisting of the working poor and underclass (WPC=20). These women held precarious work, had insecure incomes that fell below the poverty line as defined by Statistics Canada's low-income cut-off (LICO) and relied on government subsidies.

Each transcript was read numerous times in its entirety, highlighting important texts, memoing, and then coding, using at times in-vivo codes (wording that participants use) till I developed a list of major themes which were then divided into subthemes, using mind maps and tree graphs to visually display the data. Using a directed content analysis approach, I worked with the assumption of either validating or extending the sociology of diagnosis framework by employing a deductive category application (Mayring, 2000). I identified key concepts in the data using the sociology of diagnosis, healthism and health promotion theories. Validation strategies to document credibility and authenticity (Lincoln and Guba, 1985) were achieved through triangulation, negative case analysis to guard against selectivity, peer debriefing, and a clarification of researcher bias (Creswell, 2007).

In this study, I wanted to know (1) how high cholesterol was understood by women; (2) whether they classified HC as a disease; (3) how blame and responsibility for HC were attributed; and (4) whether findings differed by class. This reception analysis reveals five major results:

1. Women characterized high cholesterol as a disease however, only if genetics were involved, and a lifestyle disease if genetics were not a factor.
2. Blame or responsibility for high cholesterol was placed on women's poor lifestyle choices.
3. High cholesterol was viewed as an individual responsibility.



4. Class reinforced the social reproduction of health.
5. Women lacked an understanding of how the SDOH affect HC and heart disease.

In the analysis that follows, I document women's reactions and understanding to the framing of diagnosis and in each section I detail when relevant how understandings vary by income, and the affective or embodied dimensions of these reactions.

## **Findings**

### ***High Cholesterol as disease***

Even though cancer is the leading cause of death for Canadian women aged 45-84, and has been for years (Statistics Canada 2012), participants internalized the message that heart disease was the top killer for women, and readily agreed with the view that heart disease is the biggest threat to women's health. Camilla (age 50, Upper middle class - UMC) states *"Yeah, heart disease is the #1 killer of women,"* while Audrey (50, Working Poor- WP) also agreed, *"A lot of women don't realize that strokes are the leading cause of death for women in Canada."*

When asked if high cholesterol was a disease, there was a striking consensus that it was in fact a disease, rather than a risk factor or symptom of various cardiovascular diseases such as heart disease. Although responses varied by income groups, only 2 women of the WP linked HC to broader issues: *"No, it's social, it's not a disease. It's a symptom of a crack in the social system,"*(Laura, 64 - WP) *"No, I think it's a reflection of our society, as in depression and anxiety."*(Rosie, 42- WP) One participant of the lower middle class (LMC) questioned the veracity of the disease label claim:

*No, high cholesterol is just a label; I don't know what it means.*

*It's a label that's been put on you to treat you a certain way...Even*

*that word 'disease', I'm not sure I believe in it. Because if disease exists then does health exist? These are just labels. I'm full of disease and I'm full of health.....all these things are man-made labels that if you go deeper into it mean nothing. We're all sick, we're all dying, we're all healthy. These labels mean very little. (Lena, 44-LMC)*

This quote highlights how fluid and contested the disease label can be in peoples' understandings. It also emphasizes the improbability of a dyadic, fractured existence, where one is either healthy or ill. Lena eloquently underscores how people occupy simultaneous and multiple roles and labels. The boundaries are ambiguous between the diseased and non-diseased state of mind. This participant stresses how the potentiality for good health or disease resides in all of us, continually. She reconceptualizes the high cholesterol disease label, demonstrating the elastic notions of health and illness and their dueling co-existence.

The most surprising finding was how women differentiated between high cholesterol-as-disease when genetics were involved, and a "lifestyle disease" if genetics were not a factor. A genetic-based classification avoided culpability, while a "lifestyle disease" of high cholesterol involved 'choice' and was blame-worthy. For example:

*For some people it's a disease and for others it has to do with lifestyle. For some people with genetics, it's a disease. If it's not genetics, then it's a lifestyle and then it's not a disease. (Hilary, 46-UMC).*

Samantha (63, UMC) expressed identical sentiments:

*If it's not based on genetics at all and just based on what you eat and how much you exercise then I would say it's a lifestyle choice.*

As did Erika (47, UMC):

*I think it should be called a lifestyle disease, a disease of your lifestyle...it's people's food choices and choices of how they live their lives.*

This "lifestyle disease" diagnosis classifies a "certain image of the 'other'" as the condemned. The diagnosis can also provide justification for an individualized focus of responsibility for high cholesterol (Jutel and Nettleton 2011:797). By classifying high cholesterol as a lifestyle disease by the higher income groups and an actual disease by the working poor, we arrive at the same conclusion via two different lenses. In the end, disease incurs blame, it's classification and categorization emphasizes a "symbolic way of [LMC and UMC women to] differentiate themselves from the working class" (Germov 2008:267), while the WP and LC internalize not only the diagnosis but the culpability and blame inherent in this new disease recognition.

### ***High Cholesterol blamed on 'poor lifestyle'***

High cholesterol was overwhelmingly believed to be caused by what Nettleton (1997) refers to as the 'Holy Trinity of Risk' (exercise, diet and smoking), otherwise known as 'poor lifestyle choices' in this study. Whereas the WP reiterated the Holy Trinity, they also spoke about stress, frequently related to a mental health condition such as depression, anxiety and emotional distress. Research confirms the association between stress and mental health illnesses

(Government of Canada 2006), with the poor having a greater likelihood of CVD (Franks, Winters, Tancredi & Fiscella 2011; Clark et al., 2010).

However, as income rose, women's answers shifted the cause (and therefore the blame) from diet and exercise to people themselves. In the UMC group, "lifestyle choice" or "poor lifestyle choices" was the most oft repeated sentiment. UMC women emphasized choice, personal responsibility and accountability as the main culprit of HC and heart disease. UMC women also stressed the natural correlation between choice and action, so if women simply made better choices they would not have cholesterol problems. For instance, Erika (47, -UMC) states:

*It's all about lifestyle choice. Heart disease is a lifestyle choice, it's also genetic but more a lifestyle choice...lifestyle choices would include poor food choices, poor choices with how you spend your time.*

Again, the word 'choice' dominates the discussion of the causes of CVD for women, such as Nicole (42, -UMC), *"I guess 3 things come to mind, what you choose to eat, how you choose to move or not move and perhaps a genetic or physiological factor..."* These answers did not acknowledge for instance, that women might lack the resources to make the 'right' choices. 'Choice' implies personal control and is characterized as the intellectual, common-sense approach to health maintenance, while 'poor choices' implies a lack of control and low moral compass. Lupton (1995) argues the "dominant representation of health in contemporary health promotion has been the notion of personal responsibility" (p.73), and these narratives represent self-control and poor choices as the ascendancy of "will power and asceticism (as healthy)", and lack thereof as diseased.

Significantly, participants with higher income were more likely to attribute high cholesterol to, an individual's "poor lifestyle choices". The working class (WC) women who were not far removed from the economic constraints of the WP, reflected morally against those who caused this high cholesterol disease state:

*Yeah, we make it a disease. We make it a disease because we say 'I'm sick, I'm not aware of what's happening to my body'. If you smoke, you drink, you don't exercise, then you make it, you make it a disease. (Susanne, 40- WC)*

With the LMC women, answers continued to focus on a lack of accountability, irresponsibility and poor lifestyle choices:

*It's not like Diabetes, I think it's a condition for your lifestyle, for you who are. It becomes a lifestyle condition... (Annette, 58 - LMC)*

By suggesting the disease is part of the moral fiber of "who you are" as an individual, the implication is that a HC disease classification confirms an individualized focus on health and reveals an inherent character flaw. Annette's statement of "*for you who are*" strikes at the core of someone's character, it is not simply a lack of proper lifestyle choices, but is a more insidious quality to have, decrying a lapse in mental and physical fortitude in the inability to resist the behaviors that lead to the disease.

When asked how one could avoid getting high cholesterol, forms of "othering" occurred, from both the LMC and the UMC, both directed at the working poor. Poor bashing (assumption that low-income people are lazy, uneducated and quick to drink and smoke) is not new (Reutter, Neufeld, and Harrison 1999). The UMC women spoke of the importance of lifestyle choices,

personal accountability and taking control, being proactive (researching, educating yourself), being aware, and taking responsibility for your children and family. There was also a lot of "*just do what I do,*" narratives. One participant articulated this sentiment explicitly:

*Do what I do, be aware, get tested, try to be healthy.*

*Be aware, research, don't just look for quick fixes, it's about*

*lifestyle and making better choices and being proactive...I*

*don't drink, I don't smoke, so it's about choices. (Hilary, 46 -UMC)*

The '*do what I do*' expression was common among participants and reveals how far removed the social determinants of health are from people's basic lexicon and confirms previous research on this (Gasher et al., 2007).

### ***Health is an individual responsibility***

The overwhelming sentiment articulated by participants of all class backgrounds was that health was a personal and individual responsibility. Women also spoke about the frustration with others' inabilities to ward off diseases and the burden on others for their misgivings. In the words of one LMC participant:

*You have to suffer the consequences of your actions,*

*if you're overweight, and you hit a certain amount of weight,*

*that's it. Your health card gets taken away, no more, you're*

*kicked off. You lose your license when you drive dangerously,*

*so you should lose your health care coverage too; watch people*

*lose weight when that happens. (Lena, 44 -LMC)*

While the UMC women emphasized personal accountability, they also repeatedly discussed the importance of nutritional knowledge and information as reasons why women had high cholesterol and/or heart disease. UMC women stated the lack of government assistance in teaching nutrition in schools as a culprit in people's poor eating habits. They believed if nutrition was a mandatory part of the school curriculum, then people would no longer have an excuse for poor health. There was a clear trend toward Othering, with what people like themselves see as healthy, and social Others seen as those who lacked knowledge, health, and a sense of accountability. One UMC woman articulated it this way:

*It lies on us, lies on us. But there are a lot of people who need to get information passed on to them. If they don't act on it, it's their fault. But, if information is given to them and they act on it, then it's fine. If poor people don't have the resources, BUT, if someone passes it on, gives them information, gives them recipes and tells them they can be healthier by eating this, and it costs less and if they don't do it, then it's their own fault. (Samantha, 63 -UMC)*

Another privileged woman mentioned the wide availability of health information through programs with little stated awareness of the cost of these programs, which can cost thousands of dollars. She said:

*Ultimately I think we're responsible. We have access to so much information and we have to take ownership over ourselves. There's so many programs, there's Weight Watchers and Herbal Magic and Dr. Bernstein diets...and nutritional counselling out*

*there for people. You've got your doctors, there's no excuse to say it has to always be the government, the government. (Donna, 51-UMC)*

Beside the lack of awareness of the cost of these programs, this quote represents the belief that knowledge will translate into action. This is called the "Knowledge-Attitude-Behavior" model (Lupton 1995:56), and is the basis of health promotion literature, indicating a linear relationship between knowledge about nutrition and better lifestyle choices. This model of behavior gives the illusion of empowerment and education is seen as a panacea for all health conditions. If women simply knew the right information and had the proper knowledge, they could easily make better decisions. But, as Lupton (1995) and Crawford (1980) both note, this model rests upon the assumption that the individual is rational, reflexive and objective, and also that knowledge is a positive commodity, that more knowledge is better, and conversely a lack of knowledge is detrimental and negative.

When asked if poverty, social isolation or inequality could influence heart disease and high cholesterol for women the WP agreed:

*Oh yes, I think social exclusion is cruel...I'm a piece of social isolation and that's probably why I'm fat because I eat to fill my emotional needs instead of getting them met appropriately. It has been rightly said that if everyone in this community is poor, poverty doesn't affect you. But if there are the terribly poor, the not-so-poor, and the rich, then it does affect you. You think 'why do I have to live like this when other people don't'? (Rita, 79-WP)*



UMC women however, stressed that being uneducated about nutrition was the most problematic issue for women and heart disease. UMC women were not entirely convinced poverty, inequality and isolation was a factor in heart disease and they linked CVD to poor choices more often than not. A scarcity of resources impacts heart disease more so than a healthy diet for poorer Canadians (Clark et al., 2010), however, UMC women refused to downplay the importance of diet and responsibility:

*...it's not income. It's probably what you eat really*

*at the end of the day. What are you eating? (Sheila, 48-UMC).*

Women of other class backgrounds also doubted the veracity of the links between poverty and health, "*Poverty? Social Isolation? No. I don't think so.*" (Sonya, 57-WC), "*It's because of the choices you might make and it's based on education.*" (Joan, 48 -LMC)

Finally, when told that studies have shown women with lower incomes have higher rates of CVD, including high cholesterol (Bierman et al., 2009) and asked to explain this correlation, the WP discussed the importance of the social determinants of health. Rita (79, WP) quite perceptively noted the importance of employment conditions on health:

*I think what keeps you healthy is belonging to a community*

*where you feel safe, have work that you love, but if you can't*

*have work that you love, at least have work that you don't hate.*

The WP also acknowledged how structured their health status was to their income:

*It goes back to income and poverty. It's a wheel of karmic*

*bondage. (Rosie, 42 -WP)*

*I'm on ODSP [Ontario Disability Support Program] and it defines how I eat. But fortunately I have some good friends who give me money from time to time. I guess I'm a high class beggar. (Laura, 64 -WP)*

Conversely, the LMC and UMC women were stumped and in fact questioned whether I had my facts straight regarding income and heart disease. Many took a few minutes to ponder the question, Courtney (44, -UMC) *"This is interesting. I've never really thought about it."* LMC women relied on their knowledge of who poor people are to explain the correlation between income and health:

*Yes and no. They're not directly responsible. It's just that lots of people in that situation are in that situation because of a lack of discipline, playing the victim, and these things more so than poverty can affect cardiovascular diseases. These are people who don't take any responsibility for their life and their situation and they don't do whatever they can to get out of it. So it's the same with their body, they've given up and that's it. (Lena, 44 -LMC).*

Many women in the LMC emphasized the eating habits of the poor, frequently mentioning McDonalds and poor choices as the reason women in a lower socioeconomic status had higher rates of CVD. For example,

*Well, it's true. People with low education eat like shit. They smoke more than they should. They drink more than they should. I know it's stereotypical, but it's from my experience, so I know that it's true. I think poor people come from a history of poor eating and it's just something that gets carried down the river and I think that they were never properly educated in the 1st place, that's why kids need to learn it in schools...* (Denise, 64 -LMC)

Although, this was a relatively rare example in my interviews, one UMC participant readily acknowledged her privileged position as a stay-at-home mom with a substantial family income, which allowed her the opportunities and resources to ensure she stayed healthy and cholesterol-free:

*Let's face it, if you have higher incomes, you have more access to join gyms or join programs. If my husband didn't do as well as he does then I wouldn't be able to participate and I wouldn't have the option of not going to work and our kids wouldn't have the option of karate and dance and I wouldn't have the option of the programs I'm involved in, so it would definitely affect us.* (Jessica, 48 -UMC)

While the social determinants of health are well documented by academic and public health agencies (e.g. WHO 2011), this woman's reflexivity was unusual in my sample. Even though previous research has shown Canadians are not well versed in the connection between poverty

and health issues (Shankardass et al., 2012), Jessica displayed exceptional awareness of income-related health inequalities in her response.

I examine how the role of diagnosis and the marketing of both high cholesterol and functional foods intersect in a sociological manner. As previously discussed this has implications for gender and class issues. Some academics believe the "...marketing strategies of the biomedical and pharmaceutical industries should themselves be recognized as determinants of --if not actual risks-- to women's health" (Rochon-Ford and Saibil 2010:10). We can also include in this list of possible determinants of health, the marketing machinery of the food-industrial-complex. My work has shown how an individualized focus on personal responsibility as both the cause and solution for health and illness "undermines a collective approach to prevention" (Rochon-Ford and Saibil 2010:10), which based on the participant's views, seems to favor the upper class women, as their health is less likely to be impacted by issues of poverty and income inequality.

## **Conclusion**

In this hyper-cholesterolized state of women's health, we see how diagnosis is socially created, and the moralization of health so inherent in 'Othering' is structured around class lines. The message of high cholesterol has been skilfully employed by health promotion campaigns and intensified through lifestyle-focused health policies that center on individual-style solutions, both of which instil a sense of choice and empowerment to women, a sense that often works to consolidate a very personal, private responsibility for disease prevention (Rochon-Ford and Saibil 2010:10). The messages in these participant narratives frames the problem of high cholesterol as a management of choice--women can *choose* to prevent high cholesterol by making better food and lifestyle choices. Women can *choose* to be informed and women can *choose* to seek additional medical advice. The flip side is that by *not* making a pro active

preventative choice, women are choosing by default to become ill, like a modern Parsonian 'sick-role', women must want to get better (Parsons 1951:437-446).

I have shown that all women in my study take on the high cholesterol as disease framing that dominates in the public sphere, and that privileged women are much less likely to understand how lifestyle choices (that influence high cholesterol) are shaped by poverty and income inequality. I argue that the sense of urgency and risk surrounding high cholesterol's elevation from a risk factor to disease-state is problematic, especially relative to its role as a risk factor for disease (as opposed to a disease itself). Elevating HC to a disease, coupled with the functional food onslaught, self-diagnosis technologies and the health promotion strategies of governments and local health agencies, have not only consolidated a public sense of high cholesterol as a disease, but have also bolstered individual solutions to HC which are focused on personal resources and health management. The problem with this increased individualized responsibility thesis is that: (1) it assumes that individual responsibility is adequate; (2) it minimizes the social, political and economic constraints women face every day; and (3) it reinforces the idea that individuals can be blamed for their health problems (Crawford 1980:377-378).

In its entirety, the health promotion activities that surround the cholesterol landscape mentioned here have inflated the risk of heart disease for women aged 40-85, by ignoring the age-mediated factors, and over-emphasizing the role that lifestyle plays. By urging women to take personal control of their heart health through a self-help dictum of false empowerment, while ignoring the broader contexts of women's health, women have internalized the message that cholesterol is a disease, an urgent health crisis for them, and that it can be remedied through individualized focus on lifestyle changes. This is not to say that the trifecta of high cholesterol promotion is received without critique, or that women lack agency, but rather to implore a cautious view against the

rising tide of individualist-led health campaigns (in all their forms) that find the individual to be both the cause and solution to high cholesterol and heart disease woes.

## References for chapter 5/article 2

- Aronowitz, R. (1991). Lyme disease: the social construction of a new disease and its social consequences. *The Millbank Quarterly*, 69:79-112.
- Armstrong, D. (1995). The rise of surveillance medicine. *Sociology of Health & Illness*. 17(3), 393-404.
- Barker, K.K. (2011). Listening to Lyrica: contested illnesses and pharmaceutical determinism. *Social Science & Medicine*, 73, 833-842.
- Becel® . (2011a). *Women and heart disease*. Accessed May 12th, 2011.  
[www.Becel.ca/en\\_ca/women\\_and\\_heart\\_disease/default.aspx](http://www.Becel.ca/en_ca/women_and_heart_disease/default.aspx)
- Becel® (2011b). *Free Healthy Heart Check*. [www.loveyourheart.ca/en\\_ca/heartcheck.aspx](http://www.loveyourheart.ca/en_ca/heartcheck.aspx)  
Accessed May 12th, 2011.
- Bierman AS, Jaakkimainen RL, Abramson BL, Kapral MK, Azad N, Hall R, Lindsay P, Honein G, Degani D. "Cardiovascular Disease". In *Project for an Ontario Women's Health Evidence-Based Report: Volume 1*. Edited by Bierman AS. Toronto: The POWER Study.
- Blais, C., Hamel, D., and Rinfret, S. (2012). Impact of Socioeconomic Deprivation and Area of Residence on Access to Coronary Revascularization and Mortality After a First Acute Myocardial Infarction in Quebec. *Canadian Journal of Cardiology*, 28:169-177.
- Blaxter, M. (1978). Diagnosis as category and process: the case of alcoholism. *Social Science & Medicine*, 12, 9-17.
- Blaxter, M. (2009). The Case of the Vanishing Patient? Image and experience. *Sociology of Health & Illness*, 31, 762-778.
- Brown, P. (1995). Naming and Framing: The Social Construction of Diagnosis and Illness. *Journal of Health and Social Behavior*. 35(Extra Issue):34-52.

- CPHI - Canadian Population Health Initiative. (2004). Improving the Health of Canadians - Summary Report. ([www.cihi.ca](http://www.cihi.ca))
- Carson, AP., Rose, KM., Catellier, DJ., Kaufman, JS., Wyatt, SB., Diez-Roux, AV., and Heiss, G. (2007). Cumulative socioeconomic status across the life course and subclinical atherosclerosis. *Ann Epidemiol*, 17(4):296-303.
- Cassies. (2013). "Make Death Wait". Cassies Off to a Good Start (Silver). [www.cassies.ca/entry/viewcase/7033](http://www.cassies.ca/entry/viewcase/7033) Accessed June 1st 2013.
- CIHI - Canadian Institute for Health Information. (2005). Select highlights on: Public views of the Determinants of Health. [www.cihi.ca](http://www.cihi.ca)
- Clark, A.M., Duncan, A.S., Trevoy, J.E., Heath, S., and Chan, M. (2010). Healthy diet in Canadians of low socioeconomic status with coronary heart disease: Not just a matter of knowledge and choice. *Heart & Lung*. 40:156-163.
- Cockerham, W.C., Rutten, A., and Abel. T. (1997). Conceptualizing Contemporary Health Lifestyles: Moving Beyond Weber. *The Sociological Quarterly*, 38(2), 321-342.
- Creswell, J.W. (2007). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches*. (2nd ed.). California: Sage.
- Crawford, R. (1980). Healthism and the Medicalization of Everyday Life. *International Journal of Health Services*. 10(3), 365-388.
- Ebeling, M. (2011). 'Get with the Program!': Pharmaceutical marketing, symptom checklists and self-diagnosis. *Social Science & Medicine*, 73:825-832.
- Frances, A. (2013). *Saving normal: an insider's revolt against out-of-control psychiatric diagnosis, DSM-5, big pharma, and the medicalization of ordinary life*. New York: Harper Collins.



- Franks, P., Winters, P.C., Tancredi, D.J., and Viscella, K.A. (2011). Do changes in traditional coronary heart disease risk factors over time explain the association between socio-economic status and coronary heart disease? *BMC Cardiovascular Disorders*, 11:28-33.
- Gasher, M., Hayes, M.V., Ross, I., Hackett, R.A., Gutstein, D., and Dunn, J.R. (2007). Spreading the News: Social determinants of health reportage in Canadian Daily Newspapers. *Canadian Journal of Communication*, 32(3/4):557-574.
- Germov, J. (2009). "Food, Class and Identity." in J. Germov and L. Williams (Eds.), *A Sociology of Food & Nutrition: The Social Appetite*, 3rd ed. (pp. 264-280). London: Oxford.
- Gilbert, D. (2011). *The American Class Structure in an Age of Growing Inequality*. (8th ed.). California: Sage, (Chapter 11).
- Government of Canada. (2006). *The Human Face of Mental Health and Mental Illness in Canada*. Ottawa: Minister of Public Works and Government Services.
- Health Canada. (2010). *"It's Your Health - Heart Disease- Heart Health"*. Catalogue # H13-7/72-2010E-PDF. February 2010.
- Health Canada. (1998). "Nutraceuticals/Functional Foods and Health Claims on Foods". Policy Paper: Therapeutic Products Programme and the Food Directorate from the Health Protection Branch.
- Invest In Canada. (2012). *Functional Foods and Natural Health Products: Canada's Competitive Advantage*. Foreign Affairs and International Trade Canada. Ottawa, Canada. Catalogue #: FR5-38/19-2012E.
- Jutel, A. (2011). *Putting a Name to It: Diagnosis in Contemporary Society*. Baltimore: The Johns Hopkins University Press.

- Jutel, A., and Nettleton, S. (2011). Towards a sociology of diagnosis: Reflections and opportunities. *Social Science & Medicine*, 73:793-800.
- Jutel, A. (2009). Sociology of diagnosis: a preliminary review. *Sociology of Health & Illness*. 31(2):278-299.
- Korp, P. (2010). Problems of the Healthy Lifestyle Discourse. *Sociology Compass*. 4(9):800-810.
- Kreatsoulas, C., and Anand, S.S. (2010). The impact of social determinants on cardiovascular disease. *Canadian Journal of Cardiology*, 26(Supplement C) Aug/Sept: 8C-13C.
- Lincoln, Y.S., & Guba, E.G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Lupton, D. (1995). *The Imperative of Health: Public Health and the Regulated Body*. London: SAGE.
- Montreal Gazette. (2011). *Rate of statin prescriptions not backed by solid proof: Study*. (January 19th, 2011). Accessed March 2013.  
<http://www.montrealgazette.com/health/Rate+statin+prescriptions+backed+solid+proof+Study/4131474/story.html>
- Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research*, 1(2).
- Moynihan, R. and Cassels A. 2005. *Selling Sickness: How the World's Biggest Pharmaceutical Companies are Turning us all into Patients*. Toronto: Greystone Books.
- Nettleton, S. (2004). The emergence of e-scaped medicine. *Sociology*. 38, 661-679.
- Nettleton, S. (1997). "Surveillance, health promotion and the formation of a risk identity", in Sidell, M., Jones, L., Katz, J. and Peberdy, A. (Eds.), *Debates and Dilemmas in Promoting Health: A Reader, 2nd edition*. London: Palgrave.
- Novas, C and Rose, N. (2000). Genetic risk and the birth of the somatic individual. *Economy and Society*, 29(4): 485-513.
- Parsons, T. (1951). *The Social System*. Free Press, New York.

Payer, L. (1992). *Disease Mongers: How Doctors, Drug Companies and Insurers Are Making You Feel Sick*. New York: John Wiley & Sons, Inc.

PHAC - Public Health Agency of Canada. (2013). Chronic Disease Risk Factors.

[http://www.phac-aspc.gc.ca/cd-mc/risk\\_factors-facteurs\\_risque-eng.php](http://www.phac-aspc.gc.ca/cd-mc/risk_factors-facteurs_risque-eng.php) Accessed June 5th 2013.

Raphael, D. (2008). Grasping at straws: A recent history of health promotion in Canada. *Critical Public Health*, 18(4):483-495.

Reutter, L., Neufeld, A., and Harrison, M.J. (1999). Public Perceptions of the relationship between poverty and health. *Canadian Journal of Public Health*, 90(1), 13-18.

Reutter, L.I., Veenstra, G., Stewart, M.J., Raphael, D., Love, R., Makwarimba, R., and McMurray, S. (2006). Public Attributions for Poverty in Canada. *CRSA*, 43(1):1-22.

Rochon Ford A., and Saibil, D. (2011). eds. *The Push to Prescribe: Women & Canadian drug policy*. Toronto: Women's Press. (chapter 1)

Rosenberg, C.E. (2002). The Tyranny of Diagnosis: Specific Entities and Individual Experience. *Millbank Quarterly*, 80(2):237-260.

Rosenberg, H., and Allard, D. (2007). *Evidence for Caution: Women & Statin Use*. Toronto: Women and Health Protection. June 2007.

Schwartz, L.M., and Woloshin, S. (1999). Changing Disease Definitions: Implications for Disease Prevalence. *Effective Clinical Practice*, 2(2):76-85.

Shankardass, K., Lofters, A., Kirst, M., and Quinonez, C. (2012). Public awareness of income-related health inequalities in Ontario, Canada. *International Journal for Equity in Health*. 11:26-36.

- Sheth, T., Nair, C., Nargundkar, M., Anand, S., and Yusuf, S. (1999). Cardiovascular and cancer mortality among Canadians of European, South Asian and Chinese origin from 1979 to 1993: an analysis of 1.2 million deaths. *CMAJ*, 161:132-138.
- Statistics Canada. (2013). "2011 National Household Survey". Statistics Canada catalogue no. 11-001-X. <http://www12.statcan.gc.ca/nhs-enm/index-eng.cfm?HPA>
- Statistics Canada. (2012). "Leading Causes of Death in Canada, 2009". Publication 84-215-X. <http://www.statcan.gc.ca/pub/84-215-x/2012001/hl-fs-eng.htm>
- Wall Street Journal. (November 2011). Panel Urges Cholesterol Testing for Kids. Ron Winslow and Jennifer Corbett Dooren. November 12th, 2011. Accessed March 2013. <http://online.wsj.com/article/SB10001424052970204358004577032194104839570.html>
- Williams, S.J. (1995). Theorizing class, health and lifestyles: can Bourdieu help us? *Sociology of Health and Illness*, 17(5), 577-604.
- World Health Organization (WHO) (2011). *Closing the Gap: policy into practice on social determinants of health: Discussion paper for the World conference on social Determinants of Heal*

**Chapter 6/Article 3**

**Abstract**

In June 2010, Becel<sup>®</sup> pro.activ<sup>®</sup> margarine was launched in Canada, the first functional food product fortified with plant sterols, with cholesterol-lowering properties. This campaign consisted of six key advertisements in two Canadian magazines and specifically focused on the problem of high cholesterol for women. Using a sociology of diagnosis framework, this paper examines how women understand high cholesterol and the solutions to it. Drawing on an analysis of in-depth qualitative interview data from 49 women who are concerned with high cholesterol, in Ontario Canada, I explore how women understand the solution to high cholesterol to be and how women perceive Becel's<sup>®</sup> corporate solution. Findings reveal participants' understanding of high cholesterol drew on a notion of 'proactive myopia' which entailed a steadfast belief in personal responsibility and accountability for health, and the valorization of knowledge at the expense of social contextualization. The solution to high cholesterol is highly individualized with a focus on lifestyle and behaviour modifications. Lastly, female participants validate the corporate marketing solution to high cholesterol as part of making the 'right choices' to be healthy. These findings are significant in extending the sociology of diagnosis framework and reflects a further entrenchment of the individualized responsibility for health.

**Keywords:** Proactive Myopia, Women, High cholesterol, Lifestyle, Health, Sociology of Diagnosis, Functional Foods.

## **Introduction**

Using the sociology of diagnosis as a framework (Jutel 2011) for examining women's understanding of high cholesterol, this case study discusses the lay perspective on high cholesterol *solutions* and prevention tips, and how women understand and situate health within a greater context. More specifically, this paper explores women's views on the corporate prevention tips of the first functional food product with plant sterols (Becel<sup>®</sup> pro.activ<sup>®</sup> margarine) marketed to Canadians and designed to lower cholesterol. I draw on data from in-depth interviews with 49 women who expressed a concern with high cholesterol and heart disease, to explore: (a) how women understand and perceive the high cholesterol solution to be; (b) women's views on the corporate marketing solution of high cholesterol by Becel<sup>®</sup>; and (c) women's understanding of why some people are healthy and others are not. Where appropriate, I illustrate how their answers vary by class.

Heart healthy food products aimed at ameliorating high cholesterol have exploded in popularity in recent years and include myriad products known as "functional foods" (Cinnamon 2009). Functional foods extend the health benefits of a food beyond the basic nutritional content. For instance, probiotics in yogurt to balance intestinal flora, antioxidant-enriched orange juice to strengthen immune systems, or plant sterols in margarine to lower cholesterol. Health Canada (1998) defines a functional food as one that is "...similar to a conventional food, but demonstrates physiological benefits and/or reduces the risk of chronic disease". Functional foods have soared in popularity globally, and currently, Canada is a competitive arena for developers with a national functional food market valued at \$4.9 billion with expected growth to \$5.8 billion by 2015 (AAFC 2011:17 ). In fact, in Canada, there are 174 firms producing functional food

products and DANONE (producers of Dan Active and Activia Probiotic Yogurt) have recently invested \$50 million in Canadian operations (Invest in Canada 2012; Statistics Canada 2009).

Functional foods have emerged as an antidote to a cholesterogenic environment that purport to not only provide healthy sustenance but actively contribute to chronic disease prevention. An example would be the examination of food via specific micronutrients (i.e. plant sterols) at the expense of the greater contextualization of food, the body and the environment (i.e. structural factors that impact someone's health). This process of focusing attention on one key ingredient is termed 'nutritionism' and was developed by Scrinis (2008). Nutritionism impedes other ways of interacting and understanding food, health, disease and ourselves, and as a consequence it can "...render the lay public susceptible to the nutritional and marketing claims of the food industry" (Scrinis 2008:545). Nutritionism is closely tied to the medicalization of food (e.g. food is treated as a drug with therapeutic capabilities) and both of these aspects blur the lines between food and medicine. Scholars have critiqued nutritionism as a "...pathologized and reductionist approach" to health promotion, and consumption patterns (Lawrence and Germov 2009:163).

The public battle against cholesterol is an exemplar of nutritionism. The vilification of cholesterol coincides with the marketing of high cholesterol as a disease rather than a risk factor (among many others) of cardiovascular diseases, in particular heart disease. This social creation of a disease can be seen in the plethora of new functional foods advertised with cholesterol-lowering properties such as bread products, oatmeal and margarine. There is currently little known about the sociological diagnosis of high cholesterol and the marketing of functional foods to women. This study addresses this gap, using a sociology of diagnosis framework.

What is meant by the "sociology of diagnosis"? The sociology of diagnosis was first called upon by Brown (1995) to be viewed as a separate area of study from medicalization, and has continued to grow in popularity amongst interdisciplinary scholars. The sociology of diagnosis can be viewed as a prism, through which previously known conditions have emerged into 'diseases', for instance, shyness is rechristened into *social anxiety disorder*, and leg cramps are now *restless leg syndrome* (Moynihan and Cassels 2005). Diagnosis is useful in locating the "parameters of normality and abnormality" (Brown 1995:39) and rather than preventing illness, diagnosis is about the "management of disease" (Rosenberg 2002:240), and is valuable in examining how one is never fully healthy, nor completely diseased, but constantly in this state of reforming, refining, re-diagnosing and reassessing ourselves, and by extension, others. The fundamental remapping of symptoms into disorders and diseases has reorganized how we view ourselves and our obligations to society, raising the stakes in what is permissible or not.

As for the sociology of diagnosis literature, it has been used to analyze pharmaceutical marketing (Ebeling 2011); alcoholism (Blaxter 1978); autobiographical cancer analysis (Blaxter 2009); obesity (Jutel 2006); the emergence of female hypoactive sexual desire disorder (Jutel 2010); doctor-patient interactions (Gardner, Dew, Stubbe, Dowell, and Macdonald 2011); disease-mongering or the business of "convincing well people that they are sick" (Payer 1992:5); control over medical information (Nettleton 2004); big Pharma and the marketing of sickness (Moynihan and Cassels 2005), overdiagnosis (Welch, 2011); and the medicalization of everyday 'normal' life (Frances 2013). However, sociology of diagnosis has not yet been used to examine functional foods.

Interdisciplinary studies of functional foods (from a variety of backgrounds including agriculture, nursing, psychology, medicine, the environment, marketing and health policy) tend



to focus on: (a) *consumer preferences, behaviours and consumption patterns* (Hailu, Boecker, Henson and Cranfield 2009; Jones 2002; Landstrum, Koivisto-Hursti and Magnusson 2009; Spiteri-Cornish 2012; Verbeke, Scholderer and Lahteenmaki 2009); (b) *criticisms of functional foods and their health claims* (Hasler 2002; Lawrence and Germov 2009; Nestle 2013); (c) *lay discourses* (Holm 2003; Jauho and Niva 2013; Niva 2007); (d) *definitions* (ADA 2009; IFIC 2007); and (e) *marketing and industry reports* (AAFC 2011; Cinnamon 2009; Invest in Canada 2012; Subirade 2007; Siro, Kopolna, Kopolna and Lugasi 2008). Since the sociological literature on functional foods is a relatively new area there are only a handful of studies published. For instance, there are several UK studies that examine lay discourses of functional foods related to probiotics (Crawford, Brown, Nerlich and Koteyko 2010; Koteyko 2010), and a case analysis of Koreans' use of germinated brown rice (Kim 2013).

However, there are no studies that employ a sociology of diagnosis lens with food, and certainly no study using this framework with a functional food campaign centered around cholesterol and women's health. To my knowledge this is the first in-depth qualitative sociological study that examines functional foods and high cholesterol marketed as a disease to women. This qualitative case study adds a more nuanced approach to women's high cholesterol issues, by examining both the solutions from a lay perspective *and* a corporate marketing campaign. This study provides new insights into the power dynamics employed in food advertising and how these narratives reinforce an individualized responsibility for health that reproduces class divisions.

### **Research Design**

A case study approach is used and employs Creswell's (2007) definition of a case study as a methodology and "product of the inquiry" (p.73). In particular, this paper is part of a larger collective or multiple case studies, that analyzes the rise of high cholesterol as a disease, content

analysis of a functional food campaign and participant narratives, the latter, of which this paper discusses.

### *Data Collection*

The study was conducted in Ontario, Canada in the spring of 2012, and includes in-depth semi-structured interviews with 49 women over the age of forty who are concerned with high cholesterol. While a content analysis of the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign can be found elsewhere (Author in press), --this paper deals specifically with women's perceptions of *solutions* to high cholesterol. I explore women's views on Becel's<sup>®</sup> cholesterol prevention tips, their understanding of why some women have high cholesterol and/or heart disease and others do not, and how their answers vary by class. To ascertain this, women were shown the Becel<sup>®</sup> pro.activ<sup>®</sup> advertising campaign which included the Becel<sup>®</sup> tips for preventing high cholesterol and heart disease (see Table I for these tips) and asked for their views. In order to minimize bias and avoid priming the participants, this study followed previous work by Lupton and Chapman (1995) who showed newspaper articles on high cholesterol to participants after a general discussion on health and illness. The female participants were self-selected based on advertisements placed in a variety of socio-economic neighbourhoods in three cities in Ontario (Oakville, Hamilton and Toronto), and on-line via the *Kijiji* website. Each participant was remunerated with a \$20.00 Starbucks gift card.

A self-administered questionnaire that asked basic demographic questions (age, education, income, ethnicity, occupation) was the first step in data collection and was used to later classify participants into social class categories. This was followed by an in-depth semi structured interview that took approximately 60 minutes and was recorded with permission. The interview was divided into three sections consisting of 32 questions (personal eating habits and functional

foods; food marketing, the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign and statin drugs; and health and illness, specifically high cholesterol and heart disease for women). Interviews occurred in participants' homes or local coffee shops.

### *Ethical Considerations*

The women were briefed on the purpose of the study with a letter of information and consent, and all aspects of the study were cleared by the University Research Ethics Board. All participants were coded numerically and with a pseudonym and no identifying information was used. Participation was voluntary and women were reminded I was not a medical professional nor would I give medical or nutritional advice and I was not affiliated with Becel<sup>®</sup> margarine.

### *Sample*

The women's ages ranged from 40-82. They reported their ethnicity (self-identified) as the following: 2 Black, 2 Asian, 3 Jewish, and 5 Middle Eastern, and 37 of Caucasian descent. The 5 Middle Eastern women were recent immigrants to Canada (within the past 10 years). Twelve participants were on cholesterol-lowering medications (also known as statins), however this was not a study inclusion or exclusion criterion. Five pilot interviews were conducted and although the data was not used these pilot cases were helpful to minimize observer bias, reorder the questions, and further refine the interview guide. As is traditional in case studies, the number of cases needed is unknown until saturation becomes obvious, whereby the last few cases reveals little new information (Small 2009).

### *Data Analysis*

I categorized women according to their class based on Gilbert's scheme (2011). The upper-middle class (UMC=15) were university educated professionals and managers, with valuable credentials and rewards. The lower-middle class (LMC=5) were lower-tiered managers and administrators, lower-status white collar and some highly skilled blue collar with at least a high school diploma and some college. The working class (WC=9) held low-skilled manual, retail and clerical jobs (both blue and pink collar), and usually only had a high school diploma. These workers were more replaceable and their work was fairly routinized and involved less autonomy. Finally, I combined the working poor and the underclass (WP=20) into one category and this group consisted of precarious work and insecure income that fell at or below the poverty line as defined by Statistics Canada's low-income cut off and a reliance on government funding (either via subsidized housing, disability or welfare assistance). These women had limited or erratic participation in the workforce and little education.

After transcription of the data using *Scribe* software, I read through each transcript and "played" with the data continuously in various forms (i.e. graphics and flowcharts) as influenced by Miles and Huberman (1994). Codes were developed based on different literature reviews and themes directly from the participants. The development of theory prior to data collection and analysis, specifically the sociology of diagnosis, informed and guided this research with the aim of either validating, extending or falsifying the framework. The work of Whitemore, Chase and Mandle (2001) was relied upon for validation strategies in terms of authenticity (representing the emic viewpoint); criticality (expert checking and negative case analysis); integrity (self-critical inquiry); vividness (the use of rich, thick descriptions); and thoroughness (a clear connection between and across quotes).

Table 12 below depicts Becel's<sup>®</sup> tips for lowering cholesterol as found verbatim in their advertising campaign.

**Table 12. Becel<sup>®</sup> pro.activ<sup>®</sup> tips for lowering your cholesterol**

**Becel's<sup>®</sup> tips for lowering your cholesterol**

- 1. Eat a balanced diet** (enjoy a variety of foods from Canada's Food Guide every day)
- 2. Include Plant Sterols** in your daily diet. Health experts suggest eating 2grams of plant sterols a day to enhance LDL-cholesterol lowering lifestyle and diet.
- 3. Focus on healthier fats** (eat less saturated and trans fats, replace them with polyunsaturated fats).
- 4. Keep active** (just 30-60 minutes of moderate physical activity on most days of the week can lead to many health benefits).
- 5. Give up smoking** (Smoking cigarettes, even a few a day, can affect your heart health and could increase your risk of coronary heart disease by as much as 70%).
- 6. Make efforts to decrease your stress levels**

## **Objectives**

This article explores: (1) how women conceptualize solutions to high cholesterol; and (2) how they view and perceive Becel's<sup>®</sup> high cholesterol prevention tips. The analysis that follows reveals three major findings:

1. Women's perspectives drew on a notion of 'proactive myopia' (a belief in personal responsibility and accountability for health, personal choices and the power of health knowledge, at the myopic expense of social contextualization)
2. Women believe the solution to HC is lifestyle and behaviour modifications and reject the notion of functional foods as part of the solution
3. Women agree with the individualized healthy lifestyle focus of the Becel<sup>®</sup> prevention tips

In the analysis that follows, I document women's reactions and understanding to the framing of the high cholesterol solution as a lifestyle and behavioural issue, and when relevant I detail how this awareness varies by class background.

## **Findings**

The narratives presented below illustrate the most commonly expressed opinions about high cholesterol and women's health, in particular the lay perspective of the solution to women's high cholesterol 'disease'-state. What these narratives highlight is the collective agreement around women's solution to high cholesterol being first and foremost an individual responsibility, imbued with a proactive sense of civic duty to take care of oneself (i.e. and not abuse the health care system). Simultaneously, these perspectives also showcase a fractured or myopic sense of the social determinants of health and people's varying 'abilities' to control their health and illness.

*Proactive myopia*

The notion of proactive myopia is defined as a belief in proactive self-directed care, personal responsibility, and the valorization of health and nutrition knowledge as the key solution to women's heart health issues. This notion is myopic in the sense of being a fragmented prism through which participants make sense of their own heart health issues and those of others. In particular, what gets missed in this perspective is (1) an awareness of the individualism of this perspective, as well (2) an appreciation of how structural factors make it more difficult for some groups to pursue significant resources towards individual health projects. It is myopic in its imperceptive and insensitive analysis, condemning themselves and others to a moral indignation of unaccountability.

The following narratives illustrate the multifactorial aspects of this perspective and encompasses but is not limited to the healthy lifestyle dictum (Korp 2010), the personal responsibility paradigm (Minkler 1999); elements of healthism (Crawford 1980); the belief in medical expertise and the role of medicalization (Conrad 2007); the sense of moralization and Othering and the 'disciplinary mood' of health promotion (Crawford 2000:224); and the lifestyles and life choices debate (Frohlich, Corin and Potvin 2001).

*Individualized sense of responsibility*

When asked to describe what the solution to women's high cholesterol entails, this upper middle class participant explains:

Healthy food choices, exercise and proactive health care as well.

Do your annual check-ups. You don't have to pay for them,

so why wouldn't you do them? And general wellness, you don't

have to sit down in front of the T.V, you can choose to do something else, general lifestyle (Nicole, 41-UMC).

The overwhelming agreement amongst respondents was that managing cholesterol is one's personal responsibility. Individual accountability for health is premised upon a few assumptions. First, that the offending behaviour (i.e. consuming fatty foods, not exercising, smoking, etc.) is easily avoided and the satisfactions derived from these disease-producing behaviours are not enough to warrant their continuation. Second, it is assumed there is no cause to justify these behaviours,-- no social, economic or psychological context that would influence the adherence to these behaviours. Lastly, it is also assumed the link between an unhealthy lifestyle and heart disease is a straightforward, linear progression with no outlying causes (Dworkin 1981:30).

*Acceptance of disease diagnosis (i.e. high cholesterol is a disease)*

Not only did women accept and believe in the diagnosis of high cholesterol as a disease, but they readily linked high cholesterol to a lifestyle disease, unless genetics were involved. This high cholesterol 'disease' was consistently linked to personal choices, lifestyle and a lack of accountability:

It isn't a condition that you have, and then don't have. [High cholesterol] is a condition that's brought about by lifestyle, so once you have it, you have to learn to control it and learn to live with it. I just think it's a product of the way we've chosen to live our lives and combined with a lack of knowledge, because if you don't implement the right kind of lifestyle, you run the risk of having cholesterol problems the older you get. I think it's a lifestyle issue, I really do, based on a lack of knowledge at critical times in



your life (Sherry, 69 - UMC).

What the individualized notion of health means however is uncertain and vague at best. There is no doubt that if individuals took better care of their bodies and minds they would most likely be healthier, but how that responsibility should be undertaken and under what conditions remains murky (Wikler 1987:1). How blame is assigned for disease-status and what the solution to high cholesterol is for these women, however, is quite clear.

*Fractured sense of contextualization*

When asked why some people are healthy and others have heart disease, this LMC participant states:

A lot of it is DNA, you're born with a certain set of parts and then it's what you do with it, it's your lifestyle. I think being aware and taking responsibility and being flexible because everything is changing all the time (Lena, 44 - LMC).

The notion of being flexible reveals the fractured knowledge among my participants from all class backgrounds, of the structural, economic, cultural, environmental, psychosocial, and political factors that influence one's state of health, in particular heart disease and high cholesterol (PHAC 2013). How does one become *aware* or more responsible?

This UMC woman struggles with understanding why others may be short-sighted in their own sense of responsibility:

For some people it can be really easy, who are self-motivated to be healthy.  
But I often meet people who are limited in their income and spend their

money on the cigarettes, and they'll go to food banks...It's sad because you can give advice, but people won't change unless they see that there's going to be a benefit. All of these things that I'm doing, well I'm at a point in my life where I can see the short-term benefits of healthy eating on a regular basis, but it's a long-term thing. You may not see the benefits right away if you're not paying attention to it (Camilla, 50-UMC).

When these conversations around personal responsibility for health begin during the interviews, there is little corresponding discourse on 'response-ability' (Abrams 2012; Minkler 1999), or how individuals can handle the constraints of everyday life along with disease prevention and health maintenance.

#### *Power of healthy lifestyles*

While the more privileged classes had difficulty in contextualizing heart disease and high cholesterol, the next participant from the working poor describes how responsibility cannot be estranged from context. When asked how realistic or achievable the Becel<sup>®</sup> tips for lowering cholesterol were, 14 of the working poor rejected the lifestyle focus. For instance:

[laughing], well, it might be achievable for some people, but not necessarily achievable for most I would say. You're asking someone to make a complete lifestyle change, depending on their age, their finances, their racial background. Because there are so many factors, I don't think it's realistic because I don't think anything in life you can say one list of recommendations will help everybody in that set of circumstances (Regina, 56-WP).

Regina's comments speaks to the fallibility of having a "...readymade healthy lifestyle suitable for all that is independent of their social and cultural situation" (Korp 2010:808). Yet, even though criticisms abound regarding the decontextualized nature of the healthy lifestyle discourse and personal accountability (Crawford 2006), this biomedical approach nevertheless persists among both lay discourses and health promotion literature (Gore and Kothari 2012).

Of the 14 WP women who initially stated the Becel<sup>®</sup> tips were unrealistic or unachievable, when later asked how women could prevent high cholesterol, only 5 referred to the social determinants of health (e.g. "epi-genetics", culture, family life, poverty, low self-esteem, and "modulating stress"), and only one of these women discussed mental health, even though many in the WP admitted to struggling with depression, anxiety, agoraphobia, loneliness, lack of social support networks and isolation. So, while some of the WP initially displayed a depth of answers, this very group later on answered in more regimented and fixed health categories of food and health knowledge. The proactive myopia highlights the contradictory and fluid nature of health-speak. The lingo surrounding what one knows about health-promoting behaviours versus the actual behaviours one engages in are quite complex and at times very different things (Backett 1992). This also speaks to the inherent contradictions and inconsistencies in cultural repertoires, since people can only make sense of their actions and surroundings based on the tools available to them, such as their awareness of or contact with other repertoires (Swidler 2001).

#### *Valorization of health knowledge*

Health knowledge is frequently espoused as a viable solution to women's high cholesterol woes and my participants readily believed in the power of nutrition and health information to change people's behaviour. However, as Wansink (2005:29) notes "...nutritional knowledge does not

dictate behavior". While studies have shown that people's nutritional intake is not related to knowledge but SES (Clark et al., 2010), participants expressed the idea that women should just "educate themselves" (Colleen, 55-WP). A working class women expressed the following:

Take in more information about how to protect yourself,  
read about cholesterol (Julia, 40-WC).

Upper middle class women however, spoke about the importance of being educated at a young age regarding healthy choices in order to prevent heart disease later in life:

Definitely get involved with their doctor and find out what  
they can do to prevent this...they should start at a young age,  
talk to your kids about it so that they know...so if the kids know  
that if they make good choices now I think that will help in the  
long run for preventing heart disease (Macy, 44-UMC).

While fixing the current educational curriculum to include a course on food was discussed, the upper classes also highlighted the problems of the 'Others'. These discussions display a genuine concern about the behaviour of others:

If people are on welfare and in poverty than perhaps that would  
be an opening to say, ok, you can do this, but you have to come to  
these classes....we'll help you buy this, but, you have to come to class.  
It's about being proactive. Well, it's not fair to just give someone  
money and say you have heart disease but your OHIP [Ontario  
Health Insurance Plan] will cover it. Why don't you say: 'you don't  
have to have it by doing this?' (Samantha, 63-UMC).

*Proactive self-directed care*

Closely aligned with this health-based moralism is a form of self-directed care based on a common-sense approach to health management:

Keep themselves educated, learn as much as they can. I've found that's been my best defense, it's been educating myself...then just making healthier choices, making it a priority that your health is most important...making some healthier choices for your family, eating better, managing stress in the family... (Judy, 40-UMC).

Knowledge is assumed to have an all or nothing capacity with these participants, as more knowledge equates with healthier behaviors. However, it is not so much the quantity of information given that is important, as it is the *type* of information promoted (Wansink 2005:13). And in these narratives the type of information extolled is associated with personal choices and healthy mindfulness.

*Awareness and mindfulness*

Moral self-regulation is part of the civilizing process (Elias 1978) whereby health regulation of individual behavior is not externally controlled and manipulated, but is internalized into a form of conscious and conscientious self-regulation.

Become aware, and through their awareness, get tested and figure out if there's something they can do about it on their own. Certainly you can take control over 3 things, body-mind-spirit, over your health in a way that will help reduce your cholesterol.

Awareness is the first step I think (Camilla, 50-UMC)

Awareness and mindfulness frequently arose as a viable option in reducing women's high cholesterol issues and is an attempt to jolt women out of their routinized or mechanized way of eating. Mindfulness is a way of avoiding overeating, a portion control mentality that has its roots in psycho-spiritual nutritional advice. This 'food-mood connection' (Null 2008) is part of the medical intuitive perspective, arguing that biography does not have to be biology, if awareness and mindfulness is present. Energy medicine, in its quest to differentiate itself from the biomedical perspective retreats to its fundamental principle that people create their illness and unconsciously participate at some point in its design (Myss 1996).

This working-class women enthusiastically explained the virtues of positive thinking:

Mind set. Total mind-set. It's what you believe. I believe that I deserve good health. I value myself not in a conceited way where I'm better than you, no. But, I value my spirit, my soul, my body, my mind, and I want to be healthy, so I think it's a mindset, because some people just give up, it's easy to just give up when life gets you down. You think WTF [what the fuck?], it's so easy to go down that road for all of us. So, it's all mindset, yup (Kiera, 50 - WC).

*Personal choices, desire for change and motivation*

Another working class participant exhibited the personal choice repertoire:

It could be genetic but it's really just a matter of taste for some people. Some people just like the taste of indulgence. It's a personal choice to a certain degree; you can't dictate what people eat for breakfast, lunch and

dinner (Eleanor, 81-WC).

When discussing the Becel<sup>®</sup> cholesterol-lowering recommendations, multiple instances of the internalization of the healthy lifestyle discourse was evident. This discourse was almost unanimous across the WC, LMC and UMC groups (i.e. 25/29), who repeated the importance of eating the 'right' foods, exercising and avoiding tobacco or alcohol:

I think they're achievable because of my mindset, but that's not everyone.

I used to smoke, but I quit when I was 29. I used to eat fast foods, I've done all that (Tanya, 46-WC).

### *Moral indignation and Othering*

This lower-middle class participant expressed genuine frustration with the health of 'Others':

How realistic is it? An exercise is walking around the block, an exercise is cleaning your house, an exercise is getting off one stop earlier, walk to get your welfare check, walk to pick up your LCBO.[Liquor Control Board of Ontario]. I'm very cynical. And if you do a survey of the people who smoke, you'll find that those are the demographics on welfare (LMC-Denise, 64).

Many women articulated a '*I did it, so can you*' attitude, and the next three narratives highlight the value that certain class groups place on "choice" and "responsibility" and also embody a sense of moral indignation. This upper-middle class participant emphasizes the importance of desire:

I think they are achievable, but it's the desire to achieve these things (Sherry, 69-UMC).

While Joan described how *choice* overrides everything else:

Honestly, it is achievable, I think it's more achievable than not. I don't smoke and I don't drink and I feel pretty average. I choose to eat well... but it's a choice, and that's the difference. It's a choice of whether you want to or not. We have a choice about what we put in our mouth, we have a choice about whether we have a cigarette, we have a choice about whether we're going to have a drink. So you've got one body, and it's how you're going to use it or abuse it. I think it's achievable and it's attainable, and it's not difficult at all (Joan,48-LMC).

Other participants were quite unfazed by the possibility that good health is not achievable for all:

I agree with all those Becel<sup>®</sup> recommendations, it's very achievable, very, very achievable. If you care about who you are and the person you want to be, you'll stop smoking because smoking just clogs up your mind... (Susanne, 40-WC).

### *Constancy of the solution*

The constancy of the solution (i.e. individual-based) remained the same regardless of the issue, whether it was heart disease, high cholesterol, poverty or diabetes:

You can be poor and buy beans, a big package for \$1.30 and feed a family with it. But people don't know that, so they buy



hotdogs instead. I still think it starts in school. It would all be achievable if we wanted to do it (Samantha, 63-UMC).

Similar to both Backett (1992) and Lupton and Chapman's (1995) research, my participants focused on personal initiative and responsibility for navigating the health and nutrition landscape, however, medical doctors were seen as an appropriate first step for cholesterol testing, genetic predispositions or health advice.

*Belief in medical expertise*

I think you need to know your body...so go to your doctor, get checked out, see what you have to work with and adjust your lifestyle to live with that...it's about living life with awareness (Lena, 44-LMC).

*Rejection of functional foods as solution*

Lastly, functional foods and Becel<sup>®</sup> pro.activ<sup>®</sup> margarine was overwhelmingly rejected as a prevention option. As one WC woman stated:

I don't think this product is a solution. It's just Becel trying to get you to buy the product. But, the solution is eating natural healthy foods, exercising and getting good sleep. It's not a margarine that's going to help you (Tanya, 46 - WC).

Thus, the proactive myopia repertoire includes several features, namely the individualized sense of responsibility and accountability for health. This may include a lack of awareness of collective

responsibilities or the active denial of such. The repertoire also includes a steadfast valorization of knowledge as the key solution, and in particular, health and nutrition knowledge. It may also include the belief in the power of healthy lifestyles to offset disease and illness. Lastly, and closely aligned to a sense of responsibility is the proactive self-directed care, screening and surveillance as a form of self-regulation for health maintenance. This is most pronounced as a form of citizen obligation. Low cholesterol and the proactive participatory role by individuals in the act of lowering it, is "...not in itself necessarily desirable, the *desire* is instead compulsory" (Jutel 2010:1086).

## **Discussion**

The proactive myopia seen through these participant narratives reveals a steadfast belief in personal responsibility, choices and knowledge as the key solution to women's high cholesterol issues, at the myopic expense of social contextualization. Meaning, the myopia produces a fractured knowledge base of which to judge the high cholesterol issue as women's sense of individual accountability coloured their entire discussions and clouded the possibilities for alternatives. The mindset of self-reliance was the overarching facet of the narratives and when faced with contradictory answers or a genuine inability to understand why income inequality, poverty or social isolation might also impact heart disease and high cholesterol for women, these participants were comforted in the knowledge that self-regulation and self-reliance had to be the answer. What is interesting to note is the constancy of the solution regardless of the problem,-- the solution for these women consistently reverted back to the individual, their choices, their desire for health and their proactive sense of responsibility. This notion of individual responsibility and accountability for health has moral and ethical health policy implications and carries connotations of civic duty, obligation, punishment and judgment with it (Wikler 1987:1).

Along with this individualized sense of responsibility were several other facets. Proactive myopia also includes the power and relative easy availability of *choices*. This involved the simple decision making process of making the 'right choice' when presented with healthy and non-healthy options. It also included the desire for change, whereby motivation, dedication and self-control entered into the lexicon of the narratives. This was part of a disciplined mindset to manage your health, your body and ward off diseases. Proactive myopia also included a belief in medical expertise as evidenced by women's internalization of the high cholesterol disease diagnosis. Medical expertise was recommended as precautionary self-regulation and maintaining regular doctor visits was seen as a personal responsibility and a form of common sense.

What these participant narratives suggest is that the future of health promotion is a continued reinforcement of the lifestyle dictum, a continued reinforcement of easy short-term solutions that focus on individualized behaviour modifications and consumption with a lack of awareness surrounding the broader social, political, economic and structural constraints that can influence and impede one's level of health, health knowledge and prevention abilities. The danger of this is that high cholesterol becomes the du jour women's health focus and when interest wanes another highly marketable 'disease' will appear alongside a more palatable notion of self-help (for instance, the American Medical Association just declared obesity to be a disease -Ryan 2013).

Polarization between people who work for and at their health versus the 'others', the moral condemnation against those who do not measure up was evident in these narratives. The overwhelming emphasis is on choice, responsibility and knowledge, while women's observations of Others seems to greatly inform their opinion of who is deserving of good health versus those who brings ill health upon themselves. It seems to be that the choice for health is made and publicly displayed by both abstaining from visibly unhealthy habits (i.e. smoking, being overtly

overweight), and by publicly participating in health-forming habits (i.e. exercising, eating healthy), --even if there is confusion surrounding that 'choice'. One participant mentioned purchasing juice for her children with probiotics in it as a healthy step forward, yet when asked what probiotics were or why they were important for her children to consume, she could not answer the question and was admittedly embarrassed. But the inherent belief in the medicalized properties of functional foods speaks to the power of nutritionism and "regimes of hope" (Watson Moreira and Murtagh 2009). Interestingly, functional foods were never mentioned by participants as a practical option in cholesterol-reduction. The notion of taste and the emotional experiences of eating were also absent from these discussions, which speaks to the increased emphasis on the business of food rather than the pleasures of eating (Lupton 1996).

What is ironic about the biomedical concept of health (i.e. risk factors and individual behaviours) as seen in these lay discourses and the Becel<sup>®</sup> tips, is that the people most likely to benefit from individualized behaviour modifications are those in socio-economically advantaged positions. While those in more disadvantaged positions find that 'lifestyle changes' have very modest impacts on their health status (Nettleton and Bunton 1995:49; Labonte 2011; Navarro et al 2006). Research shows clearly that downstream interventions are not effective if upstream barriers are not addressed (Lyons and Langille 2000; Hall and McAuley 2010). In fact, researchers now consider socio-economic status (SES) a risk factor for heart disease in its own right, stating childhood exposure to socio-economic hardships changes the mechanisms of stress adaption strategies and the cumulative effects of this disadvantage across the life course adversely impacts cardiovascular health (Franks, Winters, Tancredi and Fiscella 201; Carson et al., 2007).

Even though there was some initial awareness of the social determinants of health (SDOH), when women were asked how to prevent high cholesterol or avoid getting heart disease, the overwhelming majority focused on lifestyle measures and contradicted their earlier admissions that economic, social or environmental causes may affect women's health. Only one working poor participant mentioned maternal health and employment conditions as factors in developing chronic diseases. The working poor women, who earlier displayed a recognition of the interplay between environment and health, now disaffirmed this linkage by reinforcing and repeating the lifestyle mantra: "*No more smoking or drinking or drugs*", "*eat healthier*", "*play sports, exercise*", and "*watch your level of obesity*", were the most common prevention phrases.

Health is something to be worked at, and issues of control frequently mentioned by the lower and upper middle classes are devoid of the possibility that others might not actually have a choice. The moral objectification of women by women was palpable, yet oddly understandable. The messages in favor of lifestyle remedies far outweigh any social determinants of health issues, and realistically the average Canadian knows very little of this matter (NCCHPP 2009), --most people's first and possibly only introduction to the social determinants of health would be in an introductory undergraduate sociology course.

This article is not an attempt to further inflame the simplistic dualism of personal versus collective responsibilities for health (Minkler 1999), but illustrates how problematic it is when the balance shifts towards the personal in such a way that it becomes ingrained in the social psyche as a common sense approach to health management.

### References for chapter 6/article 3

- Abrams, S. E. (2012). Persistent Problems and Collective "Response-Ability - Editorial". *Public Health Nursing*, 29(6):479-480.
- ADA (American Dietetic Association). 2009. "Position of the American Dietetic Association: Functional Foods." *Journal of the American Dietetic Association* April 2009: 735-746.
- AAFC - Agriculture and Agri-Food Canada. (2011, October). *Health and Wellness Trends for Canada and the World*. Accessed July 20, 2013.
- Backett, K. (1992). The construction of health knowledge in middle class families. *Health Education Research*, 7(4):497-507.
- Blaxter, M. (2009). The Case of the Vanishing Patient? Image and experience. *Sociology of Health & Illness*, 31: 762-778.
- Blaxter, M. (1978). Diagnosis as category and process: the case of alcoholism, *Social Science and Medicine*, 47(8):1067-1076.
- Brown, P. (1995). Naming and Framing: The Social Construction of Diagnosis and Illness. *Journal of Health and Social Behaviour*, 35 (Extra Issue): 34-52.
- Carson, AP., Rose, KM., Catellier, DJ., Kaufman, JS., Wyatt, SB., Diez-Roux, AV., and Heiss, G. (2007). Cumulative socioeconomic status across the life course and subclinical atherosclerosis. *Ann Epidemiol*, 17(4): 296-303.
- Cinnamon, B. (2009). Results from the Functional Foods and Natural Health Products Survey - 2007. A Working Paper, Statistics Canada. Catalogue no. 88F0006X, no.1
- Conrad, P. (2007). *The Medicalization of Society: On the Transformation of Human Conditions into Treatable Disorders*. Baltimore: The John Hopkins University Press.

- Crawford, P., Brown, B., Nerlich, B., and Koteyko, N. (2010). "Nutritional altruism and functional food: lay discourses on probiotics." *Sociology of Health and Illness* 32(5):745-760.
- Crawford, R. (2006). Health as a meaningful social practice. *health: an Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, 10(4):401-420.
- Crawford, R. (1980). Healthism and the Medicalization of Everyday Life. *International Journal of Health Services*, 10(3): 365-388.
- Creswell, J.W. (2007). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches, 2nd edition*. California: SAGE Publications.
- Dworkin, G. (1981). Voluntary Health Risks and Public Policy. *The Hastings Center Report*, 11(5): 26-31.
- Ebeling, M. (2011). 'Get with the Program!': Pharmaceutical marketing, symptom checklists and self-diagnosis. *Social Science & Medicine*, 73: 825-832.
- Elias, N. (1978). *The Civilizing Process* (Trans. by E. Jephcott). Blackwell, Oxford.
- Frances, A. (2013). *Saving Normal: an insider's revolt against out-of-control psychiatric diagnosis, DSM-5, big pharma, and the medicalization of ordinary life*. NY: HarperCollins.
- Franks, P., Winters, P.C., Tancredi, D.J., and Fiscella, K.A. (2011). Do changes in traditional coronary heart disease risk factors over time explain the association between socio-economic status and coronary heart disease? *BMC Cardiovascular Disorders*, 11:28-33.
- Gardner, J., Dew, K., Stubbe, M., Dowell, T., & Macdonald, L. (2011). Patchwork diagnoses: The production of coherence, uncertainty, and manageable bodies. *Social Science & Medicine*, 73:843-850.

- Gilbert, D. (2011). *The American Class Structure in an Age of Growing Inequality*. (8th ed.). California: Sage, (Chapter 11).
- Gore, D., and Kothari, A. (2012). Social determinants of health in Canada: Are healthy living initiatives there yet? A policy analysis. *International Journal for Equity in Health*, 11:41.
- Hall, KS., McAuley, E. (2010). Individual, social environmental and physical environmental barriers to achieving 10 000 steps per day among older women. *Health Education Research*, 25(3):478-488.
- Hailu, G., Boecker, A., Henson, S., and Cranfield, J. (2009). Consumer valuation of functional foods and nutraceuticals in Canada. A conjoint study using probiotics. *Appetite*, 52:257-265.
- Hasler, C.M. (2002). "Functional Foods: Benefits, Concerns and Challenges—A Position Paper from the American Council on Science and Health." *Journal of Nutrition* 132: 3772-3781.
- Holm, L. (2003). Food Health Policies and Ethics: Lay Perspectives on Functional Foods. *Journal of Agricultural and Environmental Ethics*, 16(6):531-544.
- Hsieh, H.-F. Shannon, S. E. 2005. Three approaches to qualitative content analysis. *Qualitative Health Research*. 15(9):1277-1288.
- IFIC. 2007. (International Food Information Council Foundation). "Functional Foods". <http://ific.org>
- Invest in Canada. (2012). *Functional foods and Natural Health Products: Canada's competitive advantage*. The Canadian Trade Commissioner Service. Accessed June 22<sup>nd</sup> 2013.
- Jauho, M., and Niva, M. (2013). Lay Understandings of Functional Foods as Hybrids of Food and Medicine, *Food, Culture & Society*, 16(1): 43-63.



- Jones, P.J. (2002). "Clinical Nutrition: 7. Functional foods—more than just nutrition." *CMAJ*, June 11 2002; 166(12): 1555-1563.
- Jutel, A. (2011). *Putting a Name to It: Diagnosis in Contemporary Society*. Baltimore: The Johns Hopkins University Press.
- Jutel, A. (2010). Framing disease: The example of female hypoactive sexual desire disorder. *Social Science & Medicine*, 70: 1084-1090.
- Jutel, A. (2009). Sociology of diagnosis: a preliminary review. *Sociology of Health & Illness*. 31(2):278-299.
- Kim, H. (2013). Functional foods and the biomedicalization of everyday life: a case of germinated brown rice. *Sociology of Health and Illness*, 35(6):842-857.
- Koteyko, N. (2010). Balancing the good, the bad and the better: A discursive perspective on probiotics and healthy eating. *health: An interdisciplinary journal for the social study of health, illness and medicine*. 14(6):585-602.
- Labonte, R. Towards a post-Charter health promotion. *Health Promotion International*, 26(Suppl2):ii183-ii186.
- Lawrence, M., and Germov, J. (2009). Functional Foods and Public Health Nutrition Policy. In J. Germov and L. Williams (Eds.), *A Sociology of Food and Nutrition: The Social Appetite*, 3rd edition., pp.147-175. Melbourne: Oxford University Press.
- Landstrom, E., Koivisto-Hursti, UL., and Magnusson, M. (2009). "Functional foods compensate for an unhealthy lifestyle: Some Swedish consumers' impressions and perceived need of functional foods." *Appetite* 53:34-43.
- Lhussier, M., and Carr, S.M. (2008). Health-related lifestyle advice: critical insights. *Critical Public Health*, 18(3):299-309.
- Lupton, D. (1996). *Food, the Body and the Self*. London: Sage.

- Lupton, D., and Chapman, S. (1995). 'A healthy lifestyle might be the death of you': discourses on diet, cholesterol control and heart disease in the press and among the lay public. *Sociology of Health and Illness*, 17(4):477-494.
- Lyons, R., and Langille, L. (2000). *Healthy Lifestyle: Strengthening the Effectiveness of Lifestyle Approaches to Improve Health*. Ottawa: Health Canada.
- Miles, M.B., & Huberman, A.M. (1994). *Qualitative data analysis: An expanded sourcebook*. Thousand Oaks, CA: Sage.
- Moynihan, R. and Cassels A. 2005. *Selling Sickness: How the World's Biggest Pharmaceutical Companies are Turning us all into Patients*. Toronto: Greystone Books.
- Myss, C. (1996). *Anatomy of the Spirit: The Seven Stages of Power and Healing*. NY: Three Rivers Press.
- Navarro, A., Voetsch, K., Liburd, L., Bezold, C., and Rhea, M. (2006). *Recommendations for future efforts in community health promotion: report of the national expert panel on community health promotion*. Atlanta: Centres for Disease Control and Prevention.
- NCCHPP - National Collaborating Centre for Health Public Policy. (2009, November). *Content Analysis of Media Coverage of Health Inequalities in Canada 2008*. Report.
- Nestle, M. (2013). *Food Politics: How the Food Industry Influences Nutrition and Health*. Los Angeles, CA: University of California Press.
- Nettleton, Sarah. 2004. The emergence of e-scaped medicine, *Sociology*, 38(4):661-679.
- Nettleton, S., and Bunton, R. (1995). Sociological critiques of health promotion. In R. Bunton & S. Nettleton (Eds.), *The Sociology of Health Promotion: Critical Analysis of Consumption, Lifestyle and Risk* (pp. 39-55). NY: Routledge.

- Niva, M. (2007). 'All foods affect health': Understandings of functional foods and healthy eating among health-oriented Finns. *Appetite*, 48:384-393.
- Null, G. (2008). *The Food-Mood Connection*. NY: Seven Stories Press.
- Payer, L. 1992. *Disease Mongers: How Doctors, Drug Companies and Insurers Are Making You Feel Sick*. New York: John Wiley & Sons, Inc.
- Rosenberg, C.E. (2002). The Tyranny of Diagnosis: Specific Entities and Individual Experience. *Milbank Quarterly*, 80(2):237-260.
- Ryan, A. (2013, June 19). Did the American Medical Association make a mistake in classifying obesity a disease? *The Globe and Mail*.
- Scrinis, G. (2008b). Functional foods or functionally marketed foods? A critique of, and alternatives to, the category of 'functional foods' - invited commentary. *Public Health Nutrition*, 11(5):541-545.
- Siro, I., Kapolna, E., Kapolna, B., and Lugasi, A. (2008). Functional food. Product development, marketing and consumer acceptance --A review. *Appetite*, 51:456-467.
- Small, M.L. (2004). 'How many cases do I need?' - On science and the logic of case selection in field-based research. *Ethnography*, 10(1): 5-38.
- Spiteri-Cornish, L. (2012). It's good for me: It has added fibre! An exploration of the role of different categories of functional foods in consumer diets. *Journal of Consumer Behaviour*, 11:292-302.
- Statistics Canada. (2009, July). *Results from the Functional Foods and Natural Health Products Survey - 2007*. Business Special Surveys and Technological Statistics Division Working Papers. Catalogue no. 88F0006X, no.1

- Subirade, M. (2007). "Report on Functional Foods November 2007." Prepared for Food Quality and Standards Service (AGNS), Food and Agriculture Organization of the United Nations (FAO). University of Laval, Quebec, Canada.
- Swidler, A. (2001). *Talk of Love: How Culture Matters*. Chicago: University of Chicago Press.
- Verbeke, W., Scholderer, J., and Lahteenmaki, L. (2009). Consumer appeal of nutrition and health claims in three existing product concepts. *Appetite*, 52:684-692.
- Watson, D.B., Moreira, T., and Murtagh, M. (2009). Little bottles and the promise of probiotics. *Health*, 13(2):291-234.
- Weiss, R.S. (1994). *Learning from Strangers: The Art and Method of Qualitative Interview Studies*. New York: The Free Press.
- Welch, G. H., Schwartz, L. M., and Woloshin, S. 2011. *Overdiagnosed: Making People Sick in the Pursuit of Health*, Boston: Beacon Press.
- Whittemore, R., Chase, S., K., & Mandle, C.L. (2001). Validity in qualitative research. *Qualitative Health Research*, 11, 552-537.
- Wikler, D. (1987). Who Should be Blamed for Being Sick? *Health Education Quarterly*, 14(1):11-25.

## CHAPTER 7: CONCLUSION

In this concluding chapter, I summarize the main findings across all three articles, the contributions to the literature, and the limitations of my research, followed by a discussion on suggestions for future research.

### Chapter Review: key findings across chapters

This concluding section of the dissertation deals with the key research findings across all three articles individually, but also in relation to each other, as each article builds upon the previous one. The findings are based on the key research questions that guided this research and are answered in each distinct article: (1) How is high cholesterol identified and marketed as a disease rather than a risk factor for cardiovascular diseases?; (2) How do women understand the issue of cholesterol (as disease or lifestyle), and the *causes* of high cholesterol; and (3) How do women understand the *solution* to high cholesterol to be? These findings centre on four key issues:

1. The construction and marketing of high cholesterol as a disease (i.e. via the sociology of diagnosis)
2. The causes of HC and attribution of blame are placed on women's poor lifestyle choices and seen as an individual responsibility
3. The class differences regarding women's knowledge and awareness of the social determinants of health (SDOH)
4. The solution to HC is individualized via the 'proactive myopia' repertoire

I only discuss the findings in the above mentioned papers which were submitted to academic journals and not my entire data set, as this dissertation only focuses on 3 key aspects of the research findings. The remaining findings are currently being written up for submission to other

journals and discuss: (a) women's understanding and reactions to the Becel<sup>®</sup> functional food campaign; (b) women's understanding of 'healthy lifestyles' and their daily health maintenance regimes (specifically women with cholesterol or heart disease worries); (c) women's understanding of cholesterol-lowering medication (i.e. Lipitor or Crestor), their views as current users of statin drugs or former users; (d) health promotion policies in Canada regarding 'healthy lifestyles' (i.e. how are individually-based health solutions promoted for chronic diseases in the health promotion literature); and (e) motivational framing of high cholesterol and women, --what are women motivated to do about the high cholesterol disease? I now turn to a discussion of the key findings:

***Finding #1: The Construction and Marketing of High Cholesterol as a Disease***

The foundation of this dissertation begins with exploring the construction and marketing of high cholesterol as a disease, rather than a risk factor (among many others) for cardiovascular diseases, in particular, heart disease. Chapter 2 begins to answer this question by incorporating a sociology of diagnosis approach that conceptualizes functional foods as a panacea for women's heart health issues. The sociology of diagnosis is useful here in examining how diagnosis extends beyond actual diseases and includes the risk factors. So, while heart disease is inherently multi-causal (WHO 2011) high cholesterol is predominantly featured as the key risk factor, obscuring the focus on the broader social determinants of health (Health Canada 2010; Conference Board of Canada 2010; CHHS-AP 2009). The main focus on high cholesterol elevates its status from risk factor to being "*at-risk-of*" or "*pre-diseased*", thereby blurring the lines between actual diseases and diseases-in-waiting (Moynihan and Cassels 2005). Since high cholesterol is marketed as a personal problem, it also encourages a personalized solution, by

drawing attention to the notion of personal lifestyle and behaviour modifications as the key solution strategy for women.

In summary, the findings of the content analysis in Chapter 2 suggest that the Becel<sup>®</sup> pro.activ<sup>®</sup> functional food campaign had two overarching messages: (1) a sense of urgency directed towards women and heart disease, which has transformed high cholesterol into a disease, rather than a risk factor; and (2) the emphasis on lifestyle and behavioural modifications as a personal solution to heart disease. While heart disease and stroke may be the leading cause of death of women in Canada, an important fact is excluded in this food campaign--that this risk is mediated by age. Meaning, it is "...not until women are in their 80s that heart disease becomes the number one cause of death" (Statistics Canada 2006a: 57-58). The next logical step in this research comes from a discussion of how actual women concerned with high cholesterol and heart disease view and perhaps internalize the high cholesterol state of emergency. Chapter 3 discusses these findings as they build on chapter 2.

***Finding #2: High cholesterol is internalized as a disease and the cause is individualized***

The participant narratives in article 2 (chapter 3) reveals that women internalized the message that high cholesterol is a disease. This reinforced my initial content analysis of the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign and is confirmed by an a priori assumption that cholesterol is being constructed into a disease and that this hyped state of cholesterolization will indeed lead to an internalization of the diagnostic status. However, an interesting discovery was the almost unanimous agreement that high cholesterol is a disease *only* if genetics are involved; otherwise, women characterized high cholesterol as a lifestyle disease if genetics are not a factor. Blame or responsibility for high cholesterol is overwhelmingly placed on women's poor lifestyle choices,

and high cholesterol is viewed as an individual responsibility. Findings in chapter 3 also reveals that women really lacked a holistic understanding of how the social determinants of health can affect high cholesterol and heart disease and illustrates how class can reinforce the social reproduction of health.

***Finding #3: Class differences surrounding food knowledge and the Social Determinants of Health (SDOH)***

Chapter 3 draws attention to the three major factors contributing to the popular (but problematic) idea that high cholesterol is a disease and situates women's internalization of the high cholesterol disease within the rise of functional foods, the relationship between Becel<sup>®</sup> pro.activ<sup>®</sup> margarine and the Heart and Stroke Foundation of Canada, and the popularity of cholesterol-lowering medication, in particular, Lipitor. In hindsight, it seems logical that my participants would indeed internalize high cholesterol as a disease, but I did not expect women to demarcate between disease-and-genetics, versus disease-and-lifestyle. The heightened sense of moralization and Othering that occurred was also quite surprising, although, perhaps it should not have been, considering how little the Canadian public understands and is aware of the social determinants of health (NCCHPP 2009; Gasher, Hayes, Ross, Hackett, Gutstein, and Dunn 2007).

What was also surprising in these findings is not only the confusion surrounding the links between broader social, environmental, and economic factors and health-status, but the outright denial of such a link. Many upper-middle class women challenged me, insisting the data was flawed and rebuffed my attempts to explain how the social determinants of health work. Many women of both the privileged and the lower-middle classes seemed genuinely confused as to how issues such as poverty, income inequality, the environment, etc., could impact one's health



status or health-maintaining regimes. Many times, women asked for a extra few minutes to mull over the question, as they had never considered the link between income and health or the environment and health. One woman from the working poor group, after thinking about the answer for 5 minutes or so, felt she could not adequately answer the question and asked to skip over it. She then called me one week later to give her answers as she had more time to think about it. Her answer was women's health could be impacted by a lack of education, money and few resources. When asked to elaborate on her answer, she declined and simply repeated it. Since she was among the very group that was adversely impacted by the social determinants of health, it was telling that she needed more time to think about these connections that quite clearly affect her on a daily basis (i.e. she lived in subsidized housing, she was overweight, she had mobility issues, she was on Lipitor, she had limited income, she struggled with losing weight, and had problems accessing local health clubs because of inadequate transportation and a reliance on public transit).

***Finding #4: The solution to High Cholesterol is individualized via the 'Proactive Myopia' repertoire***

The findings in chapter 4 (article 3) reveal that women believe the *solution* to high cholesterol is lifestyle and behaviour modifications and reject the notion of functional foods as part of the solution. Women also agreed with the individualized healthy lifestyle focus of the Becel<sup>®</sup> prevention tips, and lastly, women drew on a notion that I term '*proactive myopia*', which is a belief in the proactive individualized responsibility for health, alongside the valorization of knowledge as the solution to greater health, at the myopic expense of greater contextualization for health.

The notion of proactive myopia encompasses four key facets, namely, the individualized sense of responsibility and accountability for health (i.e. no sense of the collective responsibility for health); a valorization of knowledge (health and nutrition knowledge in particular), as the key solution and also a cause of the high cholesterol problem; a belief in the power of healthy lifestyles to prevent and solve heart health issues (diet, exercise, no smoking or alcohol intake); and a proactive self-directed care in terms of self mastery over one's body, mind, spirit and biomedical aspects of health. The proactive myopia also entailed other facets including the predominance of personal choices, a sense of desire for change and the motivation to change your life and your health. The constancy of the solution (i.e. individual-based) remained the same regardless of the problem. Whether it was heart disease, diabetes, high cholesterol or obesity, women concurred that the solution always reverted back to the individual. The belief in medical expertise was apparent among my participants as many mentioned the importance of getting regular checkup's, asking for medical help, going on cholesterol-lowering medications (Lipitor or Crestor), and abiding by your doctor's recommendations. Many also mentioned the need for more medical and nutritional expertise from nutritionists, dietitians or weight-loss clinics to provide valuable knowledge and to educate the public about heart disease and high cholesterol. Another facet includes a stronger connection to the mind-body-spirit paradigms, whereby increased awareness and mindfulness surrounding food and healthy eating were considered as possible solutions to the high cholesterol problem. Interestingly, functional foods and Becel<sup>®</sup> margarine was never mentioned once as a solution for women's high cholesterol problems or even as a viable option in minimizing heart disease.

To summarize, the key findings across all three articles suggests that: (1) high cholesterol is constructed and marketed as a disease on its own, rather than a risk factor for heart disease; (2)

the *causes* of the high cholesterol disease-state are placed on women's poor lifestyle choices and seen as an individual responsibility; (3) class differences highlight participants' poor understanding or awareness of the social determinants of health and nutrition; and (4) the *solution* to the high cholesterol problem is theorized as a 'proactive myopia' narrative (i.e. the belief in personalized responsibility for health, personal choices and the power of health knowledge, at the myopic expense of social contextualization). I now turn to the key contributions of this dissertation.

### **Key Contributions to the Literature**

#### *a. Contributions to the sociology of health and illness - 'The Feminization of Diagnosis'*

I examine how the role of diagnosis and the marketing of both high cholesterol and functional foods intersect in a sociological manner. Some academics believe the "marketing strategies of the biomedical and pharmaceutical industries should themselves be recognized as determinants of --if not actual risks to--women's health" (Rochon-Ford and Saibil 2010:10). We can also include in this list of possible determinants of health, the marketing machinery of the food-industrial-complex. My work has shown how an individualized focus on personal responsibility as both the cause and solution for health and illness "undermines a collective approach to prevention" (Rochon-Ford and Saibil 2010:10). The framing of high cholesterol as a disease and the inherent risks involved in this diagnosis favors a simplistic response, while obscuring people's abilities to make sustainable changes in their lives. The sense of urgency surrounding high cholesterol is misplaced, since it is not until a woman is in her 80s that heart disease becomes the number one killer for Canadian women. In fact, "women between the ages of 30-79 are most likely to die of cancer, not heart disease" (Lippman 2006:3; Statistics Canada 2006a:57-

58). This falsely created sense of urgency surrounding high cholesterol for women leads to what I call the *feminization of diagnosis*, and can be analyzed as an emerging trend in women's health literature and sociology of health and illnesses.

As the 'feminization of poverty' is increasingly becoming a global problem (Rochon-Ford and Saibil 2010; Wallis and Kwok 2008), I argue that we are now facing what I term the *feminization of diagnosis* which is also increasingly becoming a problem for women. The feminization of diagnosis adds to the knowledge on women's health and the sociology of health and illness in numerous ways. For example: (1) disease promotion occurs simultaneously with drug-based solutions and in this particular research, it occurs alongside functional food based solutions. Secondly, pharmaceutical advertising disproportionately targets women "often under the guise of offering them 'choices', framed in 'feminist' or 'empowering' language" (Olivieri 2010:ix), and I argue the functional food literature also disproportionately targets women (Jovanovic in press). Lastly, the feminization of diagnosis hinges on the gendered inequality inherent in the diagnostic label and can be seen in the plethora of emerging female-oriented 'diseases', such as *premenstrual dysphoric disorder (DSM-IV categorization)* (Ebeling 2011; Moynihan and Cassels 2005); *female hypoactive sexual desire disorder* (Jutel 2010); *female sexual dysfunction* (Moynihan and Cassels 2005); and the gendered marketing of the Human Papillomavirus -*HPV* to women by Gardasil (Habel, Liddon and Stryker 2009). All of these cases highlight the need for women to protect themselves against newly discovered diseases, while simultaneously providing a product (prescription medicine, functional food or vaccination) to 'empower' and educate women on their risk factors and possible solutions.

I have argued throughout this dissertation for a precautionary approach to the marketing idea of high cholesterol as a disease and the construction of functional foods consumption as a panacea for women's high cholesterol problems.

***What is sociological about cholesterol?***

There is nothing inherently sociological about cholesterol. However, when cholesterol is touted as the only risk factor for heart disease, which is itself marketed as the "number one killer of women," then the sociological lens is useful in understanding how this problem came to be, and the consequences of this new problem, especially for women. The issue is that heart disease is *not* the biggest killer of Canadian women. In fact, it is only when women are in their 80s that HD becomes the biggest killer (Statistics Canada 2006a). What is interesting about cholesterol is the seemingly easy way it has been promoted to the public and women in particular. As my study confirms, female participants readily repeated the Heart and Stroke Foundation's mantra of HD being the number killer for women. Women believed in and accepted that HC was a disease, when in fact it is only one of many other risk factors for HD. It is by employing the sociological lens that we see how the micro individual purchases of Becel® pro.activ® margarine (to lower one's cholesterol) is intimately tied to the macro structural regimes of self-help technologies, neoliberalism and consumption. This anti-cholesterol craze that is upon us in this functionalized food society, entrenches the notion that HC is a disease and can only be treated through lifestyle behavior changes that conveniently offer either a functional food product or a pill (such as Lipitor) for consumption.

As my research has shown, it is no coincidence that cholesterol-lowering functional foods emerged and gained popularity like they have. The environment is conducive to their success,

with the support of Health Canada and the Heart and Stroke Foundation, FF's have emerged as an actual viable option to treat the "disease" or rather "dis-ease" of HC. What is worrisome about this trend is the future implications for women who currently make up fifty percent of Lipitor users. The idea that HC is the enemy has gone unchallenged while there is currently "...no single clinical trial showing that statin therapy is beneficial for women who don't already have heart disease..." (Rosenberg and Allard 2007) Where this cholesterol fear will end is unclear, but in November 2011, the National Heart, Lung and Blood Institute in the United States along with the American Academy of Pediatrics recommended cholesterol testing for children starting at age 9 with cholesterol-lowering medication therapy as needed (Winslow and Corbett Dooren 2011). The option to now medicate young children against high cholesterol has created a consumer base for life, as statin drugs are typically taken forever. The key is not just in selling Becel<sup>®</sup> margarine or Lipitor medications as the solution, but in selling the *idea* that these are the solutions, and that a solution to the high cholesterol disease is needed.

The transformative nature of diagnosis lends itself as a structured "road map" (Jutel 2011a:1) for treatment, solution, and knowledge regarding the cause. However, in disagreement with both Jutel (2011b) and Parson's (1951) sick role, diagnosis among my participants was not seen to be a "claim for exemption", or a permission to be sick. In fact, my participants were very clear in their absolute level of responsibility and accountability not only in the current diagnosed state of having high cholesterol, but, in: (1) preventing it from occurring in the first place; (2) in taking responsibility and eschewing collective or governmental assistance; and (3) 'owning' your illness, and acknowledging your role in its cause and in the path to recovery. Although there was a duty or obligation to seek treatment and comply with doctors orders as seen in Parson's sick role, the obligation to "*want to get well*" was irrelevant in my study because of the importance of being

well for the good of society. Ironically, all responsibility was seen as individual for the greater good, to offset health care costs, and to prevent welfare and healthcare fraud, --but there was no corresponding reciprocal nature of collective responsibility towards the individual. The 'government doesn't owe you anything', was a typical response by participants and so, this intensified self-surveillance and self-dependability was evident among the women in my study. This increased state of medicalization and healthism may be due to the growth of the medical-industrial-complex, the food-industrial-complex; the rise of alternative care; the rise of functional foods; and the rise of self-directed research for self-care.

The medicalization literature has certainly informed the sociology of diagnosis literature and we can see how diagnosis can be at times an "enabling factor of medicalization" (but diagnosis can also "rearrange individual identity" (Jutel 2011a: page 9 and 11). Sociology of diagnosis is an important avenue for understanding lay-professional interactions and the lay experience of illness, but also for the myriad of other health-illness interactions, namely, public health promotion and education campaigns, disease identification, prevention and control measures, and the changing sites of diagnosis (including in the laboratory, medical offices, cyberspace, grocery stores, and magazines).

Sociology of diagnosis helps us better understand health, disease and illness, and delineates between normality and abnormality, determining what the health priorities are, the power differentials and key stakeholders involved. My research has helped identify how diagnosis of high cholesterol is enriched through a functional food campaign and the health narratives involved, and internalized by participants themselves. There are very real consequences for women within this increased diagnosis state. Women are not seen as simply mothers, wives, workers, or human beings, but are now increasingly looked at as nutritionists, naturopaths,

dietitians, researchers, and gatekeepers of health and nutrition knowledge for the entire family. One consequence of this additional burden is the internalized 'caring dilemma' (Reverby 1987). Although originally a term denoting the expectation of caring among nurses amidst a society that does not value caring (Bourgeault 2006), the caring dilemma can be fruitful in showcasing how my participants took on additional 'caring' burdens, (i.e. managing the high cholesterol issues of their spouse or family members), while also taking personal control over their own health agenda, by actively researching and analyzing data on heart disease and high cholesterol. The caring involved and enacted by these women is reinforced by the narratives in the Becel<sup>®</sup> ads that structure caring as an inherently feminine identity, without acknowledging that 'caring' is also work (Reverby 1987). For example, Becel<sup>®</sup> states on their website:

Like many women, you may be so busy taking care of others that you don't always look after yourself. Yet enjoying a long and healthy life is the best gift you can give to those you love (www.becel.ca)

Essentially, what Becel<sup>®</sup> is really saying is that as a woman you should care about your health, not for yourself, but for the advantage you give to your family as a gatekeeper of health and nutrition knowledge.

I have brought attention to how a 'disease' gets constructed, identified and then marketed to women via a food campaign (i.e. article #1), but I have also shown how there are consequences to the diagnostic labeling (i.e. articles 2 and 3) through the internalization of responsibility and blame via the proactive myopia repertoire. By examining the consequences of the disease internalization, without forcing the situation into simplistic dualisms of agency and structure, or medicalization versus lay power and control, this dissertation raises the important question of consequences,--the social, political, economic and cultural consequences of the social



construction of diagnosis. What gets labelled a disease, why it occurs and under what conditions is an intriguing and worthy area of study, and since "disease boundaries are ever-shifting...and the developing of diagnosis serves as an indication of what we're prepared to accept as normal, healthy, moral and bearable" (Jutel 2011a:139), I believe this dissertation is an important step in the right direction.

By examining how the diagnostic process can be opaque at times, I have shown how certain perspectives are privileged while others are subdued. This research has also shown how the sociological lens can reveal the intricate and layered nuances of "negotiation, compromise and interests that cover and surround the scientific evidence of disease" (Jutel 2011a:145). I have attempted to extend the sociology of diagnosis as a deserving field of study on its own, not simply as an appendage to the study of medicalization (Brown 1995; Jutel 2011b).

We need not look far for evidence of the rising tide of diagnosis across risk factors and symptoms, behaviours and emotions to see the sociological importance of studying diagnosis. For example, obesity was recently diagnosed a disease (Pollack 2013), and the latest Diagnostic and Statistical Manual of Mental Disorders (DSMM-5 - see Frances 2013) reveals the following new disease categories: (1) temper tantrums by children are now diagnosed as "*Disruptive Mood Dysregulation Disorder (DMDD)*"; (2) forgetfulness, usually a normal progression of old age, is now diagnosed as "*Mild Neurocognitive Disorder (MDD)*"- this disorder is for people without dementia, but who show signs of 'mental decline'; OR who would be at-risk of dementia (which might very well be all of us at a certain age); (3) gluttony (otherwise known as stuffing your face sporadically), is now diagnosed as "*Binge Eating Disorder*" - (*BED*); (4) adults who suffer from hyperactivity are now diagnosed as having "*Adult Attention-Deficit Hyperactivity Disorder - AADHD*"; (5) the medicalization of grief, whereby mourning the loss of a loved one is now

diagnosed into "*Major Depressive Disorder (MDD)*"; and finally (6) addictions to technology, (I might be classifiable in this category as an addict to BlackBerry, otherwise known as 'crackberries'), are now diagnosed as "*Behavioural Addictions*".

So, whether it is an everyday emotion or behaviour becoming diagnosed, or a symptom or risk factor being marketed as a disease, the sociology of diagnosis adds value to the greater body of knowledge in the sociology of health and illness and medical sociology specifically, but can also add a refined examination to the sociologies of knowledge, culture, deviance and social movements (Hutson 2011:xxx). This is an exciting time for the sociology of diagnosis as the field has expanded dramatically in the past several years. My dissertation has shown how the sociology of diagnosis is important in examining all the possibilities of the diagnostic label, beyond the medical corridors to the areas of how diagnosis is enacted, identified with, practiced, marketed, resisted, controlled, negotiated and internalized.

One of the most important questions to ask when employing a sociology of diagnosis framework (in my opinion) is the consequences (health or otherwise) of said diagnosis. For instance, now that obesity has officially been declared a disease, what are the consequences for people diagnosed with such a label? Do they feel stigmatized, depressed, relieved, or empowered? (Anspach 2011:xxv). And in my own research, I have touched on some of the consequences of the high cholesterol label and shown (in articles 2 and 3) that women have internalized this diagnosis, and have readily accepted the culpability involved in seeing themselves and their individualized actions as part of both the cause and solution to high cholesterol. As medical sociologists, the goal "should be to understand the *practice* of medicine or what makes medicine 'medicine', [and] diagnosis is at the center of medical practice" (Anspach 2011:xxv).

*b. Contributions to class discussions*

Public perceptions regarding the relationship between income and health tends to reflect the predominance of lifestyle responses (i.e. the effect of smoking, diet and exercise on one's level of health and illness), and a lack of knowledge regarding the social determinants of health (Shankardass, Lofters, Kirst and Quinonez 2012). While we know that socio-economic status can impact cardiovascular health (Blais, Damel and Rinfret 2012) what is not known is how women's awareness of the social determinants of health and heart disease varies by class. Previous research has shown that in general Canadians have a poor understanding of the SDOH (CIHI 2005), and Canadian youth also showcase a lack of awareness on this issue (Woodgate and Leach 2010), --however, to my knowledge, we do not know how this varies by class. This study adds to the sociological literature by specially examining how women's awareness of the SDOH and heart disease/high cholesterol varies by class.

What we know about lifestyles is that the upper classes tend to take better care of themselves (Blaxter 1990), due to their advantageous socioeconomic and environmental backgrounds. So that,-- the existence or permissibility of a healthy lifestyle is not so much a matter of choice as it is dependent upon the social and material environment in which a person lives. Other research shows how positive or negative lifestyles depend on one's social class, as negative health behaviours (i.e. smoking) tend to be overwhelmingly found among the lower socio-economic classes, with health promotion awareness campaigns showing the greatest benefit in smoking cessation rates for the upper classes (Jarvis and Wardle 1999). One of the seminal works on the social determinants of health, the Whitehall studies (Marmot, Rose, Shipley and Hamilton 1978) shows the social gradient in health, so that the lower your social position, the worse your health, which Marmot has labeled "the status syndrome" (Marmot 2004). In fact, the lower one's

position within the social hierarchy, the less autonomy and control one has over their lives, and the less integrated they are within society (Marmot 2006). As Link and Phelan (2000) note, higher socio-economic classes have the resources to:

gain access to the best doctors; know about and ask for beneficial health procedures; have friends and family who support healthy lifestyles; quit smoking; get flu shots; wear seat belts; eat fruits and vegetables; exercise regularly; live in neighborhoods where garbage is picked up often; [have] interiors that are lead-free; and streets are safe; have children who bring home useful health information from good schools; work in safe occupational circumstances; and take restful vacations (p. 74).

So, although studies quite convincingly confirm that upper and upper-middle classes are indeed healthier via their access to a wide range of resources (Cockerham 2005; Link and Phelan 2000), this message is poorly understood by the general public. My research also confirms a weak and contradictory understanding of the broader factors influencing health. While the upper-middle class women in my study flatly denied the existence between health and wealth (except for the rare acknowledgement by one participant in particular), what was surprising was the level of confusion surrounding the SDOH by the lower classes who presumably had fewer resources from which to access better health, yet their understanding of the SDOH continues to reflect the standard lifestyle responses commonly heard from the upper class women. At times, the working poor and working class groups simultaneously acknowledged the numerous barriers to health while also accepting full responsibility for their health and illness.

*Breakdown of class differences across the articles*

In the tables below, I have highlighted the most commonly expressed sentiments regarding the class differences across the articles. When relevant I have included how many women per class group answered a certain way. Since at times these participants' answers were contradictory, these tables allow the reader to quickly assess the differences between the groups. Although, it should be noted that not every conceivable answer is found in these tables.

**Table 13. Question: Is high cholesterol a disease? (based on article 2)**

<b>WP</b>	11/20 = YES, HC is a disease (answers were linked to diet, lack of exercise, etc, not to SDOH). 3/20 - did not know how to answer the question 6/20 = NO, HC is not a disease. (only 2 answers focused on SDOH, remaining 4 could not fully explain their answers).
<b>WC</b>	7/9 = YES. These answers increasingly became focused on choices, lifestyle and responsibility. (mentioned lifestyle as reason)  1 = did not know how to answer the question. 1 = NO (but answer was not linked to SDOH).
<b>LMC</b>	YES - HC is a disease BUT, linked to genes. OR not a disease if it is linked to lifestyle. Women questioned the 'disease label', but simultaneously demarcated between genes and lifestyle.
<b>UMC</b>	YES - answers linked to choices and lifestyle, and personal accountability.

**Table 14. Question: What causes high cholesterol? (based on article 2)**

<b>WP</b>	Most common answers focused on the 'Holy Trinity of Risk' (diet, exercise, smoking, poor lifestyle choices)  -if SDOH was mentioned, the 'Holy Trinity of Risk' was also mentioned -20/20 mentioned at least 1-2 'Holy Trinity of Risk' answer -stress mentioned by 4 women -genes mentioned by 6 women
<b>WC</b>	9/9 women mentioned at least 1 'Holy Trinity of Risk' answers  6/9 women mentioned 2-3 'Holy Trinity of Risk' answers
<b>LMC</b>	Answers centered on lifestyle, stress and genes
<b>UMC</b>	14/14 women mentioned at least 1 'Holy Trinity of Risk' answers  11/14 women mentioned 2-3 'Holy Trinity of Risk' answers  -start to see more answers based on lifestyle, choice, blaming others

**Table 15. Question: How can economic and social conditions (poverty, income inequality and social exclusion) influence heart disease and high cholesterol more than diet? (based on article 2)**

<b>WP</b>	<p>-emphasis on distancing themselves from saying poverty is more important than diet.</p> <p>-WP believe the rich have as much chance to get HC/HD or being unhealthy as the poor, because the rich can have bad diets and not exercise also.</p> <p>-The majority of the WP doubted the poor were more susceptible (i.e. even if they may have mentioned SDOH, then also stated that it did not matter because the rich can be unhealthy too).</p> <p>-10/20 mentioned the SDOH and agreed that poverty, isolation, etc matters to health.</p> <p>-10/20 either disagreed or did not know</p>
<b>WC</b>	<p>5/9 - YES it can affect health, but answers still reverted back to people needing to make the right choices, being responsible no matter what your income is.</p>
<b>LMC</b>	<p>3/5 - NO, did not believe the link between income and health. Doubted the statistics.</p>
<b>UMC</b>	<p>4/15 YES, income can affect health, BUT, of these 4, the answers were simplistic (i.e. people cannot afford organic food, vitamins, gym memberships).</p> <p>-if women did state YES, income was related to health, they also tied it to lifestyle and diet.</p>

**Table 16. Question: Some studies have shown that people with lower incomes have higher rates of CVD, how can you explain this? (based on article 2)**

<b>WP</b>	<p>Answers focused on: lack of money, resources, stress, &amp; mental health issues</p> <p>2/20 did not believe this statistic. Felt UMC people just as likely to have CVD. 18/20 believed this statistic, citing lack of money, resources, knowledge, education, high stress, poor coping skills, etc.</p> <p>-overall only a handful gave really insightful answers that discussed the SDOH.</p> <p>-majority of answers stressed that a lack of money = poor food choices and stress = bad diet = high CVD (simplistic answers at times)</p>
<b>WC</b>	<p>6/9 believed it, but mentioned no money = bad diet. Answers were overly simplistic.</p> <p>1 woman stated self-love, and mind-body-spirit awareness (but also doubted the statistic) 2 women doubted this statistic.</p>
<b>LMC</b>	<p>2/5 - did not believe it (thought it was more lifestyle-based)</p> <p>3/5 - believed it was a cycle of poverty, and a bad diet because of lack of resources</p>
<b>UMC</b>	<p>14/15 - truly did not understand the links between income and health.</p> <p>-these women admitted they never thought about it before, answers were simplistic. Answers reinforced that good food does not have to cost a lot of money. Believed a lack of knowledge, education, poor choices and not being informed was the bigger problem.</p> <p>1/15 - only one woman gave a SDOH-based answer.</p>



**Table 17. Question: How realistic or achievable do you think the Becel® tips are? - (based on article 3)**

<b>WP</b>	14/20 - No the tips are not realistic (because of time, money, resources, kids) 6/20 - Yes, they are realistic (it just requires effort, planning, desire, discipline, and lifestyle choices)
<b>WC</b>	9/9 - Yes, they are realistic and achievable (based on choices, desire, motivation)
<b>LMC</b>	3/5 - Yes, they are realistic and achievable
<b>UMC</b>	13/15 - Yes, they are realistic and achievable. (based on choices, desire, motivation). Mentioned stress and time management as most difficult.

**Table 18. Question: Why do you think some people are healthy and others unhealthy? (i.e. why do some people get high cholesterol and others do not?) - (based on article 3)**

<b>WP</b>	10/20 - gave multifactorial answers. Of these 10 women, 5 gave SDOH answers, and only one of these 5 women mentioned mental health, even though many within WP had mental health issues.  10/20 - gave lifestyle-based answers
<b>WC</b>	9/9 - believed it was genes and personal choices that determines health
<b>LMC</b>	4/5 - believed it was personal responsibility
<b>UMC</b>	15/15 - stated it had to do with choices, genes, knowledge/education.

**Table 19. Question: How can you avoid getting high cholesterol? (i.e. what's the solution?) - (based on article 3)**

<b>WP</b>	12/20 - gave lifestyle-based answers (mentioned seeing medical doctor). 1/20 - mentioned stress  4/20 - gave multifactorial answers, but only 2 were SDOH based
<b>WC</b>	9/9 - mentioned lifestyle. sometimes stress, and vague notions of having 'balance' in your life. -answers based on: mindset, desire, motivation, choices, indulgence
<b>LMC</b>	5/5 - gave lifestyle based answers, but increasingly mentioned personal choices, responsibility and moral indignation (othering), seeing medical doctor
<b>UMC</b>	15/15 - gave lifestyle based answers (being aware, mindful, choices, education) 6 women mentioned importance of seeing your medical doctor

## **Limitations of the Study**

### *Limitations for article 1*

The limitations for article 1 (chapter 2) are relatively minor (as stated by the reviewers and Editor of the journal *Food, Culture & Society*) and consist of issues relating to content analysis. First, although I identified the top 5 functional food advertisements (California Almonds, Kellogg's All Bran, Becel<sup>®</sup> Margarine, Campbell's Soup and Planters Nuts), I did not state how many magazines each advertisement appears in, to get a sense of how focused or widespread the campaigns were. Since I only looked at 24 of the top magazines, I cannot state with certainty that these ads were not featured in other magazines. However, California Almonds advertisements were found in 13 different North American magazines; Kellogg's All Bran were found in 11 magazines; Becel<sup>®</sup> pro.activ<sup>®</sup> margarine was found in 7 different magazines (but was specifically a Canadian product featured in Canadian magazines); Campbell's Soup was found in 10 magazines; and Planter's Nuts advertisement were found in 6 magazines.

Second, although Becel<sup>®</sup> pro.activ<sup>®</sup> appears 3rd on the list, it was the campaign I chose to study, and no mention was made of why California Almonds or Kellogg's All Bran were not chosen. Although I did explain in the article that the Becel<sup>®</sup> campaign was chosen for several reasons, namely, the complexity of the campaign, the singular focus on women and high cholesterol, the obvious narratives in the advertisements and Becel's<sup>®</sup> close involvement as a key sponsor of the Heart and Stroke Foundation of Canada, I also needed to ensure my dissertation was manageable within the scope of time I had to complete it. The elements present in the Becel<sup>®</sup> ads as mentioned were not necessarily present in the advertisements of California Almonds and Kellogg's All Bran. California Almonds in particular was a massive campaign with 7 different advertisements in their entire campaign that ran over the course of one year using men, women

and children in their ads. These ads were also featured in both Canadian and American magazines and included their relationships with both the Heart and Stroke Foundation of Canada and the American Heart Association. This campaign was rejected for being too wide in scope. Whereas Kellogg's All Bran advertisements were rejected for further study because no narratives were involved. These ads only featured the product and did not have a visible association with a health agency such as HSF. Frankly, this campaign was not exciting or revelatory and I did not feel a personal connection with the ads in any sense.

Lastly, the reviewer also asked how Becel<sup>®</sup> was presenting itself as a product for women. Although not discussed in article 1, Becel<sup>®</sup> is targeted to women through its advertisements which feature women, including 2 female participants and a female medical expert and the narratives are all based on women's lives. The promotional literature accompanying Becel<sup>®</sup> pro.activ<sup>®</sup> explains how women can reduce their cardiovascular risk through various lifestyle measures (including the consumption of Becel<sup>®</sup> margarine), and on their website they state: *"Like many women, you may be so busy taking care of others that you don't always look after your heart. Yet enjoying a long and healthy life is the best gift you can give to those you love"* (Becel.ca). Research shows that foodwork is quite gendered, assuming this type of labour falls within 'women's work' (Lupton 2000), and realistically women still do the majority of the cooking, grocery shopping and food prep (Statistics Canada 2006b), so the product is geared towards women and marketed in grocery stores and online, in hopes of awakening their concern about high cholesterol. Although not mentioned by reviewers, article 1 could have also engaged more with the media and advertising literature.

*Limitations for article 2*

For article 2, I asked participants about their views on cholesterol in general and as a disease state, and I also asked them to read over the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign in its entirety. There is the possibility one could argue my participants were primed; however, this bias was reflected upon in the initial drafting of the interview guide and was further refined during the first 5 pilot interviews. One can never say with certainty that my participants' answers were not influenced by viewing the campaign, or that their answers might have differed if they were shown the Becel<sup>®</sup> ads either at the beginning of the interview or the very end. However, the placement of the questions on the Becel<sup>®</sup> campaign were not a whimsical decision, and I followed the lead of Lupton (1996) and Lupton and Chapman (1995) who asked 3 focus groups of Australian men and women to view media reports that discussed health and diet. These media clippings were viewed after eliciting participant's general views on the relationships between health and lifestyle, then they were shown the media clips, then asked more specific questions relating to reliability and trustworthiness of sources of health information.

*Limitations to article 3*

Not enough information on class differences of food and health knowledge was given in this article. Since I only have 15 upper-middle class women, and 5 lower-middle class women, I cannot state that what I have found is a pattern likely to exist within a larger study, but certainly there is value in raising this question and the qualitative data I have suggests it is certainly a productive question to ask. Another limitation is that my sample was not racially or ethnically diverse as I would have liked. Out of 49 total participants, these women reported their ethnicity (self-identified) as the following: 3 Jewish, 3 Black, 2 Asian, and 5 Middle Eastern women who were also recent immigrants to Canada (within the last 10 years), and 38 of Caucasian decent.

So, 12 out of 49 women (or 25%) were non-Caucasian, hence I am not be able to speak to ethnic differences among health and nutrition knowledge.

With qualitative in-depth interviews or self-reports there may be a risk of 'social desirability bias' (Esterberg 2002:86), whereby participants either underreport 'bad' behaviours or over-report 'good' behaviours, but as discussed in chapter 1, I took great care to minimize this potential. However, my participants could have overestimated the ease with which they adhered to a 'healthy lifestyle' and underestimated the difficulties involved in maintaining good health. My participants could also have wanted to appear favorably by echoing the health promotion dictum of responsibility and accountability for health, alongside the common-sense approach of lifestyle and behavioural modifications.

Lastly, although measuring people's lifestyles was not a goal in this study, the topic of 'lifestyles' and 'healthy lifestyles' was eventually reflected in the findings, and as Cockerham, Rutten and Abel (1997) note, lifestyles is a complex phenomenon that should not be solely measured at the individual level but must include "...collective patterns of health-related behaviour that form health lifestyles [and] different lifestyles must be related to the social contexts in which they occur" (p. 338). Although explaining health related behaviour was not the aim of my research, it is worth noting that there are indeed limitations as to how complete or thorough one's analysis can be of other's behaviours and explanations of said behaviours, when "what we do has more significance, than what we know" (Williams 1995:598). The difference between what people say and what they actually do is an incredibly complex and difficult undertaking for social scientists, and certainly future research will need to take this into account.

## **Future Research Directions**

### *a. Heart Disease and Health Promotion Strategies*

While chapter 3 briefly discussed the three key factors that contributed to the construction of high cholesterol as a disease (namely, the rise of functional foods, the complex relationship between Becel<sup>®</sup> margarine and the Heart and Stroke Foundation of Canada, and the popularity of statin drugs, like Lipitor), in a future project, I would like to further examine how heart disease has been constructed in popular culture and mass media via a historical documentation of newspaper stories over the last 5-10 years. This would include a content analysis of how the Canadian media frames heart disease and high cholesterol stories, the number of stories about pharmaceutical options for heart disease and HC. In addition to the content analysis, in-depth interviews with participants would be required to explore their views on heart-disease and HC media stories.

### *b. The Heart and Stroke Foundation's campaigns for heart-health awareness*

The Heart and Stroke Foundation is a well known Canadian authority on heart and stroke issues, and they recently won a marketing award for their latest heart disease awareness campaign (Cassies 2013), entitled, *'Make Death Wait'*, which was launched nationally via television, radio, newspaper and on-line ads. This campaign was furiously debated in the media and on-line blogs for its scare tactics, but this fear-inducing campaign was simply one in a long line of campaigns from the HSF, and future work could entail a historical analysis of the changes to their heart disease promotion campaigns over the years.

*c. Social Class and Food Knowledge*

I would like to further explore or extend Backett's (1992) study that examined health knowledge of the middle class, and study middle-to-upper class families only and their construction of health and nutrition knowledge. Backett's (1992) study revealed a gap between health knowledge and health-affirming behaviours, meaning, that participants' knowledge regarding healthy eating and behaviours, did not necessarily translate into action. This mismatch between how people make sense of the healthy lifestyle discourse and the everyday constraints of life is intriguing and worthy of further study. Since there are very few studies solely focused on how the privileged maintain health (i.e. their daily health regimes) or translate health knowledge into practice, I would like to explore this via an ethnographic study of upper-middle class families.

*d. Cholesterol-lowering medication and women*

In chapter 3 I briefly alluded to the rise of Lipitor as the most popular pharmaceutical drug in the world (Rosenberg and Allard 2007). This is an area I would like to further explore. In particular, I would like to examine the marketing of Lipitor to women and the awareness surrounding statins via in-depth interviews with women familiar with cholesterol-lowering medication (either as current or former users).

*e. Further exploration of the 'proactive myopia' repertoire*

Future research can include the broader theoretical development of the 'proactive myopia' repertoire evident in my participant narratives. To ascertain the connections between proactive myopia and neoliberalism, for instance, and explore whether this repertoire could have significance in other areas. Perhaps in issues of control, individualism, risk, surveillance and knowledge construction. Although my concept of proactive myopia is unique, its' theoretical contribution is still limited by the lack of engagement with the sociology of culture and various

works on repertoires (see Ann Swidler 2001). For future research I hope to take this concept and link it to women and health issues and to the sociology of culture literature, by bringing the sociology of diagnosis into a dialogue with cultural sociology to look at the various repertoires that people draw on to explain their behaviours.

### **Final Remarks**

Functional foods have risen in popularity with a new category specifically aimed and marketed to lower one's cholesterol. In particular, high cholesterol is marketed as a "disease" rather than a risk factor for various cardiovascular diseases, such as heart disease. Little is known about the sociological diagnosis of high cholesterol and the marketing of functional foods, in particular with women. This dissertation address this gap by asking: (1) How is high cholesterol identified and marketed as a disease rather than a risk factor for cardio vascular diseases in functional food advertising - specifically addressing the Becel<sup>®</sup> pro.activ<sup>®</sup> margarine campaign? (2) How do women understand the issue and *causes* of high cholesterol; and (3) What do women understand the *solution* to high cholesterol to be and how do they view Becel's<sup>®</sup> high cholesterol solution to be?

This dissertation has shown how diagnosis can be socially created, and the message of high cholesterol has been skillfully employed by functional food campaigns and intensified through lifestyle-focused health policies that centre on individual-style solution which instil a sense of choice and empowerment to women--a sense that often works to consolidate a very personal, private responsibility for disease responsibility. I have argued the Becel<sup>®</sup> pro.activ<sup>®</sup> campaign construct high cholesterol as a disease, magnifying an already intensified state of anxiety surrounding the potentiality of risk and disease surrounding heart disease, and turned personal culpability into a banner of consumer empowerment. I have shown that the messages in the



participant narratives frame the problem of high cholesterol as a management of choice, and that privileged women are much less likely to understand how lifestyle choices (that influence high cholesterol) are shaped by the broader social determinants of health. I have also shown how ingrained the health promotion agenda of lifestyle and behavioural modifications are within the lay public, as these participants readily believe in and defend the continued reinforcement of personalized responsibility for health.

Key findings include the following. First, high cholesterol is constructed and marketed as a disease, rather than a risk factor for cardiovascular diseases.<sup>12</sup> Secondly, the causes of high cholesterol and attribution of blame are placed on women's poor lifestyle choices and seen as an individual responsibility. Thirdly, there are class differences regarding food and health knowledge and participants' awareness and understanding of the broader social determinants of health. Lastly, the solution to women's high cholesterol problems is highly individualized via the 'proactive myopia' narrative, which is a belief in the personalized responsibility for health, the valorization of knowledge as the key solution and a fractured awareness of the broader constraints of everyday life on people's health status and behaviours.

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<sup>12</sup> While high cholesterol is marketed as a disease, the cure for high cholesterol is almost simultaneously marketed via functional foods which present their foods as a viable solution to women's high cholesterol disease problems.

### References for conclusion chapter

- Backett, K. 1992. The construction of health knowledge in middle class families *Health Education Research*, 7(4):497-507.
- Blais, C., Hamel, D., and Rinfret, S. 2012. Impact of Socioeconomic Deprivation and Area of Residence on Access to Coronary Revascularization and Mortality After a First Acute Myocardial Infarction in Quebec. *Canadian Journal of Cardiology*, 28:169-177.
- Blaxter, M. 1990. *Health and Lifestyles*. London: Routledge.
- Bourgeault, I.L. 2006. Sociological Perspectives on Health and Health Care. In D. Raphael, T. Bryant, and M. Rioux (Eds.), *Staying Alive: Critical Perspectives on Health, Illness, and Health Care*. (pp. 35-58). Toronto: Canadian Scholar's Press.
- Brown, P. 1995. Naming and Framing: The Social Construction of Diagnosis and Illness. *Journal of Health and Social Behavior*. 35(extra issue): 34-52.
- Cassies. 2013. "Make Death Wait". Cassies Off to a Good Start (Silver).  
[www.cassies.ca/entry/viewcase/7033](http://www.cassies.ca/entry/viewcase/7033)
- CCHS-AP. 2009, February. *The Canadian Heart Health Strategy and Action Plan*. A Report commissioned by the Federal Government. <http://www.chhs.ca/en>
- CIHI - Canadian Institute for Health Information. 2005. Select highlights on: Public views of the Determinants of Health. [www.cihi.ca](http://www.cihi.ca)
- Cockerham, W.C. 2005. Health Lifestyle Theory and the Convergence of Agency and Structure *Journal of Health and Social Behaviour*, 49(March):51-67.
- Cockerham, W.C., Rutten, A., and Abel, T. 1997. Conceptualizing Contemporary Health Lifestyles: Moving Beyond Weber. *The Sociological Quarterly*, 38(2):321-342.

Conference Board of Canada. 2010, January. The Canadian Heart Health Strategy: Risk Factors and Future Cost Implications. Accessed July 28 2013.

<http://www.chhs.ca/sites/default/files/Conference%20Board%20Report%20English.pdf>

Ebeling, M. 2011. 'Get with the Program!': Pharmaceutical marketing, symptom checklists and self-diagnosis. *Social Science & Medicine*, 73: 825-832.

Esterberg, K.G. 2002. *Qualitative methods in social research*. New York: McGraw-Hill.

Fox, N.J., and Ward, K.J. 2008. Pharma in the bedroom...and the kitchen...The pharmaceuticalization of daily life. *Sociology of Health and Illness*, 30(6):856-868.

Frances, A. 2013. *Saving Normal: An insider's revolt against out-of-control psychiatric diagnosis, DSM-5, big pharma, and the medicalization of ordinary life*. New York, NY: William Morrow, an imprint of HarperCollins Publishers.

Gasher, M., Hayes, M.V., Ross, I., Hackett, R.A., Gutstein, D., and Dunn, J.R. 2007. Spreading the News: Social Determinants of Health Reportage in Canadian Newspapers. *Canadian Journal of Communication*, 32(3):557-574.

Habel, M.A., Liddon, N., Stryker, J.E. 2009. The HPV Vaccine: A Content Analysis of Online News Stories. *Journal of Women's Health*, 18(3):401-407.

Health Canada. 2010, February. *It's Your Health: Heart Disease --Heart Health*. Catalogue # H13-7/72-2010E-PDF [www.healthcanada.gc.ca/iyh](http://www.healthcanada.gc.ca/iyh)

Jarvis, M.J., and Wardle, J. 1999. Social Patterning of Individual Health Behaviours: The Case of Cigarette Smoking. Pp. 240-256 in *Social Determinants of Health*, edited by Michael Marmot and Richard G. Wilkinson. Oxford, UK: Oxford University Press.

Jovanovic, M. 2014. Selling Fear and Empowerment in Food Advertising: A Case Study of Functional Foods and Becel<sup>®</sup> Margarine. *Food, Culture & Society*, 17(3). (in press).

- Jutel, A. 2011a. *Putting a Name to It: Diagnosis in Contemporary Society*. Baltimore, Maryland: The John Hopkins University Press.
- Jutel, A. 2011b. Sociology of Diagnosis: a Preliminary Review. Pp. 3-30 in *Sociology of Diagnosis*. edited by PJ. McGann and David J. Hutson. Bradford, UK: Emerald Group Publishing.
- Jutel, A. 2010. Framing Disease: The example of female hypoactive sexual desire disorder. *Social Science & Medicine*, 70:1084-1090.
- Kirkey, S. 2011, January 19. Rate of statin prescriptions not backed by solid proof: Study. *Post Media News, The Montreal Gazette*. [www.montrealgazette.com](http://www.montrealgazette.com)
- Link, B., and Phelan, J. 2000. Evaluating the Fundamental Cause Explanation for Social Disparities in Health. Pp. 33-47 in *Handbook of Medical Sociology*, 5th ed., edited by Chloe E. Bird, Peter Conrad, and Allen M. Freemont. Upper Saddle River, NJ: Prentice-Hall.
- Lippman, A. 2006, March. *The Inclusion of Women in Clinical Trials: Are We Asking the Right Questions?* Toronto: Women and Health Protection.
- Lupton, D. 2000. 'Where's me dinner?': food preparation arrangements in rural Australian families. *Journal of Sociology*, 36(2), 172-186.
- Lupton, D. 1996. *Food, the Body and the Self*. London: Sage.
- Lupton, D., and Chapman, S. 1995. 'A healthy lifestyle might be the death of you': discourses on diet, cholesterol control and heart disease in the press and among the lay public. *Sociology of Health & Illness*, 17(4):477-494.
- Marmot, MG. 2006. Status Syndrome: A Challenge to Medicine. *JAMA*, 295(11):1304-1307.
- Marmot, M. 2004. *The Status Syndrome*. New York, NY: Henry Holt.

- Marmot, MG., Rose, G., Shipley, M., and Hamilton, PJS. 1978. Employment grade and coronary heart disease in British civil servants. *J Epidemiol Community Health*. 32:244-249.
- Moynihan, R., and Cassels. A. 2005. *Selling Sickness: How the World's Biggest Pharmaceutical Companies are Turning us all into Patients*. Toronto: Greystone Books.
- NCCHPP. 2009, November. Content Analysis of Media Coverage of Health Inequalities in Canada 2008. Report by the National Collaborating Centre for Healthy Public Policy.
- Nettleton, S., and Bunton, R. 1995. Health and Lifestyle: A Critical Mess? Notes on the dedifferentiation of health. In R. Bunton and S. Nettleton (Eds., ) *The Sociology of Health Promotion: Critical Analysis of Consumption, Lifestyle and Risk*. Chapter 15 (pgs. 189-202). NY: Routledge.
- Olivieri, N. 2010. Forward. In A. Rochon-Ford, and D. Saibil (Eds.), *The Push to Prescribe: Women & Canadian Drug Policy* (pp.ix-xii). Toronto: Women's Press.
- Parsons, T. 1951. *The Social System*, New York, NY: The Free Press.
- Peterson, A., and Lupton, D. 1996. *The New Public Health: Health and Self in the Age of Risk*. London: Sage.
- Pollack, A. 2013, June. A.M.A. Recognizes Obesity as a Disease. *New York Times*, June 18.
- Reutter, L., Neufeld, A., and Harrison, M.J. 1999. Public Perceptions of the relationship between poverty and health. *Canadian Journal of Public Health*, 90(1), 13-18.
- Reutter, L.I., Veenstra, G., Stewart, M.J., Raphael, D., Love, R., Makwarimba, R., and McMurray, S. 2006. Public Attributions for Poverty in Canada. *CRSA*, 43(1):1-22.
- Reverby, S. 1987. A Caring Dilemma: Womanhood & Nursing in Historical Perspective. *Nursing Research*, 36(1):5-11.

- Rochon Ford, A., and Saibil, D. 2010. eds. *The Push to Prescribe: Women & Canadian Drug Policy*. Toronto: Women's Press.
- Rosenberg, H., and Allard, D. 2007, June. *Evidence for Caution: Women & Statin Use*. Toronto: Women and Health Protection.
- Shankardass, K., Lofters, A., Kirst, M., and Quinonez, C. 2012. Public awareness of income-related health inequalities in Ontario, Canada. *International Journal for Equity in Health*. 11:26-36.
- Statistics Canada. 2006a. Women in Canada: A Gender-based statistical report. Catalogue no. 89-503-XWE.  
<http://www5.statcan.gc.ca/bsolc/olc-cel/olc-cel?catno=89-503-X&lang=eng>
- Swidler, A. 2001. *Talk of Love: How Culture Matters*. Chicago: University of Chicago Press.
- Statistics Canada. 2006b. Overview of the time use of Canadians. Ottawa: Minister of Industry.
- Wallis, M.A., and Kwok, S-M. 2008. Introduction. In M.A. Wallis, and S-M, Kwok (Eds.), *Daily Struggles: The Deepening Racialization and Feminization of Poverty in Canada*. (pp.9-18). Toronto: Canadian Scholar's Press.
- Williams, S.J. 1995. Theorising class, health and lifestyles: can Bourdieu help us? *Sociology of Health and Illness*, 17(5):577-604.
- Woodgate, R.L., and Leach, J. 2010. Youth's Perspectives on the Determinants of Health *Qualitative Health Research*, 20(9):1173-1182.
- World Health Organization - WHO. 2011. *Closing the Gap: policy into practice on social determinants of health: Discussion paper for the World conference on social determinants of health*.

**APPENDIX A: RECRUITMENT POSTER**



**PARTICIPANTS NEEDED FOR  
RESEARCH INTO HEALTHY FOOD CHOICES**

**Do you use food to protect your health or manage your illness?**

**Are you over the age of 40?**

I am looking for volunteers to take part in a study of functional foods & health management.

Functional Foods extend health benefits beyond basic nutritional value, such as fibre-enriched cereal, Omega-3eggs, and yogurt with probiotics.

You would be asked to participate in a self-administered questionnaire, and in-depth interview. The study results will be confidential and no identifiers will be used.

Your participation would involve 1 session, which is approximately 45-60 minutes at a location convenient to you.

**In appreciation for your time, you will receive a \$20.00 gift card redeemable for Tim Horton's or Starbucks.**

For more information about this study, or to volunteer for this study, please contact:

**Maja Jovanovic**  
**Department of Sociology**  
[jovanm3@mcmaster.ca](mailto:jovanm3@mcmaster.ca)

416-\*\*\*-\*\*\*\*

**This study has been reviewed by, and received ethics clearance through, McMaster Research Ethics Board.**

email: jovanm3@mcmaster.ca	email: jovanm3@mcmaster.ca	email: jovanm3@mcmaster.ca	email: jovanm3@mcmaster.ca	email: jovanm3@mcmaster.ca
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**APPENDIX B: LETTER OF INFORMATION**



**LETTER OF INFORMATION / CONSENT**

**A Study about functional food use and health or illness management**

**Principal Investigator:** Maja Jovanovic  
Department of Sociology  
McMaster University  
Hamilton, Ontario, Canada  
(905) 525-9140 ext. 21347  
E-mail: [jovanm3@mcmaster.ca](mailto:jovanm3@mcmaster.ca)

**Faculty Supervisor:** Dr. Neil McLaughlin  
Department of Sociology  
McMaster University  
Hamilton, Ontario, Canada  
905-525-9140 ext. 23611  
Email: [nmclaugh@mcmaster.ca](mailto:nmclaugh@mcmaster.ca)

**Purpose of the Study**

This research examines how people who are middle-aged and older and health-focused use functional foods. Functional foods are products that claim to extend health benefits beyond the basic nutritional value of the food. For instance, Omega-3 eggs to lower cholesterol, flax seed products to reduce inflammation and risk of cancer or fibre-enriched cereals to reduce blood cholesterol and blood glucose levels.

The purpose of this study is to better understand the way middle-aged and older health focused people use and understand functional foods either to maintain and enrich their health, or to prevent illness. This research is part of the requirements to fulfill my Ph.D. in sociology. I am interested in the overall construction of functional foods and how they may interact with people's feelings of risk and anxiety. I am interested in how the use of food is used to prevent illness or maintain health.

You are invited to take part in this study on the relationship between functional foods and health or illness. Functional foods are being touted as having the potential to prevent illness and contribute to health while blurring the lines of the differing abilities of consumers to attain and maintain 'good health'. This research will contribute to a greater understanding of functional foods and how they become part of and contribute to the internalized self-regulation of health by people who self-identify as health conscious.

Please note that I, Maja Jovanovic, am not a medical professional and participants will **not** be given any medical, nutritional or otherwise advice. My research is not affiliated with any food corporation involved in the production, manufacturing or advertising of functional foods. Neither



myself, nor McMaster University are affiliated with or endorse the use or discontinued use of any vitamin or food product or functional food. This research and McMaster University are not affiliated with or endorse any major food retailer such as Whole Foods, or Organic Garage, or any health-minded retailer such as “The Running Room”.

### **Procedures involved in the Research**

Interviews will take place at a time and place that is convenient to you. This may be a library, a Cafe, Starbucks, or a local coffee shop.

The 1<sup>st</sup> step is to fill out a short self-administered questionnaire that asks you about basic socio-demographic questions (age, gender, occupation, education, income). This will take 5-10 minutes.

The 2<sup>nd</sup> step is to participate in an in-depth interview. This will take 45-60 minutes. I will be taking notes during our interview, and with your permission our interview will be tape recorded so that it can be transcribed. Examples of some interview questions include:

- How do you judge whether a food is healthy or not?
- Why do you think some people are healthy and others are not?
- What does a healthy lifestyle mean to you?

### **Potential Harms, Risks or Discomforts:**

The risks involved in participating in this study are minimal. Some of the questions may raise issues that you find stressful or anxiety-provoking. This may raise certain emotions for you such as embarrassment or anxiety. You may feel as if you are being quizzed about your health knowledge and feel awkward about this.

You do not need to answer questions that you do not want to answer or that make you feel uncomfortable and you can withdraw (stop taking part) at any time. I describe below the steps I am taking to protect your privacy.

- never using any names, only pseudonyms
- remove all identifying information
- store all information in a locked cabinet drawer
- ensure that all computer data is password protected
- ensure all interview recordings are deleted after transcribing.

### **Potential Benefits**

The research will not benefit you directly. The major potential benefits are to me, the researcher and to the academic community in the sense that this research will lead to a better understanding of functional food discourse and health and illness

### **Payment or Reimbursement**

As part of the appreciation for participating in this research, you will receive a \$20.00 coffee gift card at either Starbucks or Tim Hortons. There is no expiry date on this gift card.

### **Confidentiality**

You are participating in this study confidentially. I will not use your name or any information that would allow you to be identified. You will be coded numerically or with a pseudonym. The responses to the questionnaire and in-depth interviews will not be revealed to anyone other than Professor McLaughlin and me. All interviews will be tape-recorded (with consent) and transcribed. During each interview I will also be taking notes, and once an interview has been transcribed, it will be erased and taped over. No names will ever appear or be used at any time. All written and electronic records/data, audio tapes, and questionnaire responses will be kept in a locked filing cabinet in my faculty supervisor's office, with access for only myself and Professor McLaughlin. All computer data will be password protected.

Once the study has been completed, the data will be held on to for future academic work such as journal papers, conference presentations and future comparative work.

### **Participation and Withdrawal**

Your participation in this study is voluntary. It is your choice to be part of the study or not and if you decide to be part of the study, you can decide to stop (withdraw), at any time, even after signing the consent form or part-way through the study. If you decide to withdraw, there will be no consequences to you. In cases of withdrawal, any data you have provided will be destroyed unless you indicate otherwise. If you do not want to answer some of the questions you do not have to, but you can still be in the study.

### **Information about the Study Results**

I expect to have this study completed by approximately August 2012. If you would like a brief summary of the results, please let me know how you would like it sent to you.

**Questions about the Study**

If you have questions or require more information about the study itself, please contact me.

This study has been reviewed by the McMaster University Research Ethics Board and received ethics clearance.

If you have concerns or questions about your rights as a participant or about the way the study is conducted, please contact:

McMaster Research Ethics Secretariat  
Telephone: (905) 525-9140 ext. 23142  
c/o Office of Research Services  
E-mail: [ethicsoffice@mcmaster.ca](mailto:ethicsoffice@mcmaster.ca)

**CONSENT**

I have read the information presented in the information letter about a study being conducted by Maja Jovanovic of McMaster University. I have had the opportunity to ask questions about my involvement in this study and to receive additional details I requested. I understand that if I agree to participate in this study, I may withdraw from the study at any time. I have been given a copy of this form. I agree to participate in the study.

Signature: \_\_\_\_\_

Name of Participant (Printed) \_\_\_\_\_:

1. *I agree that the interview can be audio recorded.*

... *Yes*

... *No*

2. *...Yes, I would like to receive a summary of the study's results. Please send them to this email address \_\_\_\_\_ or to this mailing address*

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

.....*No, I do not want to receive a summary of the study's results.*

3. *I want my identity kept confidential.*

...*Yes*

... *No, I prefer to be identified with my real name. OR, you can refer to me as: \_\_\_\_\_*

4. *I agree to be contacted about a follow-up interview, and understand that I can always decline the request.*

... *Yes. How to contact me \_\_\_\_\_*

... *No*

## APPENDIX C: SURVEY

### Self-Administered Survey



Please note that you may skip any questions you are not comfortable answering.

#### **Socio - Demographic Questions:**

1. What country were you born in? \_\_\_\_\_
2. What is your age? \_\_\_\_\_
3. If you do not feel comfortable stating your age, please circle your age range:  
40s    50s    60s    70s    80s
4. What is your gender? \_\_\_\_\_
5. What is your marital status?
  - Married
  - Common-law
  - Single
  - Widowed
  - Separated
  - Divorced
  - Other – please explain \_\_\_\_\_
6. What ethnic group are you from? Please be specific if you fall into more than one group.  
\_\_\_\_\_
7. Are you currently employed? Please circle your answer.
  - Full-time
  - Part-time
  - Multiple job holdings
  - Not in labour force (unemployed, laid off, looking for employment, on disability, caring for family members, ill)
  - Retired
  - Self-employed
  - Other (please explain) \_\_\_\_\_

8. What is your job title? (Please be as specific as possible).
9. What is the highest level of education you have completed? Please circle your answer.
- Some primary school
  - Some elementary school
  - Some high school
  - Completed high school and awarded with diploma
  - Some college/trade school
  - Graduated from College/trade school and awarded with diploma
  - Some university
  - Graduated university and awarded with degree
  - Some post-graduate studies
  - Earned Master's degree –awarded with degree
  - Earned Doctorate degree – awarded with degree
  - Other \_\_\_\_\_ (please explain)
10. Can you estimate in which of the following groups your **annual household** income falls? Calculate based on gross amount (before taxes). Please circle your answer.
- Less than \$20,000
  - \$30,000s
  - \$40,000s
  - \$50,000s
  - \$60,000s
  - \$70,000s
  - \$80,000s
  - \$90,000s
  - Over \$100,000
  - Do not feel comfortable answering

This study has been reviewed by the McMaster University Research Ethics Board. and received ethics clearance.

If you have concerns or questions about your rights as a participant or about the way the study is conducted, please contact:

McMaster Research Ethics Secretariat  
Telephone: (905) 525-9140 ext. 23142  
c/o Office of Research Services  
E-mail: [ethicsoffice@mcmaster.ca](mailto:ethicsoffice@mcmaster.ca)

## APPENDIX D: INTERVIEW GUIDE



### **In-depth Interview with Participants**

**Ice-breaker:** How did you hear about this study?

*For the purpose of this study we are defining Functional foods as foods that claim to have health benefits beyond the basic nutritional value of the food. For instance, Omega-3 fortified eggs to lower cholesterol, flax seed products to reduce inflammation and risk of cancer or fibre-enriched cereals to reduce blood cholesterol and blood glucose levels. (Show participants actual functional food products)*

#### **Personal Eating Habits and Functional Foods:**

1. What foods do you avoid to manage your health or prevent illness?
2. How do you judge whether a food is healthy or not? - (Do the health symbols on food mean anything to you?)
3. Please explain what you know about Functional foods? (*prompt: their knowledge or understanding of FF*) --What does the HSF mean to you? Do you trust the HSF? Why?
4. Do you think functional foods work? (*prompt: what results have you achieved?--i.e. real or imagined sense of well-being*)

#### **Food Marketing:**

5. (*Show participant functional Becel<sup>®</sup> pro.activ<sup>®</sup> food ads*) Now that I've shown you some functional food advertisements, how do you feel about them/what do they mean to you? Do they convince you of their health claims?

6. What do you think about Becel<sup>®</sup> pro.activ<sup>®</sup> margarine as a possible solution to women's high cholesterol?
7. Have you read any articles on cholesterol or seen any advertisements for cholesterol products (either food or medication)? If so, what did you think?
8. How do you assess health & nutrition information about cholesterol/heart disease?  
(*prompt: how do you know **what** to believe?*)
9. **Who** do you trust to get the right advice about health and nutrition and **why**?
10. What do you know about cholesterol?
11. Are you worried about cholesterol? (Do you know your cholesterol numbers?)
12. Have you heard of Lipitor or Crestor? Do you know anything about them?
13. What does a healthy lifestyle mean to you?
14. What factors or circumstances can affect someone's dietary choices? (or their ability to be healthy?)
15. How realistic or achievable do you think the tips/recommendations are on the Becel advertisements?

### **Health and Illness**

16. How would you describe your current level of health?
17. Have you ever had a health condition? (i.e. diagnosed with an illness/condition)
18. Are you currently on any cholesterol-lowering medication? If so, can you explain what that means for you?



19. IF yes to Q#18, have you ever felt pressured to take/remain on cholesterol medication?
20. How many other people do you know that are on cholesterol medication?
21. What do you do on a regular basis to be healthy? (*prompt: exercise, walk, meditate*)
22. Do you ever worry or have anxiety about food and the food choices you're making?
23. How much money do you estimate you spend on food/healthy living on a monthly basis?
24. What role do you think the government should play in the health of Canadians (how can the government help make people healthier?)
25. Where does the responsibility lie in maintaining a healthy population?
26. Why do you think some people are healthy and others unhealthy? (i.e. why do some women have high cholesterol and others do not?)
27. What do you think causes high cholesterol and heart disease?
28. Do you think that economic and social conditions like poverty, income inequality and social exclusion, rather than dietary choices can influence heart disease/high cholesterol?
29. Do you consider high cholesterol a disease?
30. How can people avoid getting high cholesterol? (what can they do?) What's the SOLUTION?
31. Some studies have shown that people with lower incomes have higher rates of CVD, what do you make of this? How could you explain this?
32. Why do you think high cholesterol is such a growing problem for women? (Where did this cholesterol 'hype' come from?)

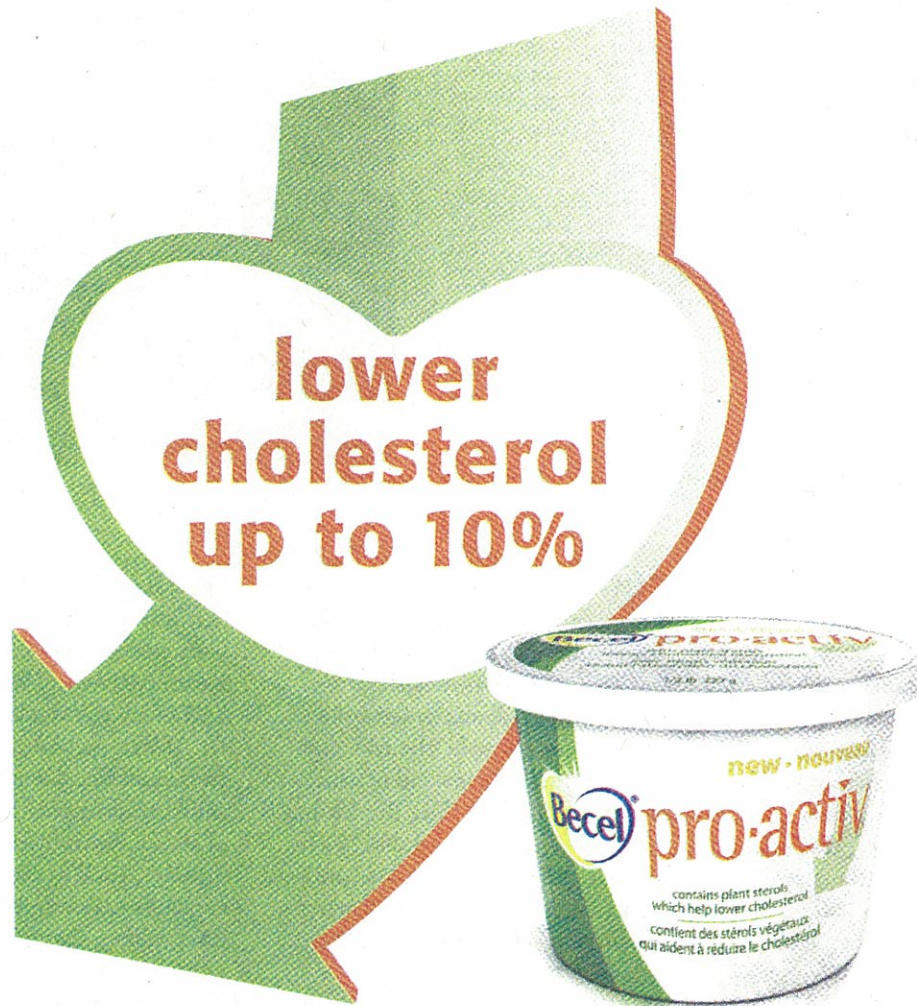
Ph.D. thesis - Maja Jovanovic; McMaster University - Sociology

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E-mail: [ethicsoffice@mcmaster.ca](mailto:ethicsoffice@mcmaster.ca)

# INTRODUCING NEW BECEL<sup>®</sup> PRO.ACTIV<sup>®</sup> ONE GIANT LEAP FOR HEARTKIND.



NEW Becel<sup>®</sup> pro.activ<sup>®</sup> calorie-reduced margarine with plant sterols is different. Becel<sup>®</sup> pro.activ<sup>®</sup> contains plant sterols, which help lower your cholesterol.

High cholesterol is a risk factor for heart disease, and 2 tsp of Becel<sup>®</sup> pro.activ<sup>®</sup> calorie-reduced margarine with plant sterols provides 40% of the daily amount of plant sterols shown to lower cholesterol in adults.

Consuming 2 grams of plant sterols per day or 2–3 servings of plant sterol–fortified foods, like Becel<sup>®</sup> pro.activ<sup>®</sup>, helps lower cholesterol up to 10% starting within 3 weeks.

**Learn more at [loveyourheart.ca](http://loveyourheart.ca)**





# CONCERNED ABOUT CHOLESTEROL?

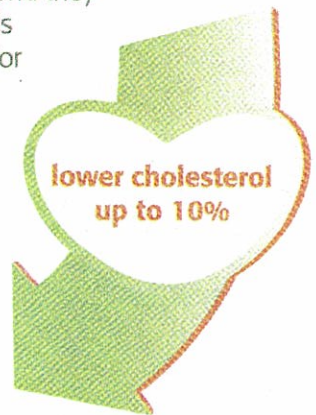
One great way to help keep your cholesterol in check is a healthy lifestyle, including cholesterol-lowering food choices like new Becel® pro.activ®, the first calorie-reduced margarine fortified with plant sterols to help lower cholesterol.

New Becel® pro.activ® calorie-reduced margarine with plant sterols is different. It contains plant sterols, which help lower cholesterol. 2 tsp (10g) of Becel® pro.activ® provides 40% of the daily amount of plant sterols shown to help lower cholesterol in adults.

Check back next month to discover ways to help lower your cholesterol and find out how three Canadians with cholesterol concerns took the Becel® Challenge.

The three volunteers were selected to take charge of their health – they changed their eating habits and lifestyles, and they were followed by a team of health professionals who provided support and recommendations for lowering their cholesterol.

Consuming 2 grams of plant sterols per day or 2-3 servings of plant sterol-fortified foods, like Becel® pro.activ®, helps lower cholesterol up to 10% starting within 3 weeks.



Look in the November issue to see how our volunteers fared with the lifestyle and dietary changes recommended by our experts – and find out how they tackled their cholesterol concerns.

**Learn more at [loveyourheart.ca](http://loveyourheart.ca)**





## Making an easy adjustment

We asked two Canadians with elevated cholesterol to tell us a bit about their health concerns and their current lifestyles. Then we asked our experts to recommend easy ways that our volunteer participants could help improve their cholesterol – and their health.



**Katie, 42**  
Senior law clerk

Katie, a single mom of a grown daughter, looks trim and fit and appears to be the picture of good health at first glance. But Katie is an admitted junk-food junkie, with a diet high in fast foods and snacks. “During a yearly physical, I was shocked to discover I had elevated cholesterol levels. I’m hoping to get my cholesterol back in check.”



**Tara, 25**  
Music industry publicist

Young and fit with a zest for life, Tara appears to be the picture of good health – but Tara has struggled to lower her cholesterol for years. “I hope that dietary changes and regular exercise will help lower my cholesterol levels. I want to do everything I can to live a heart healthy lifestyle.”

## Helping to lower your cholesterol

### 1. Eat a balanced diet

Enjoy a variety of foods from Canada’s Food Guide every day.

### 2. Include plant sterols in your daily diet

Health experts suggest eating 2 grams of plant sterols a day to enhance an LDL-cholesterol-lowering lifestyle and diet.

### 3. Focus on the healthier fats

Eat less saturated and trans fats, replace them with polyunsaturated fats.

### 4. Keep active

Just 30-60 minutes of moderate physical activity on most days of the week can lead to many health benefits.

### 5. Give up smoking

Smoking cigarettes, even a few a day, can affect your heart health and could increase your risk of coronary heart disease by as much as 70%.

**Does your cholesterol need lowering?  
Visit [www.loveyourheart.ca/proactiv](http://www.loveyourheart.ca/proactiv)  
for more information.**

Check back in the next issue to see how our two volunteers are doing with the lifestyle and dietary changes recommended by our experts – and find out if their cholesterol levels have improved.

## Start smart with Becel® pro.activ® calorie-reduced margarine with plant sterols

Becel® pro.activ® is the first food fortified with plant sterols which help lower cholesterol.

High cholesterol is a risk factor for heart disease. 2 tsp (10g) of Becel® pro.activ® provides 40% of the daily amount of plant sterols shown to help lower cholesterol in adults. Consuming 2-3 servings per day of plant sterol-fortified foods, like Becel® pro.activ® can help lower your cholesterol up to 10% starting within 8 weeks.

## Add it to your daily routine

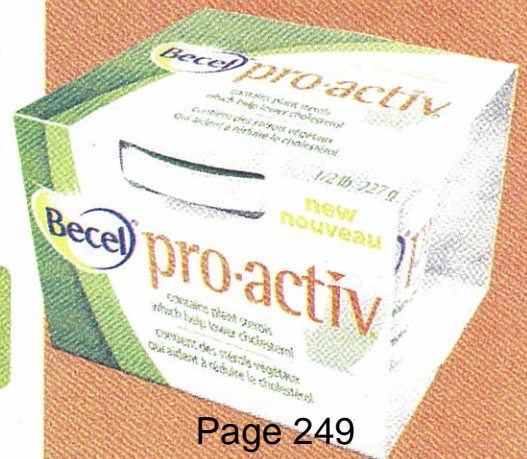
It’s easy to incorporate Becel® pro.activ® into your diet – spread it on your whole grain toast at breakfast, on your sandwich bread at lunch, and on your steamed veggies at dinner.

## Make Becel® pro.activ® part of a healthy lifestyle

Enjoy a variety of foods from Canada’s Food Guide every day, and plan your meals around heart-healthy choices: vegetables, fruit, whole grains, lower-fat milk products, lean meat and lower-fat meat alternatives.

lower cholesterol  
up to 10%

And remember it’s important to live healthy: exercise 30-60 minutes daily, give up smoking and control stress levels.





# Be proactive with Becel

For many Canadians, managing cholesterol is one important way to help stay heart healthy. Exercise and diet helps – and now you can help lower your cholesterol with the plant sterols found in new Becel® pro.activ®.



## OUR EXPERT



**Maria Ricupero**  
Registered Dietician

Maria is a Registered Dietician specializing in the prevention and management of heart disease and diabetes.

## What you need to know about heart-healthy living

### What is cholesterol?

Cholesterol, a waxy substance found naturally in the body, is necessary for the structure of cells and helps make vital chemicals the body needs, such as vitamin D and some hormones. The majority of cholesterol is made in the liver and some comes from one's diet. Too much trans and saturated fats (bad fats) can cause cholesterol levels to become too high, resulting in fatty deposits in the arteries, which can have a negative impact on heart health.

### What are plant sterols?

Plant sterols are naturally found in plant-based foods such as fruits, vegetables, nuts, whole grains and vegetable oils.

### How do plant sterols positively affect cholesterol?

Plant sterols help remove cholesterol from the body by partially blocking absorption into the bloodstream. Studies show that consuming 2 grams of plant sterols daily can lower cholesterol by up to 10% starting within 3 weeks.

### What are some other ways I can help lower my LDL cholesterol?

Cholesterol is a risk factor for heart disease affecting close to 40% of Canadian adults, so it's important to find ways to help reduce cholesterol, such as dietary changes and exercise.



## Making an easy adjustment

We asked two Canadians with elevated cholesterol to tell us a bit about their health concerns and their current lifestyles. Then we asked our experts to recommend easy ways that our volunteer participants could help improve their cholesterol – and their health.



**Katie, 42**  
Senior law clerk

Katie, a single mom of a grown daughter, looks trim and fit and appears to be the picture of good health at first glance. But Katie is an admitted junk-food junkie, with a diet high in fast foods and snacks. "During a yearly physical, I was shocked to discover I had elevated cholesterol levels. I'm hoping to get my cholesterol back in check."



**Tara, 25**  
Music industry publicist

Young and fit with a zest for life, Tara appears to be the picture of good health – but Tara has struggled to lower her cholesterol for years. "I hope that dietary changes and regular exercise will help lower my cholesterol levels. I want to do everything I can to live a heart healthy lifestyle."

## Helping to lower your cholesterol

### 1. Eat a balanced diet

Enjoy a variety of foods from Canada's Food Guide every day.

### 2. Include plant sterols in your daily diet

Health experts suggest eating 2 grams of plant sterols a day to enhance an LDL-cholesterol-lowering lifestyle and diet.

### 3. Focus on the healthier fats

Eat less saturated and trans fats, replace them with polyunsaturated fats.

### 4. Keep active

Just 30-60 minutes of moderate physical activity on most days of the week can lead to many health benefits.

### 5. Give up smoking

Smoking cigarettes, even a few a day, can affect your heart health and could increase your risk of coronary heart disease by as much as 70%.

**Does your cholesterol need lowering? Visit [www.loveyourheart.ca/proactiv](http://www.loveyourheart.ca/proactiv) for more information.**

Check back in the next issue to see how our two volunteers are doing with the lifestyle and dietary changes recommended by our experts – and find out if their cholesterol levels have improved.

## Start smart with Becel® pro.activ® calorie-reduced margarine with plant sterols

Becel® pro.activ® is the first food fortified with plant sterols which help lower cholesterol.

High cholesterol is a risk factor for heart disease. 2 tsp (10g) of Becel® pro.activ® provides 40% of the daily amount of plant sterols shown to help lower cholesterol in adults. Consuming 2-3 servings per day of plant sterol-fortified foods, like Becel® pro.activ®, can help lower your cholesterol up to 10% starting within 3 weeks.

## Add it to your daily routine

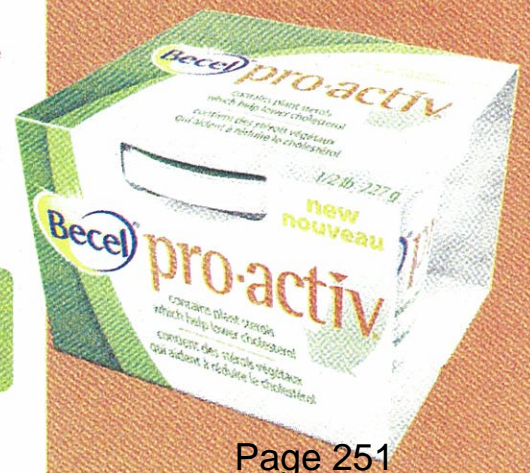
It's easy to incorporate Becel® pro.activ® into your diet – spread it on your whole grain toast at breakfast, on your sandwich bread at lunch, and on your steamed veggies at dinner.

## Make Becel® pro.activ® part of a healthy lifestyle

Enjoy a variety of foods from Canada's Food Guide every day, and plan your meals around heart-healthy choices: vegetables, fruit, whole grains, lower-fat milk products, lean meat and lower-fat meat alternatives.

lower cholesterol  
up to 10%

And remember it's important to live healthy: exercise 30-60 minutes daily, give up smoking and control stress levels.





# Be proactive with Becel

Help stay heart-healthy with diet and exercise. And help lower your cholesterol with the plant sterols found in new Becel® pro.activ® calorie-reduced margarine with plant sterols.

## Expert tips to help lower cholesterol

Adopting healthy lifestyle practices, including diet, can help lower your blood cholesterol. Small changes can really help. Here are some ways you can lower your cholesterol with diet:

- **PLANT-BASED DIET** You don't have to be vegetarian, but emphasize plants whenever possible. Have legumes, soy, nuts and seeds, vegetables, and nut butters (peanut or almond butter) more often.
- **INCREASE FIBRE** Eat whole grains, high fibre cereals, legumes, vegetables and fruit.
- **CHOOSE HEALTHY FATS** Polyunsaturated fats are found in

canola oil and some non-hydrogenated margarines. Aim to include 2-3 tbsp of unsaturated fat each day.

- **INCLUDE PLANT STEROLS** They are naturally occurring in vegetable oils, fruits, vegetables and nuts. However, you would have to eat a lot to achieve the amount required to lower LDL (bad) cholesterol. Look for products that have been fortified with plant sterols.
- **LEAN CUTS** Have lean cuts of meat and poultry. Limit cheeses, sausages, ribs, fried and deep-fried foods.

### OUR EXPERT:



**Maria Ricupero**  
Registered Dietitian

Maria Ricupero is a Registered Dietitian and Certified Diabetes Educator with 10 years of experience working with clients in a Cardiac Rehabilitation centre. She specializes in the prevention and management of heart disease and diabetes.

## Making changes to make a difference

We asked Katie and Tara to try and improve their cholesterol by making lifestyle and dietary changes, including new Becel® pro.activ®. Here's what they told us:

### Katie, 42

Senior law clerk

Katie discovered she had elevated cholesterol at her yearly physical. "I love food like pizza, chips and chocolate, but I knew I had to make changes.



Now I'm eating breakfast, healthier lunches and lots of veggies. I like Becel® pro.activ® - I'm using it instead of mayonnaise on my sandwiches, on toast and on vegetables. With all these changes, I feel better, I like the taste of Becel® pro.activ® and I'm looking forward to the results!"

### Tara, 25

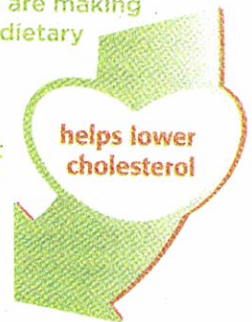
Music industry publicist

Though she's young, Tara has had cholesterol issues for years. "I know that living a heart-healthy lifestyle is important.



I've been doing daily cardiovascular exercise, I've cut back on fatty foods and I've been keeping a food journal so I can track what's going into my body. I've added Becel® pro.activ® to my veggies and on bread and it's tasty. I'm excited to see the results of my hard work!"

Check back next issue to see how Katie and Tara are making out with their dietary and lifestyle changes. We will also talk to Maria about the long-term changes they can make to improve their heart health.



## Lower cholesterol with the plant sterols in Becel® pro.activ®

- High cholesterol is a risk factor for heart disease.
- Plant sterols lower cholesterol.
- 2 tsp (10g) of Becel® pro.activ® contains 40% of the daily amount of plant sterols shown to lower cholesterol in adults.
- Consuming 2-3 servings per day of plant sterol fortified foods like Becel® pro.activ® can help lower your cholesterol.

Need information about lowering your cholesterol?  
Visit [www.loveyourheart.ca/proactiv](http://www.loveyourheart.ca/proactiv)





# Heart-healthy results with Becel<sup>®</sup> pro-activ<sup>®</sup>

We asked two women with a history of elevated cholesterol to take the Becel challenge - try new Becel<sup>®</sup> pro.activ<sup>®</sup> calorie-reduced margarine with plant sterols for three weeks, along with other heart-healthy dietary and lifestyle changes, and see the results. Here's how things measured up:

## THE PARTICIPANTS



**Katie, 42**  
Senior law clerk

Although single-mom Katie knew her diet was high in fast foods and snacks, she was still surprised to discover she had elevated cholesterol. Now she's eating healthier meals and snacks including more multigrain breads, fruits and veggies, and reducing salt. She's adding Becel<sup>®</sup> pro.activ<sup>®</sup> to toast at breakfast, with sandwiches at lunch and on veggies at dinner. "I'm walking more and doing regular workouts. Although I've started a new job with a heavier workload and more stress, I'm eating better and exercising more, so I'm feeling better and living healthier." And her cholesterol is improving as a result - after three weeks, her LDL levels were down nearly 24%!



**Tara, 25**  
Music industry publicist

Tara is a busy young professional who has recently returned to school. She tries to live a healthy lifestyle, but she struggles with cholesterol issues. She's been tracking her intake with a food journal, cutting back on fatty foods, adding Becel<sup>®</sup> pro.activ<sup>®</sup> to her diet and doing daily cardiovascular exercise. "I've been eating small amounts every three hours, carrying fresh fruit with me at all times. And I've recently added strength training and yoga to my exercise regimen. I still wish I had more time to relax - I know that coping with stress is important to heart health".

## OUR EXPERT



**Maria Ricupero**  
Registered Dietitian

Maria Ricupero specializes in the prevention and management of heart disease and diabetes. Here's her advice to Katie and Tara for ways they can continue to show improvements in their health and cholesterol:

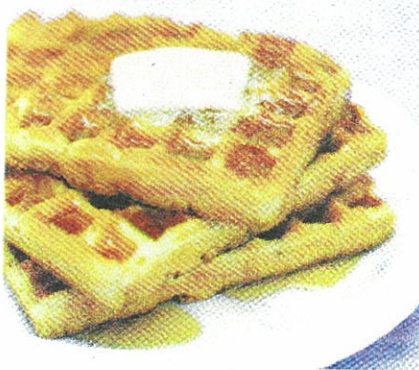
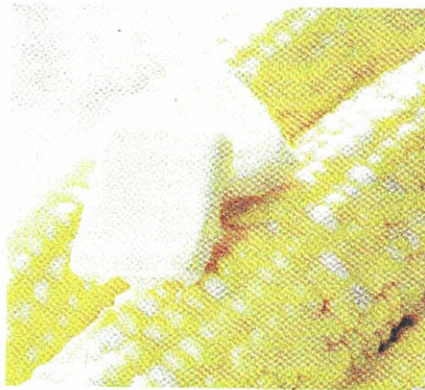
### MARIA'S ADVICE FOR KATIE

Congratulations on successfully making lifestyle changes! Making improvements to your eating regimen - and incorporating plant sterols into your diet - is a proven way to reduce cholesterol in adults. Save time in the morning with a smoothie - or bring it with you to work. Blend fresh fruit and low-fat plain yogurt with ground flaxseed or a mixture of unsalted nuts and a pinch of cinnamon and you're good to go! Keep up the great work!!

### MARIA'S ADVICE FOR TARA

Great job! Eating regularly and including heart-healthy foods like vegetables and fruit is important - snacks like unsalted nuts or yogurt are good snack choices too. Be mindful of how much you're eating during times of stress by continuing with your journal. Yoga will help you relax and achieve better balance. Looking ahead, remain consistent with this new routine. It sounds like this is a demanding time for you at work and school, so plan ahead - and when the going gets busy, remember to breathe!





Help keep your cholesterol levels in check with Becel® pro.activ® calorie-reduced margarine with plant sterols.

### Heart-healthy living - what you need to know

While cholesterol is necessary for the body to function, too much of this waxy substance can result in fatty deposits forming in the arteries, compromising heart health. The majority of cholesterol is made in the liver but some comes from one's diet - when you consume too much trans fat and saturated fat, cholesterol levels can become too high.

Plant sterols, which are naturally found in plant-based foods such as fruits, vegetables, nuts, whole grains and vegetable oils, can help. Plant sterols help remove cholesterol from the body by partially blocking absorption into the bloodstream. Studies show that consuming 2 grams of plant sterols daily can lower cholesterol by up to 10%.

### More easy ways to help lower your cholesterol

- Enjoy a variety of foods from Canada's Food Guide every day - vegetables, fruit, whole grains, lower-fat milk products lean meat and lower-fat meat alternatives
- Include 2 grams of plant sterols in your daily diet.
- Eat less saturated and trans fats, replace them with polyunsaturated fats.
- Exercise moderately for 30 to 60 minutes most days of the week.
- Give up smoking to lower your risk of coronary heart disease by as much as 70%.
- Make efforts to decrease your stress levels.

Does your cholesterol need lowering? Visit [www.loveyourheart.ca/proactiv](http://www.loveyourheart.ca/proactiv) for more information.

### What are plant sterols?

Plant sterols have been in our diets for thousands of years - they're naturally-occurring substances found in plant-based foods: fruits, veggies, nuts and grains, and in vegetable oils like sunflower, safflower and canola oils. They help to lower cholesterol by partially blocking cholesterol absorption into the bloodstream.

### What is Becel® pro.activ® calorie-reduced margarine with plant sterols?

Becel® pro.activ® is the first food fortified with cholesterol-reducing plant sterols. Just 2 tsp (10g) of Becel® pro.activ® provides 40% of the daily amount of plant sterols shown to help lower cholesterol in adults. Enjoy two to three servings per day.

### Make Becel® pro.activ® part of a healthy lifestyle

It's easy to incorporate Becel® pro.activ® into your diet - spread it on toast, bread and veggies. Live healthy: enjoy a variety of foods from Canada's Food Guide, plan your meals around heart-healthy choices (vegetables, fruit, whole grains, lower-fat milk products, lean meat and lower-fat meat alternatives), exercise 30-60 minutes daily, give up smoking and control stress levels.

