Fast Food, Safe Drug
An Ethnography of Vitamin Use in Contemporary Canadian Society

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A Thesis

In

The Department

Of

Sociology and Anthropology

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Arts (Social and Cultural Anthropology) at
Concordia University
Montreal, Quebec, Canada

April 2006

Your file Votre référence
ISBN: 0-494-14214-6
Our file Notre référence
ISBN: 0-494-14214-6

ABSTRACT

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One third of the population of North America uses nutrient supplements, spending billions of dollars per year on these products. Yet only a minute portion of individuals need vitamins supplements to correct physiological deficiencies.

This thesis explores the underlying reasons for this huge discrepancy, trying to determine what it is about North American culture and lifestyle that causes people to take so many vitamins that they supposedly do not 'need'.

Four major findings emerged from this research, which is based principally on data taken from fifty interviews. First, individuals are incited to take vitamins because they lack confidence in the food supply and their diet. Second, few deterrents to taking vitamins exist. Third, individuals easily establish vitamin taking routines ensuring consistent consumption. Finally, high supplementation can be attributed to normalisation of vitamin ingestion.

I would like to thank Margaret Christison, who proof-read me through both my degree and this thesis. I would never have had the confidence or endurance to finish this text without her.

Recognition must be given to the Anthropology 620 group who put up with me and my writing for a thirteen week semester.

Thank-you to my respondents who gave me their time and opinions, I am grateful to them all.

A thank-you is most due to Dr. Howes who gave me so much guidance throughout this project, and, who kept me employed and therefore fed through the better part of the last few years, helping me to avoid becoming a student scurvy statistic myself.

Table of Contents

List of Figures

Fast Food, Safe Drug

Introduction: An Avalanche of Vitamins

Vitamin consumption first became interesting to me while I was working as a quality control analyst at a pharmaceutical company. I tested vitamin products for the better part of five years (1998-2002), and my initial reaction in this role was one of shock at the sheer volume of product samples passing through my laboratory. My perception of an avalanche of vitamins was reinforced when I worked a year-long stint in 2003 as a cashier at a pharmacy where, once again, I was consistently bewildered by the number of vitamin supplements that passed by my scanner. Why all these vitamins?

Upon further reflection I realised that my interest went back a lot further. Two stories about the curious nature of vitamin consumption came to mind. The first is a personal experience from childhood, the second is a story my friend Penelope tells about her university days. Remembering these anecdotes further piqued my interest concerning vitamin consumption.

The Vitamin Commercial

I have a clear memory of being badly frightened during my childhood by a commercial on television for a vitamin C product. The advert starts with a scene of a small child, carrying a schoolbag, running down the front steps of his house, presumably on his way to school. It's a bright sunny day and all appears well with the world for the first few seconds of the commercial. Then, some impending doom type music comes on, "Dum-Dum-Dum" and voice-over dialogue begins, saying something like this: "three out of five children leave their house every morning without having received their daily requirement of vitamin C". I remember my heart jumping; it was definitely the music and tone of voice I was responding to. This was

the early seventies. I was maybe six years old and petrified that I was not getting my vitamin C, whatever that was. I went straight to my mother and questioned her about this. She responded, "that's why you get a glass of juice every morning. You get more than enough vitamin C, you don't need those pills".

Penelope's Story

When Penelope was in university, this would be the late 1980s, she had a friend who fell ill during his second year. He had some bizarre symptoms, rough blotchy skin and bleeding gums for example, which persisted for a long period of time so he decided he had better see a doctor about them. The friend went from physician to physician but to no avail. No one could figure out what was wrong. Finally, he happened upon a doctor, straight out of medical school, with much of his book-learned information fresh in his mind. This doctor figured it out: Penelope's friend had scurvy.

The deficiency disease that develops when an individual doesn't ingest enough vitamin C, scurvy must have been the result of an abominable student diet. I never questioned Penelope about the details of her friend's diet, but I assume it was one of those cases of consuming nothing but macaroni and cheese for months on end.

It is almost impossible to get scurvy in North America these days. Normally one could only get this disease by design. Vitamin C is everywhere in the North American diet, either occurring naturally or added to foods. Even a glass of Kool-Aid and a *small* portion of McDonald's French Fries contain 28 and 9mg respectively, of the 30mg recommended nutrient intake (Canada) or 60mg recommended daily allowance (U.S.) for this vitamin. The overt symptoms of scurvy only show up when less than 10mg are consumed per day, and one also has to go a long time (several weeks) without vitamin C in the diet to get this disease (Whitney and Rolfes 1993:

325-6, Appendix H). The fact that Penelope tells this story to get laughs, and that it does get laughs says a lot. The story is amusing because scurvy can be easily healed. It is also funny because getting scurvy is really not a worry for most North Americans, especially well-fed middle class kids like Penelope's friend. What is "funny" then is that after multivitamins, vitamin C is the second most taken vitamin product in the U.S. According to nutritionists almost no one (except Penelope's friend, I guess) needs to supplement with vitamin C, yet many people do. In fact, self-medicating with vitamin C is dangerous enough that it is not recommended under any circumstances (Whitney and Rolfes: 323-330, 363). Ultimately then, Penelope's story is funny because scurvy does not worry people. Most North Americans *know* they don't need to worry about vitamin deficiency diseases. Why, then, are they taking so many supplements, especially when consuming vitamins constitutes a great danger?

My curiosity sparked, I took it upon myself to see just what the statistics were regarding vitamin consumption. How many were being consumed and how much of the consumption was deemed "necessary" by the official medical community? Here are the figures I unearthed: one third of the population of North America uses vitamin and mineral supplements. Billions of dollars are spent on them every year in the US alone, and, according to Whitney and Rolfes, only 0.1% of individuals need vitamin supplements to correct physiological deficiencies (Whitney and Rolfes 1993:363; Apple 1996:31; Richards 1991:46-49). What lies at the heart of this huge discrepancy? Why are so many people taking so many vitamins that they supposedly do not "need"?

Evidently, in one way or another, culture is at work here and this is what I have chosen to investigate in this project (Lock 2002). What is it about North

American lifestyles and values, and about vitamin supplements themselves that causes their consumption to be so high in North America?

Approach to Fieldwork and Writing

I have approached my fieldwork and the writing of this thesis with certain sensitivities. I have chosen methods that I hope will not work to reproduce or reinforce unequal power relations in the world of pharmaceutical consumption. With a view to achieving this end I place emphasis on the first person voice of the people I interviewed. My interview section (chapter 4) has an abundance of quotes and is the longest section of this thesis. I have also chosen to place my interview data ahead of the literature review so that respondents' words are heard first. My informants were kind enough to give me answers to my research question so I want their voices to have prominence. I have also taken steps to protect my respondents (all names of people and places are pseudonyms; no information that could potentially reveal the identity of an informant has been included).

Also, in an attempt to keep this work as even-handed as possible I will reveal my biases. I use no vitamin products although I have sporadically in the past. After working for almost a decade in drug companies I have negative feelings about pharmaceutical corporations and the industry in general. I hold doubts about the products they create and sell, believing that many products probably do more to line the companies' pockets than improve individuals' health. Not only do I avoid using vitamins, but also whenever possible, I try not to use any products produced by these companies. This does not mean that I never use any pharmaceuticals, but I certainly think long and hard before I support this industry by purchasing their wares. I also want to stress that I am in good health, making it somewhat easy for me to get up on my high horse about pharmaceutical consumption.

I believe it is important for me to state my biases up front because although I tried not to wear my opinions on my sleeve while doing my fieldwork, it is possible

that some informants sensed my bias and altered their testimony accordingly. Certainly the fact that my main research question is 'why do people take so many vitamins?' and not 'why don't people take more vitamins' is a good indication of where my vitamin sensibilities lie.

Clarifications and Definitions

As a matter of form, when I refer to 'vitamins' in this text, I mean vitamin supplements. On the rare occasions that I need to speak of vitamins molecules specifically, I refer to them as such. So for the purpose of this text vitamins = vitamin supplements.

Although my topic is vitamin consumption I often lump minerals and other nutrition related products (such as herbal, root, plant, fatty acid, etc) into the category of vitamins. I've done this for two reasons: first, because many vitamin supplement products contain the latter ingredients, and second, because many of my informants spoke about these other products as either entities indistinct from, or related to, vitamins. I found separating vitamins from related products to be a somewhat difficult and arbitrary undertaking for the purposes of this research, so I didn't do it. Generally speaking, however, the focus of my project remains vitamin consumption.

Also notice that the focus of this project is vitamin consumption, as distinct from production. Vitamin production is a whole other world, one that I could not include in a project of this scope. Again, sometimes the line between these two distinctive categories became blurred during various stages of my research, so I made an effort to concentrate on consumption, but did not completely exclude production related issues when doing so seemed artificial or forced.

For the purposes of this paper I make no point to carefully differentiate the U.S. and Canada. At a future date a more country specific investigation will have to be performed due to the differences, in healthcare systems for example, that exist between the two nations. For the purposes of this text, however, I lump the two countries together considering all of North America to be my area of study.

Chapter 1: History of Vitamins

In order to understand what is happening with vitamins today I must go back in history to investigate the period before supplements were introduced. I consider a time when vitamin molecules existed solely in food. Further, I consider the history of not only food but also 'pills', because after all, vitamins are food molecules in pill form. They are hybrid; one might say nature and technology combined (Michael 2000).

Drugs

During the latter half of the nineteenth century, manufacturers of proprietary medicines started to flourish in North America (Shaw 1972). This was the beginning of a period known as the patent medicine era or 'The Golden Age of Quackery', which saw its peak in the first decade of the twentieth century. This era was characterised by the emergence of companies that took on the ambitious task of producing medicines. For the most part, those involved were untrained medically but well-informed in the ways of business. Although this was the pre-radio era, companies managed to find multiple places to advertise such as in almanacs, pamphlets and newspapers (Shaw 1972; Healy 1997). Products were recommended as cures for vast lists of medical conditions. For example, consider the ailments for which 'Mountain Herb Pills' (a patent medicine) was a recommended remedy:

Bowel Complaints	Dropsy	Inflammation
Coughs	Debility	Inward Weakness
Colds	Fever and Ague	Liver Complaints
Chest Diseases	Female Complaints	Lowness of Spirits
Costiveness	Headaches	Piles
Dyspepsia	Indigestion	Stone and Gravel
Diarrhoea	Influenza	Secondary Symptoms

(Shaw 1972:32)

Making curative claims of this kind was possible due to lack of regulation, but also

because it made sense. Understandings of illness, the body and how medicines worked differed from dominant medical beliefs in North America today. Illnesses were viewed as disorders of the whole body, and medicines accordingly needed to be multi-pronged. These notions began to change toward the end of the nineteenth century, however, when the isolation of morphine and quinine, and developments in microbiology started to give rise to a one-illness-one-remedy understanding of disease (Healy 1997). Ironically, medications that were understood as quack medicines (specific remedies for specific illnesses - 'magic bullets') during the patent medicine era came to be respected, while the older, multi-pronged medications now came to be understood as quack (Healy 1997; Abramson 2004).

By the 1910s and '20s the patent medicine business was on the decline. Because of changing understandings of illness, 'muckraking attacks' were launched on patent medicine companies, and private assaults were published in magazines, articles that were later reprinted in the *Journal of the American Medical Association* (Shaw 1972; Mintz 1967; Healy 1997). The year 1906 marked the beginning of the end with the passage of the first Food and Drug Act. For a while some companies managed to stay in business, but by the 1950s the patent medicine era was over (Shaw 1972). The final blow had been dealt in 1938 with the enactment of the Federal Food, Drug and Cosmetic Act (Mintz 1967). With the passage of these acts, it became illegal to make unsupported curative claims, or to advertise medicines directly to the public (Healy 1997).

Food

For millennia, the world over, there has existed empirical knowledge about the curative powers of certain foods (Friedrich 1988; Porter 1997). Ancient Egyptians,

Greeks, Romans and Arabs used liver to heal night blindness. Jacques Cartier's men drank spruce beer, while the English, no less wise, ate 'sower oranges and lemmons' to relieve the symptoms of scurvy (Friedrich 1988:4; Fried 1984:157-167). In the late nineteenth century the Japanese navy was combating beriberi, the vitamin B1-deficiency disease, by replacing a diet of rice with barley (Friedrich 1988).

Food, then, has long been understood to be 'nutritionally' important, in some sense of the word. But in the past, this way of looking at food was restricted to the very general qualitative notion that certain foods relieved specific disease states. The reductive and quantitative approaches that many North Americans apply to food today, for example viewing food as units of vitamins molecules, carbohydrates, calories and the like, simply did not exist. Nutritional science only came into being during the late nineteenth century (Davenport-Hines and Slinn 1992). In the case of vitamin compounds specifically, it was only with developments in biochemistry early in the twentieth century that identification, isolation, structural elucidation and synthesis of actual individual molecules was made possible (Basu and Dickerson 1996; Friedrich 1988; Davenport-Hines and Slinn 1992).

Vitamins

1900-1950s

It was Casimir Funk who first labelled the nutritional substances we now know as the vitamin molecules in 1912. He chose the name 'vitamins' because he felt they were substances vital to life and believed that they contained amine (amines being a class of compounds containing a specific chemical structure). (Davenport-Hines and Slinn 1992). At that time, and for some two decades to follow, vitamin molecules were understood simply as food factors whose absence produced specific

diseases such as scurvy or pellagra. Bit by bit over the course of 1900 to 1950, a period known as the 'vitamin era', biochemists extracted, isolated and then learned to synthesize the vitamin molecules we now know as A, B1, B2, B3, biotin, pantothenic acid, B6, B12, Folic Acid, C, D, E and K. With these developments, it became apparent that these compounds, which had been classified under the one heading 'vitamins', actually had numerous chemical structures and performed a wide variety of physiological functions. Despite this new understanding, their original definition (substances needed in minute quantities to maintain physiological health) as all belonging to the category 'vitamins' remained.

The first and second world wars provided impetus to research and better understand nutritional science, particularly that to do with vitamins. At home, rationing meant that governments needed to understand better what a good 'scientific diet' was, and advances in nutritional knowledge allowed for more efficient feeding of the troops at the front (Davenport-Hines and Slinn1992; Apple 1996). Researchers were also looking for the causes and solutions to deficiency diseases like beriberi and pernicious anaemia. At first, nutritional research was used simply to alter peoples' diets in attempts to provide correct amounts of each nutrient. Soon after, however, food started to be converted into extracts when it sometimes became impractical to feed patients the huge amounts of food they needed to cure their disease. For example, in the 1930s, patients receiving vitamin therapy for pernicious anaemia were fed extracts in equivalents of raw liver (Davenport-Hines and Slinn 1992).

Vitamin molecules remained fully entrenched within foods, however, until the 1930s when the worlds of vitamin molecules and pills collided with the extraction and synthesis of vitamins for commercial ends. The first vitamin supplements in the form of drug vehicles were made, and Recommended Daily Allowances (RDA) were

developed soon after, in 1943, by the Committee of the Food and Nutrition Board of the National Academy of Sciences/National Research Council (Whitney and Rolfes 1993:9-10). Initially, vitamin supplements were still produced to provide relief from diseases related to vitamin deficiencies, but their use took off among the general public almost immediately (Marks 1975; Apple 1996). Vitamins started to be consumed in unpredicted ways (Michael 2000). For example, Ostelin D, the first standardised vitamin supplement produced for the market, was a cod liver oil preparation that was originally created as an anti-rachitic therapy, but whose prophylactic use started soon after its creation in 1924. Ostelin D's popularity at the time can be attributed in part to the simple fact that it tasted and smelled much less fishy than its predecessor cod liver oil. Its success was also due to the dominant feminine ideology during the interwar period, 'scientific motherhood'. Scientific motherhood put North American middle-class women, responsible for the care and raising of children, in a position where they were expected to seek assistance from medical and scientific authorities in matters of nutrition. Vitamins would have appeared as a kind of 'perfect scientific food' to many mothers at the time, especially as they were vouched for in child care books and domestic science courses, and by medical personnel, public health workers and particularly manufacturers (Apple 1996; Davenport-Hines and Slinn 1992).

Much of the prophylactic use of vitamin products, like Ostelin D, at this time can be explained by the aggressive advertising that accompanied their release on the market. Middle-class mothers were bombarded with vitamin information in magazines such as *Good Housekeeping* and *Hygeia* where vitamin products were introduced in both editorials and advertisements (often one and the same). The aura of science that these advertisements invoked persuaded aspiring scientific mothers to

buy these products. Furthermore, these columns and ads ran side by side with articles that warned mothers about the nutrient-depleted reality of modern processed food (Apple 1996).

Mothers were not only induced to feed their families vitamins, they were also given specific instructions on the best consumption rituals. For example, through advertisements mothers were told that vitamins should be taken with breakfast and that supplementation was a daily need. Vitamin takers were also exhorted to leave their bottles out in plain view:

> 'Don't tuck the bottle away in your medicine cabinet. Don't take the tablets at irregular intervals or only when you are feeling ill. 'One-A-Day' brand Vitamin A and D tablets are food supplements, and should be taken one a day - every day - preferably with a meal. You will not get the greatest benefits from 'One-A-Day' tablets unless you take them regularly'.
>
> 'Why not put the bottle on the breakfast table as a pleasant reminder to make taking a tablet every day a part of your daily routine'
> (One-A-Day promotions, early 1940s, as quoted in Apple 1996:91-92)

Mothers were also warned that bodies were more vulnerable during winter months due to scarcity of vitamins A and D in off-season diets. Consider the wording of this White's Cod Liver Oil advert:

> Do you know why the winter months are called the danger months? Do you know that science has discovered that the lowered resistance to disease during these months is a direct result of the scarcity in our winter diet of the twin Vitamins A and D – that in winter even the common food sources of these precious vitamins often lack the health giving elements they so abundantly furnish in summer? (Apple 1996:26)

These commercial suggestions increased vitamin sales by establishing habits and promoting higher consumption.

Although vitamin molecules started to be available in drug formats during this period, vitamins were still perceived in many ways as 'food'. Biochemist Albert Szent-Györgyi, who first identified Vitamin C, thought of vitamins as food:

> 'Vitamins were to my mind, theoretically uninteresting. Vitamins means that one has to

> eat it. What one has to eat is the first concern of the chef, not the scientist'. (Fried 1984:160)

Despite his lack of interest in the project, Szent-Györgyi went on to isolate Vitamin C and later, in 1933, performed the first successful artificial synthesis of the molecule (Borsook 1941). Because vitamins were perceived as food they were also considered safe:

> In other words, if the public should demand vitamin D in its beer, there is no reason why the Foundation (Wisconsin Alumni Research Foundation) should not provide it – because it may do some good and it most certainly will not do any harm. (written during the 1930s by Dr. Harry Steenbock, founder of the WARF) (Apple 1996:50).

Not considered medicine, vitamins escaped the restrictive rules of marketing applied to drugs. Exaggerated and direct advertising, strategies that had proven helpful for boosting sales of patent medicines, could still be used for vitamins (Fried 1984; Healy 1997). Vitamin consumption was fashionable and extravagant claims regarding the positive outcomes of their use were widespread, claims that were often refuted later (Marks 1975). 'Fear' advertisements which employed scare tactics to sell vitamin products were another marketing tool familiar from the patent medicine era commonly used during this period. Particularly effective were advertisements that drew attention to the hidden or invisible nature of many deficiencies (Figure 1). Thus both positive and negative-appeal advertising strategies were used.

While drugs became subject to increasingly stringent marketing rules, a trend that lasted until 1985 when direct-to-consumer (DTC) drug advertising became legal in the US, and 1997 when the rules governing DTC were further relaxed, vitamins were marketed with impunity. Pharmaceutical manufacturers were among those that took advantage of this legal loophole. This was lucky for them because it was often easier to convince consumers than doctors of the merits of these products. A good many doctors failed to jump aboard the vitamin bandwagon (Davenport-Hines and Slinn 1992; Apple 1996). It is doubtful that vitamin sales would have been propelled

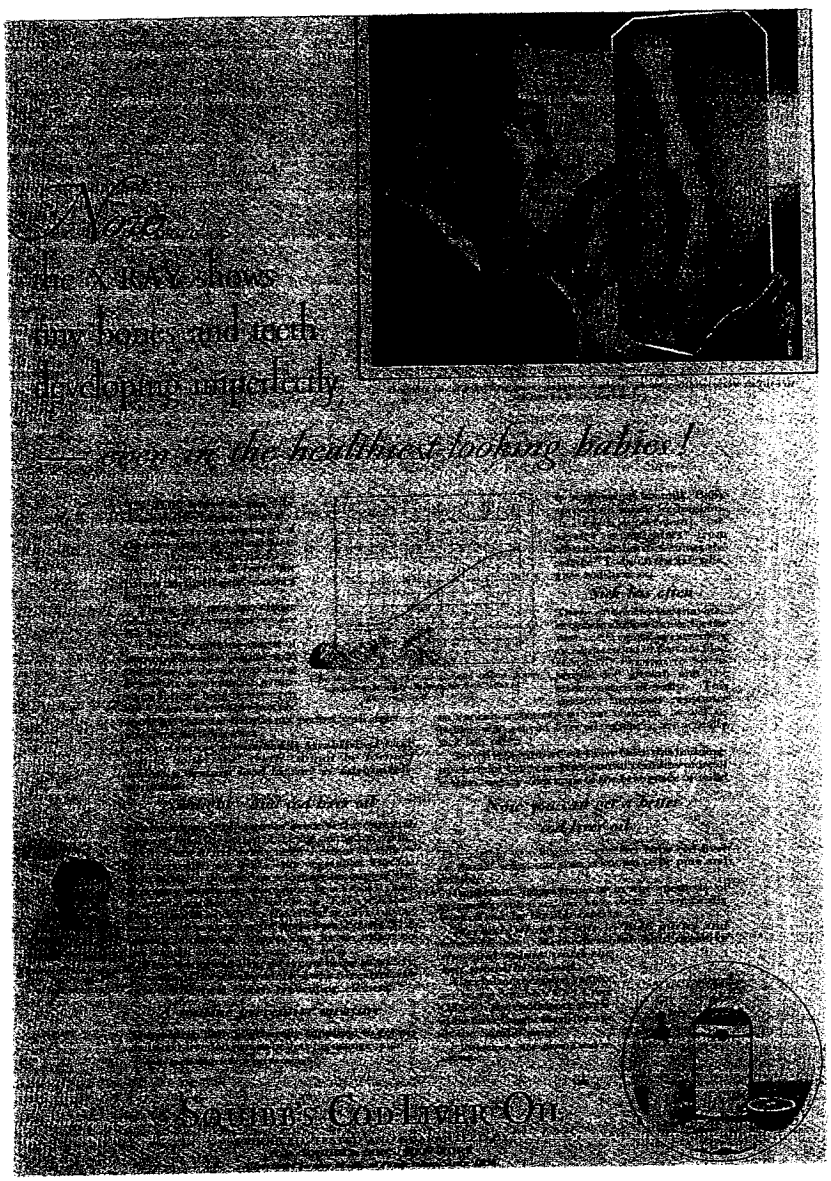


Figure 1: Squibb's Cod-Liver Oil advertisement. (Source: *Good Housekeeping*, December 1926, p. 249)

to the heights they quickly achieved if manufacturers had been compelled to rely on promotion via doctors alone. Ironically, vitamin advertisements often delivered the message that these products were recommended by the official medical community. Vitamins became extremely lucrative lines for several pharmaceutical companies, whose profits helped build drug empires that still exist today (Glaxo, Pfizer, Abbott, Mead Johnson and Squibb, for example) (Davenport-Hines and Slinn 1992). For example, in 1936, the drugstore publication *Drug Times* estimated that more than one third of all drug business consisted of vitamin products (Apple 1996).

Vitamin sales were important to the prosperity not only of pharmaceutical companies but also of pharmacies. Retail vitamin sales in pharmacies exploded during the 1930s. In the late nineteen thirties, for example, eighteen percent of all sales in a typical drugstore consisted of vitamins (Apple 1996). In the world of advertising vitamins were treated like food, but in production and sales vitamins revealed their drug-like character, that is, they were fabricated in pharmaceutical companies and sold in drugstores. In the 1930s however, just as vitamin sales started to climb significantly, grocers (and other non drug outlets like mail order houses and department stores) started to get in on the action, consequently the true nature of vitamins, food or drug, became a critical question. Grocers contended that vitamins were food, while pharmacists insisted they were drugs that required expert knowledge to be sold. The answer to the question 'are vitamins food or drug?' ended up in the courts and finally, in 1943 a ruling was made finding that vitamin products advertised as preventions, treatments or cures for disease, were drugs and could only be sold in drugstores, while those taken as dietary supplements and labelled "Not for Medicinal Use" were food and could be sold outside of pharmacies (Apple 1996). The highly publicised battle between the grocers and the pharmacists, and the advertising that

both sides embarked upon in an effort to woo customers to their stores subsequent to the ruling, did nothing but raise the profile of vitamins and increase their sales even more. In the end, both types of outlets were allowed to sell vitamins, but in the 1940s and beyond, pharmacies continued to dominate the vitamin market, probably because consumers believed in the superiority of pharmacists' knowledge (Apple 1996).

The first vitamin product containing multiple active ingredients was introduced during the late 1930s. It was called Vitamins Plus and can be considered the ancestor of the multivitamin formulations of today. As with the other vitamin products mentioned above, the target consumers of Vitamins Plus' were not people with gross vitamin deficiencies. In fact this product was marketed chiefly as a beauty aid to middle-class women. Manufacturers were also starting to create product lines directed towards children and the elderly. By the 1940s, then, market segmentation of vitamin products was well under way (Apple 1996).

1960s and seventies

Vitamin consumption, a fashion during the 1930s and forties, had become a full-blown fad by the sixties and seventies. A health and fitness craze was in full swing. Urban gyms and health food stores were sprouting up everywhere (Fried 1984). Vitamins were widely advertised, especially in the vitamin enthusiast's premiere magazine *Prevention*. Inside, one could find articles claiming a plethora of potential health/curative benefits for the common cold, schizophrenia, cancer, heart problems, ageing and sexual problems (Fried 1984). It was also during the 1970s that the government began making direct and concerted efforts to advise the public on matters of diet-related disease (Health Canada 1990).

At this time several groups were vying for power in the world of vitamins:

individual consumers, vitamin gurus (lay people with extensive vitamin knowledge), regulatory agencies, doctors and manufacturers. Vitamin consumption had become political. Members of the medical profession referred to the vitamin trend as 'quackery', and complained about the money wasted by, and potential health risks to the vitamin faddists. They likened vitamin gurus to religious fanatics, 'hucksters' who were only after money (Fried 1984:15). Doctors who converted, like chemist Linus Pauling, were ostracised by the official medical community, suspected and accused of seeking fame at the expense of the public's health. In the words of Professor Thomas Jukes, a nutrition expert at the University of California: 'Pauling is a past master of salesmanship. How do you think he got two Nobel Prizes? By selling himself' (as quoted in Fried 1984:17). Meanwhile, the medical community was under attack from the regulatory institutions. The FDA accused doctors of being 'communists', of falsely claiming that vitamin consumption was harmful because they were trying to control where and how the public spent their money (Fried 1984). All the while, the FDA itself was trying to get the vitamin industry under its own control, claiming that the FDA bureaucracy was needed to reign in over-enthusiastic claims about and money spent on vitamins. The FDA wanted to have vitamins classified more as a drug than food in order to control them more stringently. The agency obviously failed to convince the vitamin-loving public however, as they answered the FDA's attempts with lawsuits and court challenges. Consumers also embarked on a letter writing campaign. The FDA received so much correspondence criticising the agency for its paternalism and "Big Brotherism" that form letters had to be sent as responses (Apple 1996:153-4; Richards 1991). During the 1970s it was clear that people did not want the establishment telling them what they could and could not consume. The FDA's efforts were only truly thwarted however, when a Republican Congressman, Craig

Hosmer, whose personal interests were tied to the success of so-called 'alternative' medicines, introduced HR 643, a bill designed to limit FDA power in controlling the vitamin trade. With the help of Democratic health enthusiast Senator William Proxmire (who himself accused the FDA of "trying to play God"), and the support of numerous co-sponsoring Congressmen and Senators (all simply searching support for their own pet bills), the bill passed in 1973, effectively removing any chance the FDA had to control vitamin sale and advertising in a manner that they saw fit (Fried 1984; Apple 1996; Richards 1991). To this day, the FDA has never managed to make any headway in this area.

> The FDA cannot set limits on the potency of supplements, cannot classify supplements as drugs, and cannot limit the number of vitamins, minerals, or other ingredients in supplements. Consequently, supplements do not receive the close regulation that drugs do, nor does the FDA require manufacturers to prove the safety or effectiveness of supplements. (Whitney and Rolfes 1993:364)

Meanwhile, in the retail world, drugstores still dominated the vitamin market but their market share was now coming under attack from not only grocery stores, mail-order firms and department stores but also door-to-door sales outfits. Increasingly, vitamin consumers were seeking their own answers to health questions and thus rejected 'received wisdom', like that found in drug stores (Apple1996; Rose 2001). Pharmacies remained a place to buy vitamins, but druggists' argument of professionalism ceased to give drug stores a substantial edge in the vitamin market. By 1981, pharmacies accounted for 33% of vitamin sales as compared to 78% in 1942. Vitamins remained, however, one of the more lucrative lines for drugstores. On a 'sales per square foot' basis, vitamins made more money than other big sellers such as hair and skin-care products (Apple 1996).

During the 1960s and '70s, advertising remained important for the promotion of vitamins. Drug store advertising continued to emphasize the professional aura of

the pharmacists in an effort to retain the upper hand in the vitamin business. Large scale advertising campaigns were also launched both on television, during such popular programs as "Mr. Ed" and "The Alfred Hitchcock Hour", for example, and in popular magazines like *Life* (Apple 1996).

Market segmentation continued during the 1960s and 70s. For example, in 1960 the first children's chewable was released - Chocks multivitamins. Flintstones and Bugs Bunny children's vitamins followed in 1970 and 71, respectively (Apple 1996).

1980s to the Present

The world of vitamins has changed since the 1970s. The controversy that surrounds vitamin use has diminished considerably over the past decades because curative claims are less exaggerated, and vitamin supplements, after decades of use, have slipped into the category of the 'mundane' (Michael 2000). Vitamins still receive bad press, but now mainly related to their over-use (Whitney and Rolfes 1993). Of the whole world, North Americans consume vitamin supplements in the largest quantities, and interestingly, the people most likely to consume vitamins today are those who 'need' them the least, i.e. the health conscious, wealthier members of societies and members of First World nations (Marks 1975; Fried 1984; Whitney and Rolfes 1993).

There has been a massive proliferation of vitamin supplements during the last couple of decades. Vitamins are available in many brands, dosage levels, and in single and multivitamin formulations. Besides vitamin molecules themselves, many products contain other active ingredients like minerals (Calcium, Zinc) and plant extracts (ginseng, ginkgo). There are also vitamins for specific demographic groups, divided

by sex, age, lifestyle and other characteristics, for example Centrum Silver, Flintstones, Stresstabs, One-A-Day Men's Formula and Materna. Most products are in tablet form, but capsules, ampoules, effervescent powders, soft chews, bubblegum, drinks and syrups are also available. There are also some food-type formats like shakes and bars, Boost and Nutribar are two examples. These are labelled 'meal replacements', unlike the other formulations which are labelled 'supplements'.

Vitamins are still advertised extensively, using strategies similar to those first employed eighty years ago. Advertisements still reflect culturally acceptable images and roles of both men and women, and still employ both negative and positive-appeal approaches (Figure 2). The blurring between editorial and advertising content is still apparent in many media (magazines, television, newspapers) and professional (medical journals) sources (Figure 3)[A]. Today over $66 million dollars are spent by the industry on vitamin promotion annually (Apple 1996:182).

Tendencies to self-medicate continue, partly because Americans have lost faith in medical professionals. Thanks to the Linus Pauling affair, vitamins are thought of by many as 'alternative medicine', which contributes to their popularity in the face of the tendency to reject professional wisdom. Furthermore, throughout the twentieth century, North Americans have increasingly doubted the nutritional quality of their diet. This helps explain the continued popularity of supplementation. In addition, consumers who are still listening intently to their doctors may not be hearing the same message as they were a few decades earlier: many physicians no longer condemn vitamin use (Apple 1996; Rose 2001).

Despite the passage of the Vitamin Amendment Act in 1976, the FDA did not

[A] My purpose in including this image is not to question the integrity of the author of this piece "Safe Alternatives to Viagra". I know nothing about Michael Downey. Rather, I wonder why this article appears next to the advertisement for Vitamin E, known as a "nature's Viagra" itself. This is not the only example of the juxtaposing of editorials and advertisements in this magazine.

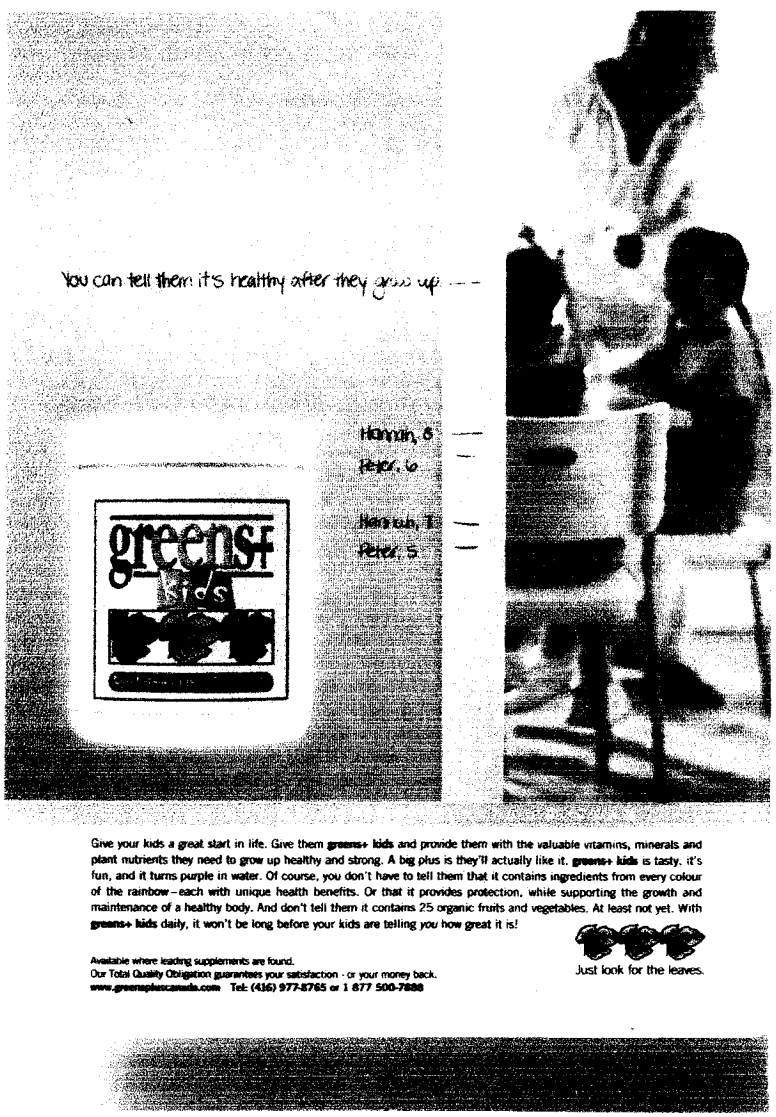


Figure 2: Greens + Kids advertisement. (Source: *Alive*, October 2002, Back Cover)

Figure 3: New Roots Herbal Vitamin E advertisement next to an article entitled 'Safe Alternatives to Viagra' which discusses Vitamin E's ability to stimulate circulation. (Source: *Alive*, October 2002, p. 41)

let the matter die. In the late 1980s the FDA, once again, targeted vitamins in a bid to control them more stringently. RDAs were also singled out for revision. In 1994 however, Congress, supported by health food stores and customers writing letters, blocked the FDA one more time (Apple 1996).

North American notions about vitamins may be changing, however, at least in Canada. A recent (2004) tightening of rules governing vitamin sale, production, packaging, labelling, importation and advertisement by Health Canada may be either a reflection or instigator of change in how vitamins are perceived by some North Americans (Éthier 2005). It is difficult to predict the outcome of these changes however, given the nature of the US-Canada border, which can be highly permeable to both products and ideas. For example, despite the Health Canada rule changes and the fact that DTC drug advertising is not allowed in Canada, Canadians are nonetheless exposed to US drug adverts by way of both print (magazines, newspaper) and electronic (television, Internet) media. Meanwhile, cheap Canadian pharmaceuticals have a tendency to flow over the border into the US.

Chapter 2: Theoretical Perspectives on Health and Illness

In this section I summarise the major sociological/anthropological theoretical perspectives that have been brought to bear on the topic of health and illness. I do this with a view to clarifying the larger context within which the present work is situated and to lay the groundwork for the theoretical discussion in the chapters to follow. I review a number of paradigms because all of them played a role in the formulation of my research question and because I make use of all of them in my analysis. Rather than choosing one theoretical framework and then trying to retrofit my data to the theory, however, I have decided to let the data guide my analysis, and even at times expose gaps in the existing range of theories; that is, I employ a kind of theoretical pluralism in an attempt to analyse my data in a way that respects what informants told me, and thereby treat my informants as theorists in their own right. It should be emphasized, however, that using a theoretically plural approach does not mean that I have no analytical focus, or, that I do not ultimately align myself with a theoretical framework. For instance, in this chapter I address major theoretical approaches to health and illness, and further on, in chapter 5, I use the anthropology of pharmaceuticals as my primary framework for analysis. This necessarily means that I concentrate more on the drug-like than food-like characteristics of supplements. Vitamins' food-like nature is not ignored, however, as I dedicate the latter portion of chapter 5, and much of the discussion in chapter 6, to this topic. Furthermore, although I make use of various types of argumentation (consensualist, conflict, structuralist, materialist and post-structuralist) when analyzing my data in chapter 5, the reader will find that, ultimately, it is to a post-structuralist theoretical position that I most closely adhere, as the concluding paragraphs of this thesis make clear.

Structural Functionalism

In functional structuralist approaches it is understood that individuals think and behave in ways that are structured by the greater society, and in a manner that maintains society in a state of harmony and equilibrium. Structural functionalist approaches to health and illness depict medical settings as parts of consensualist, smoothly running societies. For example, from this perspective social order is maintained by medical professionals and the sick each performing their role in society, healer and patient respectively. Thus each person within the health care system has a role to play and by playing that role social harmony is preserved.

Talcott Parsons' (1951) notion of the 'sick role' is an excellent example of structural functionalist theorising applied to medicine. According to Parsons, when people become ill society falls out of balance. It is up to the doctor to re-establish that balance by confirming that the patient is indeed ill thus preventing him/her from being labelled as a malingerer, and then, whenever possible, healing him/her. Until confirmed ill by the physician, patients are simply regular persons that are not fulfilling their societal role and are therefore deviant. Thus, the patient who is truly unwell, as verified by the doctor, fills the role of a sick person - someone who needs help, cannot fulfil normal social obligations, wants to get well and is supplicant to a physician with a view to recovering - while the doctor plays the role of healer.

Functionalist paradigms have been criticised for their failure to address conflict scenarios within medical settings and for their failure to consider issues of gender, race, class and ethnicity. Furthermore, because functionalist and functional structuralist paradigms tend to involve ahistorical, teleological and circular reasoning they have largely fallen into disrepute and are frameworks that are not readily applied in current health and illness literature (Lupton 1994; and Clarke 1990).

Political Economy or Conflict Perspectives

In political economy or conflict theory all social institutions produce and are reproduced by economic and political power. In these approaches to health and illness marginalised groups such as women, the elderly, children, blacks, and the unemployed have restricted access to health care because they are viewed as not contributing their share to the economic system. From the conflict perspective the medical system is designed to take care of those who contribute most to a viable capitalist economy. Conflict theorists believe that health care reflects and supports the capitalist system in which it exists. Medical care and products are just more commodities to be bought and sold in a system which thrives on making money, not promoting health. Preventative approaches to health are largely ignored because the system is oriented towards curative money-makers like drugs and other medical technologies. From the political economy perspective then, the medical system is a site of struggle over power which serves to perpetuate social inequalities. Members of the medical establishment, physicians, and high-ranked pharmaceutical and regulatory agency personnel are viewed as particularly and increasingly powerful. Generally speaking, conflict theorists view modern medicine, under capitalism, as expensive, ineffectual and inequitable (Lupton 1994; Clarke 1990).

Major proponents of conflict theories of health and illness include Ivan Illich (1976) and Vincent Navarro (1976). In *Medical Nemesis* (1976) Illich argues that contemporary medicine, due to its excessive professionalisation, bureaucratisation and practice, is iatrogenic. Further, he believes that sick individuals are blamed for their own ill health and that political and economic conditions that produce illness are obscured. Illich believes that due to the medical establishment's excessive influence and power, and because people have such faith in the medical profession, everyday

problems not originally medical in nature are being re-defined as illness, a phenomenon called 'medicalisation'.

Navarro (1976), another conflict theorist, disagrees with some of Illich's assertions. He believes that it is the government acting on behalf of the corporate class, and the corporate class itself, that dominate the health care sector. Therefore it is they, rather than the medical establishment per se that is to blame for the poor and unequal delivery of health care. For Navarro, the capitalist system produces living conditions such as pollution and dangerous workplaces that cause ill health. Consumers then must spend their money on health products to cure these ills, supporting the capitalist system that is making them sick in the first place. Furthermore, vulnerable portions of the population are more likely to experience poor working and living conditions, and are less likely to be able to secure good health care, putting their health more at risk than the rest of society.

Common in all these approaches is the notion that medical knowledge is neutral and objective in and of itself. Problems in the medical system exist because of unfair or unequal access to this perceived 'good'. This has been a critique of conflict perspectives. Conflict paradigms have also been challenged because they do not recognise real improvements in health and life expectancy that are characteristic of the twentieth century. Further, conflict approaches have failed to examine the real power dynamic of patient-doctor encounters. Often patients will have more say and doctors display more good-will than can be expected in political economic frameworks. Finally, conflict theorists have been criticised for targeting the capitalist system, when many socialist states have been characterised by similar problems of iatrogenesis and inequality in access to health care (Lupton 1994; and Clarke 1990; Rose 2001).

Postructuralist Perspectives

Poststructuralist, like structuralist approaches, emphasise the socially constructed nature of knowledge, particularly the role that language plays in producing and reproducing meaning. Poststructuralists do not believe that behaviours and ideas contribute to a consensually functioning society, however, setting them apart from functionalists. Further, they do not believe that power is only wielded from the top down. Poststructuralists believe that power relationships exist in societies, but that power is shared by all, no one is entirely powerful or powerless. Who wields power, in any given situation, depends on historical, political and sociocultural context. Power for poststructuralists, lies in discourses, systems of language and practice that envelope activity and thought, producing meaning for individuals. Individuals, in turn are part of the system influencing discourse. Thus for poststructuralists there can never be one truth, rather one is constantly negotiating a sea of discourses. Phenomena like health and illness are patterned by discourses that guide our ideas and practices in this area. These discourses are particular to our culture(s), and sub-cultures, and to our place in time. We constantly draw upon and renegotiate these discourses as we go about our daily lives.

Medical discourses affect the ways in which people perceive their health. Therefore states of health are constructed, subjective and dynamic as opposed to static, universal and objective. Because discourses are loci of power, what is perceived as 'truth' in the medical system is the product of power relations. Poststructuralists believe that medical knowledge is neither neutral nor objective, it is constructed, and therefore it is always contingent on socio-historical setting. From a poststructuralist perspective the truth claims of biomedicine are as constructed as those of lay or alternative medicine. The poststructuralist paradigm, then, resembles

that of conflict except that poststructuralists believe that although some in society have better access, everyone shares in power. Power is not simply a force wielded from above pushing down on those below, rather, it is multidirectional and multicentred. Poststructuralists also differ from conflict theorists in that they do not view power as purely a product of capitalist forces (Lupton 1994: Clarke 1990; Rose 2001).

An example of poststructural theorising applied to the field of health and illness is Evelleen Richards' work on Vitamin C. In *Vitamin C and Cancer: Medicine or Politics?*(1991) Richards demonstrates the ways that medical 'truths' are socially constructed. The author shows how the orthodox medical community has mobilised powerful mainstream medical institutions, medical journals, and individuals, in an effort to discredit Vitamin C as a potential treatment for cancer, and, how alternative medicine proponents have tried to counter this attack by suggesting models for Vitamin C that fit the orthodox paradigm and by mobilising popular media with a view to influencing a lay audience. According to Richards, alternative and orthodox medical knowledge belong to completely different health paradigms. Those who support alternative methods of viewing health and illness have to fight constantly to have their perspectives heard, while orthodox medicine proponents easily disseminate their notions in established medical journals and through well-respected institutions. In this text Richards demonstrates how different researchers, with different perspectives have harnessed powerful institutions within the two different medical discourses in an effort to make their views heard. Ultimately, according to Richards, the most politically powerful discourse, that of orthodox medicine has 'won'. The truth of whether or not vitamin C might be an effective cancer treatment will probably never be known because in this instance the more powerful discourse has managed to

obliterate the arguments of the weaker. However, Richards also asserts that the alternative discourse has also 'won' in its own right as many people take Vitamin C for cancer, despite official medical establishment failure to endorse this treatment (Richards 1991).

Robert Crawford's *A Cultural Account of "Health": Control, Release, and the Social Body* (1984) is another example of post-structuralist theorising on matters of health and illness. According to Crawford, the body is culturally constructed. Therefore our understandings of matters of health and illness depend on larger societal conceptions of what the body is. Our bodily states give others (and ourselves) clues about how we are to be defined; as normal or abnormal, or as dominant or subordinate, for example. The body is therefore both a physical and social entity which communicates with self and others. Although Crawford asserts that we keep our bodies healthy for purely physical reasons, to avoid discomfort for example, in this text he concentrates on the ways in which the body is used to moralise about notions of control or release. Slim and healthy individuals, for example, are perceived as having good self-control, a positive trait in North American society. Good health, however, also requires us to balance out the self-control with release. Abandoning ourselves to less "healthy" activities is actually good for us. Letting loose relieves stress and primes the body for productive work, and being productive is another positively valued trait in North America. Having a healthy body, then, is a demonstration that one has achieved a good balance of the proper behaviours of control and release. Crawford also says, however, that these ways of communicating with bodies are not simply applied to North Americans with a view to making them conform. This symbolic framework is also co-opted with a view to resistance (Rose 2001; Katz and Marshall 2004). Keeping the body slim and healthy is also a way for

North Americans, bombarded with an uncontrollably unhealthy environment, to assert some control. Therefore individuals can appropriate the positive symbol of the healthy body to fight the greater hegemonic capitalist system that is subjecting them to unhealthy lifestyles. The symbol of the healthy body is therefore used in the greater society to control individuals, but this powerful symbol is also used by individuals as a tool of empowerment. What a healthy body "means", then, is constantly renegotiated within North American society (Crawford 1984).

Critics of poststructuralist paradigms argue that this approach is excessively relativistic and nihilistic. Further, they argue that poststructuralists' anti-absolutist assertions are absolutes themselves (Lupton 1994; Hall et al 1995; Richards 1991).

Chapter 3: Methodology

I performed the fieldwork portion of my master's programme between September 2004 and September 2005. I did not work continuously, taking a Leave of Absence during the winter semester of 2005 for example. My fieldwork consisted of interviewing and keeping a field journal.

Interviews/Conversations

My interviews were not oriented to probe into any particular facet of vitamin consumption. Because there has been little anthropological work done on vitamins and because I wanted to see how people perceived vitamins without leading them along any specific path I kept my inquiries very general and open. Nevertheless, most informants provided, directly or indirectly, a lot of information about why they take the vitamins that they do (see Chapter 4: Interviews/Conversations below).

During interviews I posed simple questions, some related to the practicalities of taking vitamins and some to conceptual notions about vitamins in order to explore peoples' habits and ideas. I was not interested in finding out whether respondents' habits and notions were 'right' or 'wrong', based on 'sound' or 'faulty' nutritional criteria. Rather, I was interested only in the meanings people associate with vitamins, and related notions like health, diet and nutrition for example, and how these meanings might explain their consumption habits. For example, people often described their diets to me as either 'good, or 'bad'. My interest in this information was not to do some supposedly objective assessment to determine if they are right or wrong but rather to see how these categorisations do, or do not promote vitamin use in their case.

I performed interviews throughout my fieldwork period although the bulk of

this work took place in the summer of 2005. I interviewed 50 people about their vitamin consumption and feelings about vitamin products. My respondents all lived in Canadian metropolitan areas and most interviews were conducted in the respondents' own dwellings so they would have their products on hand to show me if need be. Interviewees were selected based on availability and willingness to participate. I used a snowball method, the earliest interviews were conducted with family, friends, schoolmates, neighbours and co-workers, who then referred others to me. Most respondents, however, belonged in the former categories so I interviewed few total strangers. I performed one interview with each person and no follow-up work was done.

No pretence to statistical representativeness was sought. My intention was to develop insight into the broadest understanding of vitamin consumption possible while remaining within the scope of this project. To that end I did make attempts, in a very haphazard kind of way, to interview people from many 'walks of life', i.e. both men and women, people in a wide age-range, and the like. I was careful to pick people with and without formal training in anthropology, nutrition, marketing or other disciplines related to my topic, and to include some people who worked in the pharmaceutical industry itself. Most of my respondents were lay people inasmuch as none were medical doctors, industry bigwigs or regulatory agency officials; exceptions included two people with graduate degrees in nutrition and one pharmacist. I also made an effort to interview people who took no vitamins, not easy to do as these people were hard to find. My respondents had three obvious commonalities. Most were middle class, white, and anglophone. For ease of transcription and coding I chose to perform my interviews in my mother tongue, English. Some of the interviewees were French-speaking but all were more than

competent in English and were kind enough to speak to me in their second language. I am content with the degree of 'variety' found in my respondent cohort. I was not Noah seeking to fill my ark with a sampling of one of every kind, male and female. Rather I sought a group varied enough to produce a broad range of data and was successful in this regard.

I used a list of very basic questions. All the interviews ended up proceeding in a semi-structured manner and flowed like conversations rather than interviews. I asked a few questions to get the discussion rolling and then let the conversation take the direction chosen by the respondent. This gave interviewees the freedom to guide and contextualise the discussion as they saw fit, and to place emphasis on what they saw as important portions of the dialogue. Consequently, people answered my questions and broached subjects in their own way. Often many of my pre-set questions were answered naturally during the course of the conversation. When the conversation died down I posed any questions that remained unanswered. For some questions and some informants, however, I was forced to resort to leading tactics to get responses. Furthermore, I realised in retrospect that some of my questions were leading to begin with because of the way they were worded. This probably biased some of the discussion. The need to lead respondents was particularly critical for people who believed (something they let me know in various ways) that my topic was a complete bore (see discussion below). Despite my leading tactics I believe I succeeded in hiding my true feelings about pharmaceutical consumption to the extent necessary for respondents to feel comfortable to speak freely about their habits. Several respondents asked me what vitamins I consume in post-interview conversations. I take this as proof that I wasn't wearing my opinions on my sleeve. There were a few (five) respondents with whom the conversation did turn to the

subject of pharmaceutical politics, situations where my anti-industry bias would have been more obvious. This was not problematic, however, as these people seemed to raise or speak easily about political issues because they already appeared to have doubts about the industry.

Early on I became aware that questioning people about nutrition could put them on the defensive so I tried to pose questions in a non-judgmental manner. Creating a good debate might have provided impetus for people to really let loose their opinions, but I decided to forego that route for one where people would be perhaps less passionate about the discussion, but would feel free to tell me the truth knowing that I wouldn't be critical of what they said. My way of creating this judgement free atmosphere was to let the respondents know, in direct and indirect ways, that I was no more knowledgeable about vitamins than they, and, that even experts in the field of nutrition had conflicting opinions on various vitamin issues. Also, by eliciting information in a conversation-style interview rather than question-answer format I hoped to make respondents feel that we stood on even ground, both giving and taking equally from the discussion. I believe that respondents who feel less like they were being probed might be more likely to give information that is truthful and accurate.

During my fieldwork I updated my list of questions regularly. The updates were usually responses to notions that came out of previous interviews. While doing my final few transcriptions I sometimes thought of other questions I should have posed (for example 'where do you purchase your vitamins' or 'do you know what company fabricated the vitamins you buy'?). I did not follow-up on these questions, feeling as it was that I had plenty of data to compile, and that I could always make these questions part of a future study.

The interviews lasted 15 - 60 minutes and were taped. I transcribed the recordings verbatim. Next I coded the interviews and finally I reviewed the coded data looking for commonalities, disparities and unusual or surprising themes. As I did during my readings, I took constant notes in my field diary while transcribing. It was often during transcription that I became aware of interesting or novel comments made by my interviewees. These notes helped me to tweak my questionnaire and focus my research topic. I stopped at fifty interviews because of time constraints, but more importantly because my data was reaching saturation as demonstrated by the dearth of transcription comments found in my diary for the latter interviews. See Appendix A to see a copy of my questionnaire.

Fieldwork Diary

I kept track of all project-related thoughts in a fieldwork journal. For example I wrote notes about ideas I got while reading, transcribing interviews, or thoughts that came to me out of the blue while going about my daily affairs. These notes consisted of: potential directions my fieldwork could take, memories of vitamin related experiences in the past, interesting themes that came out of interviews, ideas on how to organise my thesis, and the like. My diary also served as a practical organising device as it also contained interview appointment reminders, phone numbers and a potential interviewee list.

I read and re-read my diary on a regular basis to keep this gradually accruing information fresh in my mind. This activity was often the impetus behind changes I made to my questionnaire, or my seeking out readings on certain topics.

Chapter 4: Interviews/Conversations - Talking about Vitamins

My fifty interviews provided an abundance of information on how people think about vitamins and how vitamins fit into their quotidian routines. Here is a summary of my interview data. For a list of my respondents pseudonyms and basic personal information, see Appendix B.

Remembering and Forgetting

Almost every interviewee told me that they have had problems, at some point, with forgetting to take their vitamins. Most have solved this problem by working vitamins into a routine in which they have to 'come across' their vitamins, either mentally, visually or physically. The latter strategy is the most common and, according to respondents, the most effective. Oksana, a 65-year old homemaker has a calendar on her refrigerator that is her visual-mental cue to take her Calcium and vitamin D. When she sees this calendar as she is preparing her breakfast in the morning, she is prompted to take her pill. Others keep their vitamins in plain view in the kitchen, on top of the fridge for example, so that they are visually reminded to take them. This strategy is not successful for a lot of people, however, as many told me that that they fail to 'see' the vitamins after a while. The most common strategy for remembering vitamins is to store them somewhere where one must physically come across them during some part of the daily routine, for example, to store them next to the toothbrushes, in the breakfast nook with the peanut butter and bread, next to the coffee machine, or in the cupboard where juice glasses or cereal bowls are kept.

For individuals who have managed to establish a vitamin routine and who have been taking vitamins for years, perhaps since childhood, supplementation is a given. It may not always be easy for these individuals to remember to take their

vitamins, but the notion of stopping supplementation never crosses their minds. Some respondents have gone beyond having to remember, their bodies remember for them. Vitamin taking has become a habit of both body and mind.

> *K: Ok, why do you take them?*
> *S: Why do I take them?*
> *K: Yeah....*
> *S: Ummm...cod liver oil, no idea.*
> *K: Just because you heard it was good for you?*
> *S: Because when I was little, growing up my mother used to always gave us a scoop of cod liver oil and it was horrible.* (Serena, a forty-three year old married woman, works full time)

> *S: I can't say that I see a difference if I take them or not. It's just a force of habit, most of it...*
> *K: It is interesting though because you know what, billions are spent on them every year, billions.*
> *S: Probably. Probably people take them just like me out of the force of habit.* (Samantha, a thirty-seven year old married mother of two young children who works full time)

When Serena's bodily morning routine of brushing her teeth and reaching for her basket is disrupted, her pills don't get taken.

> *S: If I miss, I miss everything, including my prescription. Like I missed everything.*
> *K: You got up late and you ran out the door and then halfway there you say 'oh *&!#*!'*
> *S: It's happened, that's right, it's happened. You know some morning where, you know, something goes on, the phone rings and 'oh my god I gotta go. Fast, fast, fast'. And I run and brush my teeth and it's like, every morning I brush my teeth, I go and I take them, because I take my synthroid.*
> *K: It's in your basket.*
> *S: That's right. They're in a basket, everybody lives together, giggle.* (Serena)

Individuals, like Serena, taking medications other than vitamins are particularly good at remembering their vitamins. Five of my respondents told me that they store their vitamins in the same place as their daily cholesterol, ulcer, malaria or thyroid medication so when they remember to take the latter, the former are taken simultaneously. These individuals told me that they rarely forget to take these more

'critical' medications, consequently vitamins are also taken on a regular basis. This strategy is not perfect however, as even prescription drugs are occasionally forgotten. Many respondents spoke of their difficulties to remember to take any type of pill. Birth control pills were mentioned in this context a few times. Victoria's situation is one exception to this scenario. Victoria (a forty year old married mother of two young children, stay at home mom) takes two separate supplements, a multivitamin and a multimineral, and the products she has chosen are supposed to be taken three times per day. However, she has been told that her thyroid medication, which she takes daily in the morning, is contraindicated with her multiminerals, specifically the multimineral inhibits her thyroid medication. Therefore Victoria avoids taking her supplements (both minerals and vitamins) in the morning, opting to take them as one big lump (6 tablets) later in the day. According to Victoria she remembers to take her supplements about three times per week. For this respondent, then, taking another medication is more of a hindrance than help in her efforts to remember to take her supplements.

When people go on health kicks, a whole constellation of physical and mental factors come together which result in increased vitamin consumption. Ten of my respondents told me that when they make a decision to eat better, start exercising more regularly and get more sleep, they also start to take their vitamins more regularly. Vitamin consumption, exercising, sleeping and eating well are all parts of an overall 'healthy' mindset and bodily practice. For many, when for whatever reason, they fall out of one of these habits, the others get dropped in quick succession.

Most people told me that they find it easier to remember to take their vitamins when the rationale behind taking the supplements is clearly defined. For example individuals taking products with a view to preventing osteoporosis (i.e. Calcium and

vitamin D) are more likely to remember their vitamins than individuals who take a multivitamin for general health reasons. Those who have already had a disease or who believe that a disease runs in the family are likely to regard their vitamin consumption as a serious affaire. For example Victoria makes extra effort to remember her vitamin C because it was recommended to her after she had an operation for skin cancer.

Family dynamics play an important role in many informants' ability to remember to take their vitamins. For example, Arthur and Amanda, parents of four young children, often remember to take their vitamins in the morning because the children remind them, or because one parent remembers and therefore gets out a pill for both self and partner when opening the jar.

> *A: And the children will remind us too when we miss their vitamins because they like taking them...*
> *K: Does anyone remind you to take them, you said your kids remind you to give them theirs, but does Amanda ever...*
> *A: Yes.*
> *K: Yeah, and do you ever remind her?*
> *A: Yeah, well basically, what happens is that when one of us remembers, we'll take it out for the other, you know 'there's your vitamin, don't forget'.* (Arthur – 38 years old, works full time)

> *K: Does anyone remind you to take them, does Arthur pull them out in the morning, the kids?*
> *A: Sometimes. The kids are good because they like the chewables and they'll fight over who's getting which one. So that kind of reminds us to get them too.* (Amanda – 37 years old, works full time)

For Simon and Samantha the situation is similar:

> *S: But the kids will remind us at the dinner table. Ophelia will say 'I didn't have my vitamin today, can I have it' and it's not because she wants vitamins but because they taste good. Cause we give her the children ones.* (Simon, 34 year old father of two young children, works full-time)

> *S: We sometimes forget and the kids will say 'oh I didn't take my vitamin this morning'.* (Samantha)

The strongest impetus for remembering to take vitamins comes through

messages from the body itself. People who feel bodily clues that vitamins are lacking rarely forget to supplement. For example, those that suffer from low energy due to anaemia remember to take their B12 or iron supplements on a very consistent basis because their exhaustion serves as a constant reminder to take their pills. Others with psoriasis remember to take their B vitamins because they feel a qualitative change, like increased itchiness, in their skin. The two people I interviewed who took a B complex for hangovers definitely remembered to take their vitamins. For some, especially women who feel their vitamin needs are directly linked to their menstrual cycles, bodily indicators may not prompt daily vitamin use, but at least consumption during various phases of their cycle. For example, Madeleine has supplemented with iron when she has felt exhausted in the days leading up to her period. And Emma, who suffers from cyclical depression, knows that when she has bouts of depression during certain times of her cycle it is because she has not been regimented enough with her B6 supplementation, and she is therefore prompted to shore up her consumption.

People have trouble remembering to buy their vitamins. Several respondents told me that they are quite good at remembering to take their vitamins but when the bottle runs out they forget to buy a new one. Some individuals who remember to take their vitamins on a very regular basis go months without taking a supplement simply because they forget to buy a new bottle.

> *D: Well it's just that we forget to buy it. You know there's a bottle of vitamin C so we go through the bottle and then it takes us a month to remember to, 'oh, buy the vitamin C'.*
> *K: Ok. So you'll take it generally, let's say, for three months or two months-*
> *D: yeah*
> *K: -at a time, and then not for months?*
> *D: And then I won't take it for a long period of time.*
> *K: But when you do have it in the house you're pretty good about remembering?*

D: I think so. (Desmond, 66 year old married father of three grown children, works full time)

The existence of companies like Amway and Avon, that sell vitamin products through door-to-door sales, must therefore increase vitamin purchases. Several respondents mentioned seeing products marketed in this way, and many of them have bought products from these companies. One of the interviewees told me that she receives her vitamins by automatic delivery ensuring that she never forgets to restock.

Generally speaking, people taking individual vitamin molecule products or specific vitamin mixes (calcium with vitamin D, B-complexes, anti-oxidant A and C) have an easier time remembering their vitamins than those taking multivitamins. This is because, as mentioned above, there appear to be more specific rationale or clear bodily reminders for taking the former. For example, respondents who take vitamin B6 for depression, vitamin B12 for anaemia, vitamin C to fight colds or vitamin E for quicker healing of wounds, heart health, or mental acuity, have little trouble remembering because their bodies cue them to take their tablets, or because they have clearly thought out reasons for consumption. Again, those most likely to take their vitamins are the ones that receive signs from the body prompting them to do so. Most respondents who take multivitamins stated that they take them for general health reasons or as insurance against potential dietary imbalances. With no clear rationale or bodily reminders to take their pills, this group finds it hardest of all to remember to supplement. Exceptions to this rule are people who take multivitamins, but who take them for one or two constituents only. For example, some respondents told me they take a multivitamin mainly for the vitamin C or iron. These individuals have an easier time to remember to take their vitamins than those taking multi-products for more general reasons. The fact that bodily signs remain potent reminders to take vitamins is

demonstrated by the ease with which respondents who feel an energy increase when they take their pills remember their tablets as compared to those who say that they feel no change.

Vitamin C products are a good case in point when discussing the differences between remembering to take vitamins or not. People take vitamin C for a variety of reasons including cold prevention or cure, cancer prevention or cure, and gum health. People are most likely to remember to take their vitamin C when they feel a cold coming on. When bodily reminders are no longer present, and rational understandings are the impetus behind consumption, people remember less, however. Still, powerful rationale like taking vitamin C as a cancer preventative, result in better compliance than less powerful reasons like supplementing to prevent colds. Those least likely to remember to take their vitamin C are those who have unclear reasons for taking it, for example those who take it simply because they've heard that vitamin C is good for you.

The prototype of a respondent who remembers to take their vitamins is someone who is reminded by bodily discomfort to take it, who has a well thought out reason in their mind to consume the product, who has managed to work their consumption into a physical or mental routine of some kind, and finally, who is a member of a larger family unit.

Family Boundaries

Notions of family boundaries and where they are drawn were evident in my interviews. Generally speaking vitamins are given and received within the nuclear family unit only and conversely one can determine where one draws the line between family and outsider by seeing who gets vitamins and who doesn't. For example, when

I arrived at Joanie's house for the interview, she had her vitamin bottles lined up on the kitchen table for me to see. Amongst them was her dog's bottle of glucosamine and chondroitin tablets. The dog is part of the family. When I arrived at Joelle's house, on the other hand, she told me that the bottle of children's vitamins that sits on her kitchen shelf actually belongs to her daughter, and that it was kept there for her **daughter** to give to her children (Joelle's grandchildren) during visits. Another respondent, Helen, told me that her mother-in-law consistently hints to her that Helen's daughter Ophelia's recurring minor illnesses are the result of mother neglecting to give daughter her vitamins on a regular basis. This respondent is peeved by what she perceives as her mother-in-law's attempts to intrude on her mothering territory. Clearly, the grandmother's vitamin advice is seen by Helen as an intrusion into her domain because this outsider is transgressing the nuclear family boundary.

> *H: Ophelia gets tonsillitis often, or she gets rundown and she runs these fevers and the question I always get from, say, my mother-in-law* [she says this whispering] *is, 'is she taking her vitamins'? And I always say 'yes, every day'. Giggle.*
> *K: Giggle, good.*
> *H: Because...I don't want her to think that my child's illness is being caused by the fact that I'm not giving her, her vitamin everyday. Like I kind of resent that, when I know that....would it boost her immune system? I'm not sure. Would it give her a little bit more than maybe what she's getting everyday, because she is a picky eater and maybe I should supplement her diet more with vitamins because of the fact that she's pickier? Yes, but, is it that she's not taking her vitamins the reason that she's getting sick? I...*
> *K: Yeah, yeah, you really question that.*
> *H: I really question that.*
> *K: And then you also resent being asked that?*
> *H: Yeah.*
> *K: Yeah, that is kind of moving in on your territory as a mom, invading your....decision making.*
> *H: A little bit.*
> *K: That's why I ask too, if other people remind, just because there is kind of a power dynamic with these sometimes. I know a lot of moms, especially for boys, saying 'are you taking your vitamins'? You know they're very suspicious that their daughters-in-law aren't cooking "proper" meals...*
> *H: Exactly.*

K: There is a whole power dynamic in...
H: yeah
K: ...absolutely, it is kind of a little...way to pinch at people and ask if they are doing things properly.
H: Properly, yeah exactly. Yeah if I'm not giving her, her vitamin then...I think that needs to be the article, you know, you should write to Dr, Schwarz and see if he would print it in the paper so I could put it up on the fridge...giggle. (Helen, 33 year old married mother of two young children, employed full-time)

Most interviewees who are mothers-to-be, mothers-trying-to-be or postpartum take folic acid and/or maternity vitamins. This is another example of drawing family boundaries. These vitamins are being taken on behalf of the child-to-be or children of breastfeeding women and therefore women's consumption of these vitamins is a way of including this child in the family unit.

The Importance of Being NC (Nutritionally Correct)

Themes of stigma and status are very strong in my interviews. For example, mothers and pregnant women are under a lot of pressure to do what is right for their children. The pressure for a mother to behave in a 'nutritionally correct' manner on behalf of her child is so strong that I had one pregnant interviewee tell me that she takes her folic acid simply to keep people off her back.

T: Yeah.....and a lot of it also is to be able to answer the question 'are you taking folic acid'? Just to be able to have that socially acceptable answer of 'yes I am'. You know instead of having to say 'no, I'm not', 'well why not'? Nah, nah, nah.
K: Oh yeah.
T: It's easier to say that I am.
K: Just to get people off your back. Ok. (Teresa, twenty-eight years old, works full time, married and pregnant with her first child)

Another said this:

S: I bought the generic, but I had friends that would not take the generic and they would only take Materna. So...
K: So why is that, eh?

> *S: Well it's because, it's just this fear about, whatever, doing the right thing for a kid.* (Sally, 34 married mother of one infant, on maternity leave from a full time job)

Pressure to do what's right regarding an unborn baby can seriously impact levels of vitamin consumption. Remember that women attempting to get pregnant are urged to take folic acid. This means that ultimately large quantities of maternity supplements are being ingested when they are actually not needed (not that I am suggesting that women should stop taking these supplements). Every mother (or mother-to-be or trying-to-be) I interviewed knew they should take folic acid, and every one of them also told me that they did, indeed, take maternity supplements. Even if some of them might have lied, as Teresa's comment suggests is possible, I am certain that pregnancy related supplementation still constitutes an important level of vitamin consumption.

That vitamin taking is not stigmatising became apparent to me during my interviews. Unlike products like birth control pills or haemorrhoid medication, vitamin tablets may, and often are left out in plain view. This fact is critical when considering the points made above about remembering/forgetting to take one's vitamins. Vitamins that can be stumbled upon physically or visually are more likely to be ingested.

The physical act of taking vitamins in public, vis-a-vis stigma, must also be considered, however. Some vitamin regimens require that vitamins be taken outside the home, sometimes in public. For example, respondents who travel and who like to take their vitamins with meals are forced to take their pills in restaurants, while others, like those who had products that were supposed to be ingested at set times of the day, are also often in public when they need to take their vitamins. Interviewees who face these situations have given me no indication that they find these situations

embarrassing. However, neither did any of them specifically state that they openly took these tablets in plain view. One interviewee, Gary, a 65 year old man who travels often on business, told me that he takes his vitamins in his room before going to the restaurant for breakfast. He did not reveal whether this was for reasons of stigma or convenience, however. While it is clear that vitamin taking is not a stigmatising activity, pill taking in public may be, as pills are nondescript entities. No one can tell that you are swallowing a vitamin rather than any other pill. This brings me to issues regarding the material nature of vitamin products.

Material Qualities of Vitamin Products

The fact that vitamins are usually found in pill format is critical to both how respondents feel about them and how easily they are able to fit vitamin taking into their daily routines.

First, vitamins are compact, solid, discrete entities that are relatively invulnerable to physical destruction, hence they are portable. Vitamin tablets' portability plays a critical role in their consumption by my respondents. Twelve interviewees spoke of travelling and taking their vitamins on trips with them. Some bring along whole bottles, while others package up small bundles of their vitamins to bring along on the road. This habit is a very important one when considering vitamin consumption because many respondents feel particularly nutritionally susceptible when travelling (see below), and are therefore more likely to take their vitamins when on the road.

Because of vitamins' material qualities, including their relatively long shelf life, people are able to keep stashes in more than one place. Some respondents keep a bottle at home and another either in their briefcase, travelling bag, or drawer at the

office (see Simon's comments below). Because vitamins are good for about two years more than one bottle can be purchased, emptied and replaced before the product expires.

Vitamin ingestion is a quick and easy process. Several respondents made it clear to me that part of what drove them to take vitamins were these qualities. Some individuals, however, have difficulty swallowing vitamins, either because they have trouble swallowing pills in general, or because vitamins are characteristically large pills and are therefore more difficult to swallow than most tablets, "*the size of these pills is incredible, you could die from choking, chuckle*" (Patrick). Of the individuals who have difficulty swallowing vitamins, approximately half told me that this discomfort affects their levels of consumption. These individuals find swallowing vitamins so unpleasant that it makes them take less. Others told me that despite the unpleasantness of the act, the discomfort of swallowing vitamins was such a minor factor that it didn't affect their volume of consumption at all.

Gary and his problems with taking brewer's yeast under some circumstances provide a good example of the importance of the material qualities of vitamin tablets. Gary often neglects to take his brewer's yeast when travelling because of the messy and time-consuming nature of its preparation.[B]

> *G: ...Brewer's yeast, sometimes I don't take it if I am away from home, it's just not convenient sometimes when I'm travelling. But I always have it with me.*
> *K: Ok, so you just end up forgetting or not being able to take it.*
> *G: I try to take it but some days it's just not convenient, eating breakfast out or something, I don't bother.* (sixty-five year old married man, father of three grown children, works full time)

Gary told me that although he sometimes skips his brewer's yeast when travelling, he

[B] Brewer's yeast is a B-vitamin-rich powder that must be combined with water before ingestion. The resultant mixture is nasty smelling and tasting, and full of chunks even after a good stirring

always takes his vitamin tablets, yet he also told me that he thinks it is more critical for him to take his brewer's yeast than his multivitamin. Clearly, vitamins, in the form of pills, are easily ingested and therefore more likely to be consumed under more circumstances than less convenient forms of supplements.

The fact that most people need water in order to take their vitamins provides one limitation on their consumption. Consumption outside the home, or sometimes even in the home may be restricted because of this fact. For example Jennifer said this:

> *J: I don't drink a lot of water. So I think, 'oh, so I have to go get a glass of water to take this pill', then I don't take it.*
> *K: Ohhhhhh, that's interesting!*
> *J: Yeah. Whereas if it's chewable, then it's like pop-pop.* (Jennifer, a forty-two year old stay-at-home mother of two small children)

This statement shows an important qualitative difference between tablets that are to be swallowed whole and chewable products. Although both are relatively easy to ingest, chewables have a small advantage over swallowables in that they can be taken without water, and without the discomfort that some people have with swallowing what are often very large pills. Chewables also have the advantage of being nicely flavoured. Many respondents told me they like taking chewable vitamins because they taste like candies, some pop a few extra once in a while for no other reason than the pleasure of eating them. Children particularly, are won over by the flavours, colours and shapes of the fruit flavoured children's varieties. They often also find the concept of taking Garfield, Arthur or Flintstones vitamins alluring. This fact has a double impact, as children who like their vitamins will often remind their parents to dole them out, consequently parents will remember to reach for their own supplements and take one too. The taste of chewables can also have a negative impact on vitamin consumption, however. Six of my respondents told me that they find the taste of

chewable vitamins disagreeable. These individuals make a point to buy swallowables rather than chewables.

Complicating the issue further is the fact that many respondents told me that they associate bad taste with good nutrition.

> *K: And...did you take them when you were a child?*
> *P: No, I mean when we were growing up it was unheard of, I think, to take any...oh, we had cod liver oil as infants, oh yeah, I remember the taste of that. So as infants we had that and that was free government...after the war* [note: Patrick is from England].
> *K: Oh really!*
> *P: There was a free supply because I guess there was poor nutrition after the war.*
> *K: Yeah, because of the rationing and everything...*
> *P: Yeah. So...I remember the taste of that to this day. Vile stuff.*
> *K: Horrible apparently, yeah.*
> *P: Oh yeah! The idea was if it tasted bad it must be good. Well it is good stuff, definitely.* (Patrick, a fifty-eight year old married father of four grown children who works full time)

So although some individuals avoid taking bad tasting products because they are so disagreeable, others will pointedly consume foul tasting supplements simply because they believe they are more nutritious. Out of fifty respondents, sixteen commented specifically about taking cod liver oil, infamous for its horrible taste. This was given to them as children. Many of these respondents express faith in the nutritional superiority of cod liver oil, although only a few still take it today as adults in capsule form. Some of those that no longer supplement with this product told me that they find vitamin taking so easy today because after taking this fish oil as a child any other product seems pleasant by comparison.

> *J: I mean when I was a kid, my mother used to feed me cod liver oil...if you've ever had cod liver oil, giggle, these things are a treat compared to that.*
> *K: Ok, so this is better.*
> *J: Oh yeahhh.*
> *K: So if I asked you about cod liver oil, what you disliked about it, you would have said the taste?*
> *J: Definitely.*

K: Ok. I've had a few people, this is a traumatic memory for, giggle, so many people.
J: Isn't that something. (Janet, a sixty year old married woman, mother of two grown children and employed full time)

I have summarised the practical effects that vitamins, as tablets, have on their takers. However, vitamins' formats also affect the way they are conceptualised by the individuals that consume them. For example, many respondents remarked on the small size of vitamin tablets – they may be large as far as tablets go, but they are small entities in the greater scheme of things. This perception leads to individuals' down-playing of their potential effects. Also, respondents feel that they are ingesting only small quantities of vitamin molecules, even when they are unclear on just what the actual definitions of 'small' and 'large' doses are. Consider the following statements:

S: Cause I just see my little bottle of vitamins as healthy and safe, and just happens to be provided by Centrum. (Sally)

G: Yeah, I'm not sure that a little pill of vitamin a day, that'll bring my iron level up to a significant level that I'll feel better, probably not. Maybe if I take iron pills, that might help, but I'm not really sure if a Centrum multivitamin, with that little bit of iron is going to actually do anything. (Garth)

S: I don't think it's a miracle thing. I just take them because I say, ok, it's got vitamins in there and it's probably...it's not bad for your health, it cannot hurt you.
K: Not at that level anyway...?
S: Exactly, it's too small anyway. The amount is too small so....I don't think it's even the percentage of what you should eat in a day. (Samantha)

K: ...you feel that they're generally safe...
G: Yeah the doses probably are fine, they're probably pretty close to what you would have in nature and I don't think many of these pile up in your body too badly. (Gary)

Clearly, despite the horrifying effects that many a 'little pill' has had on the population, cases in point being Thalidomide and Premarin, some people perceive

tablets as safe based on their small stature.

Respondents are very aware that tablets are a drug format. Many interviewees speak negatively about taking pills in general, making derogatory comments about pill-popping for example.

> *K: Um...what do you dislike about them...?*
> *V: Yeah, it's just a little strange for me taking all these...I mean it ends up being a lot of pills. It ends up being 8 pills that I take.*
> *K: Ok, so you're kind of not used to popping pills.*
> *V: That's right.*
> *K: And you don't mind swallowing them?*
> *V: No, physically it doesn't bother me. It just feels like the Valley of the Dolls. Chuckle.*
> *K: Valley of the Dolls of vitamins, eh?! Chuckle. Yeah, kind of the Sesame Street version of Valley of the Dolls. Chuckle.* (Victoria)

> *K:.....but what do you dislike about taking them, you were saying, they can be expensive, some of them?*
> *G: Yeah, well, just a small running cost. Also, nobody likes to be medicating if in fact there's no benefit.* (Gary)

> *K: Ok, um...do you like anything particularly about taking them, are they chewable, they taste good...?*
> *D: No...no, don't like or dislike, it's just a pill, I don't have a problem taking pills, I never did...let me rephrase that please, I don't like taking pills, I resist taking pills but I mean the physical action of consuming a pill doesn't bother me, I have no problem with that.* (Desmond)

> *G: ...I feel that there's way too much medication going on the planet, people are just popping pills for every little...they feel a little ache and 'oh, I've got to take something for that'. You know, people have aches and pains, it's part of life, it's not like a big deal. I'm not a hypochondriac, you know, 'oh I have a headache, I've got to go see a doctor, take some pills', no way...why drug myself up all the time.* (Garth, a 35 year old married man with no children, works full time)

One respondent made it clear to me that pill taking, of any kind, can lead to addiction. Taking tablets, even vitamins, can be potentially habit-forming.

> *K: What do you dislike about them?*
> *M: I just don't like being dependent on some sort of medication. I mean I think that we think that vitamins are, you know, maybe safer than...you know, like I wouldn't take Tylenol everyday just because it's there, if I didn't feel the symptoms for it, and so I think if it got to the point where I felt like I was exhausted all the time I would actually take the effort to*

research what I'm eating as opposed to just popping a pill into my mouth. Because I don't like the idea of being dependant on it.
K: Ok, yeah, you don't want to take pills-
M: no
K: -unless you feel that you need them.
M: Yeah. And I don't feel that there's been enough research done on vitamins to actually know. We treat them as if they're safe but they could be as dangerous for us as morphine, we don't know. So you know, it's like.....I mean, it is a drug, I know it's food complex but it's made in a drug format and so it's a whole potential of dependency too, like, if I found myself taking heroin every day I'd be concerned, and on the same level, psychologically, I think, if I find myself needing to take a vitamin everyday, that's indicating something. (Madeleine, forty-three year old stay-at-home married mother of three young children, part time student)

Helen worries that she might be engendering pill-popping habits in her children by giving them vitamins. Remember her words above. She doesn't know whether or not she should give her children vitamins, despite what her mother-in-law wants her to do. She thinks a better approach might be to work on her children's eating habits, '*we're trying to sell the red pepper over the little pill*'. It might be a better idea to give the kids pepper-popping rather than pill-popping habits. Addiction is the least of Sally's worries however:

S: I don't think they're addictive though, chuckle, cause then I'd remember to take it, chuckle.

When speaking of people who take a lot of vitamins, however, most respondents use terms like 'faddists' or 'fanatics' rather than 'addicts', indicating that they perceive a qualitative difference between people who take a lot of hard drugs and people who take a lot of vitamins.

E: But one of my favourite magazines is Prevention, are you familiar with it?
K: Oh you read Prevention? Yeah?
E: I love that magazine.
K: Ok, so you get all sorts of information from that, yeah, about what vitamins do and...
E: What the latest fad is and why it's a fad and who thinks it works and all that kind of stuff. (Emma, 50 year old married mother of two grown children, works full time)

The term fanatic, in fact, has more religious than drug connotations. (See below for more discussion about vitamin language use and metaphors).

Most respondents would rather regulate their bodies through food and exercise, not by taking pills. For some, pills represent a kind of unknown or uncertainty in that the pharmaceutical world rather than god or nature has created these tablets. People are unsure of what these tablets contain, and furthermore, generally speaking my respondents don't feel they have a lot of vitamin knowledge, so they don't like resorting to ingesting this mysterious form, a pill. Most people believe that food, not tablets, is the best source of nutrients.

> *S: I actually feel that it's healthier and better, preferable, to get my vitamins from food, so that's my wish, that I get the vitamins I need from the source, you know, get my vitamin C from oranges or green leafy vegetables, get what I need from actual food.*
> *K: ...in a perfect world you would rather get your...*
> *S: Nutrients from food.* (Sally)

Many respondents made reference to the ever-shifting nature of vitamin information that comes out of the official medical community either in popular media or medical sources. The uncertainty generated by this constantly changing information leads many respondents to stop listening. Ultimately they give up on trying to find the 'truth' and make up their own minds based on the tidbits of information they do get.

> *K: Hm-hmmm, ok, you feel they're safe.*
> *G: Until the next report in the press...and then I'll go off of them.* (Gary)

> *A: I don't really believe anything I hear because it changes the next week. But some does sink in I guess.* (Arthur)

Two respondents expressed their discomfort with taking vitamins as a form of food, stating that ingesting pills instead of eating meals smacks of some creepy futuristic scenario. Both these individuals made reference to The Jetsons. One of these

two individuals was very adamant in her comments to me about the unnatural nature of vitamin taking and how much more satisfying it was to her senses to eat meals.

> *K: So I asked what you like about them, so what you like about iron anyway, is that it is a way to get iron besides your diet, which is so difficult and gross, so what do you dislike about them, you said the smell, the taste?*
> *L: Literally the smell and the taste. I don't like getting my nutrients in pills. I don't like the idea that you would need a pill to get what is free. I paid thirty dollars for a little bottle of ninety tablets, that's premium quality. I feel like it's the Jetsons, I feel like we're going to evolve to a state where we don't have to eat meals, just take a pill. 'Hey, that's something I need'. But I love food. So part of what frustrates me is that, unlike many people, I love food. I love the taste of it, I love the smell of it, I love the look of it. I'm tactile and aesthetically driven, you know, so if I get a plate of something, food, I want to touch it and eat it and smell it, like I'm happy with that so why would I take that* [indicating the pills] *when I could just go out and eat. Like asparagus is interesting. I like asparagus. It's a very cool looking vegetable. I want to eat it. It tastes really nice. Even if it is canned asparagus and it's soggy, I still prefer it to a pill...look at me, I'm an eater. I love eating. Why would you deprive yourself?* (Linda, 28 year old unmarried woman, works and goes to school)

But, just as it bothers many respondents to take vitamins because of the aura of uncertainty and unknown that surrounds them, many are perfectly happy to take vitamin tablets because they are so knowable quantitatively. For example, many respondents told me that they check dosage levels on bottle labels, some using these lists of ingredients and dosages as comparison tools when choosing between one product and another, or when comparing tablet claims against RDA values. None of my interviewees showed any indication of questioning either the merits or accuracy of these quantitative lists. Having exact figures regarding ingredients and dosages gives some respondents a sense of security when taking vitamins, especially when vitamins are compared with actual food.

For some interviewees vitamins need not be compared and contrasted with food because they are actually conceptualised as food. Vitamins may be pills, but they

are understood to contain food molecules and are therefore a kind of food.

> *S: I guess I think of vitamins as carrots or something.* (Sally)

> *K: Ok so you consider them safer maybe than other pills?*
> *D: Right because they're supposed to be food, you know, natural food vitamins, is what I'm thinking should be in it. There shouldn't be a lot of chemicals there.* (Douglas, a thirty-nine year old married stay at home father of three young children)

> *K: And you said 'not with a meal', in the morning when you get up?.*
> *S: That's right.*
> *K: Not with a meal.*
> *S: That's my breakfast, giggle.*
> *K: Ok, giggle.* (Serena)

Although this way of conceiving vitamin pills may appear strange in some ways, from other perspectives it makes good sense. Some foods that we eat nowadays are so adulterated that they expand our notions of what food is to such an extent that vitamins can be included in that definition.

> *D: You know, you look at the ingredients, you think meat is meat, and you look at the ingredients and it's not, so who knows.* (Douglas)

Some respondents come to include vitamin tablets into categories of food by other conceptualisations. For example, Desmond considers vitamin supplementation as an act aimed at making up for dietary deficiencies, therefore vitamins are meant to be taken into the body, just as food is meant to be ingested. This is contrasted with consuming pills that are drugs, for example Tylenol, which for him is an act of adding something to the body.

> *D: Yeah I'm not a big pill...like Tylenol, if I take two a year...that sort of thing. I'm not a pill taker.*
> *K: Ok. So why have you decided to take these. You feel they are kind of different than, more safe or natural than...other...harsher, pharmaceutical-type products or...?*
> *D: No, no, no, it's just that because I believe, I guess, we need the vitamins, I suppose we're supposed to get the vitamins out of food and I know that since I don't use much orange juice or citrus fruit, I'll take the vitamin C as a replacement.*

K: Ok. Ok, so that's different than taking say Tylenol, where you are adding something to your body, this you feel you are making up for a deficit of something?
D: Yeah, you put it very well. (Desmond)

Leah said something similar:

L: I don't see it as a...I mean it is a supplement, but I don't see it like a medication. Like to me a medication is something, now you're altering something. This is uh...like I would get it in food but maybe I'm not eating all the ones that I should right? So add to it. (Leah, 39 year old married mother of one young child, works full time)

Further, people not only conceptualise vitamins as food, some conceptualise food as vitamins. For example, people speak of oranges as vitamin C, dairy products as Calcium and carrots as vitamin A.

L: I eat an orange almost every day so I feel my vitamin C is always taken care of. (Luba, 62 year old married mother of three grown children, retired)

L: There was a while when I was taking a lot of prune juice instead of doing vitamins...but prune juice is disgusting! But it has the highest count of iron out of everything. (Linda)

D: And Calcium was recommended my last visit so I've been taking that and drinking more milk. (Della, 54 year old married mother of four grown children, works full time)

Beauty

Many vitamin products are consumed as beauty regimes. For example, Justina takes flax and fish oils because she doesn't want to take Acutane for her acne, and many respondents take vitamin E to improve skin appearance. Products are also taken to improve hair texture. Antioxidant and free radical fighting vitamins are often taken to slow the ageing process. For some people this is done to increase longevity but for others the goal is to fight the aesthetic signs of ageing. Finally, many vitamin products are taken as part of dieting regimes, either as products that promote slimming themselves, or to make up for potentially insufficient nutrient intake caused by dietary

restrictions. Some of the respondents diet for health reasons, but for others the goal is to achieve a slim body.

Food, Eating and Diet

Food, eating and diet are domains where interviewees experience a lot of uncertainty. Uncertainty about food takes many forms, some related to quality, others to safety. First, many people question the actual vitamin content of food grown today. Some even reference articles they have read on soil depletion to explain their scepticism about food's actual nutrient content.

> *K: Ok. Um....why do you take them?*
> *V: Uh, because I was looking at a study that showed that the quality of food I'm eating from the supermarket is not as vitamin rich as it used to be, or if I was eating it right off the farm. It's mass produced...*
> *K: Travels long distances...*
> *V: Travels long distances and I also think that the soil has been, and this makes sense to me, this argument that over time with mass farming the soil has been depleted of some minerals. That's why I take the multimineral thinking that my zinc levels, those kind of smaller, magnesium, smaller minerals, not the mega minerals that you still can probably get good doses of, those things which you only need micro amounts, that I may not be getting them.* (Victoria)

Second, even if food is nutritious when it comes out of the soil, many people question how good it is when it finally reaches their plate. Several interviewees wondered how much time food spends in transit or on shelves before it is brought home. Respondents are particularly sceptical about the quality of winter time vegetables and fruit. These are either old, imported from far away, or frozen for most people in Canada, consequently many respondents don't believe that these foods are of good nutritional quality. Some respondents didn't even mention the nutritional quality of winter-time vegetables and fruit, rather they commented on how unappealing to the senses and pocketbook this limp and expensive produce is. For some these products are so repulsive that they avoid buying them completely.

H: I guess, especially in the winter, I guess I'm more worried about feeling tired and maybe not eating properly if I'm at work or whatever, so somehow if I'm taking the vitamin, and I think 'well, if I've missed out on something in my day, maybe the vitamin will take care of it'. You know?
K: Um, you say in the winter more, is it because you work, is it because you're doing less activities, or you eat worse, or you find the food not as appealing...what is it...?
H: I don't know, I guess because we, we're working more, feeling a little bit more run down, you know, my lunches at work aren't always the healthiest.
K: Ok. And do you have a garden here?
H: No.
K: Ok, so it's nothing to do with having garden vegetables?
H: No, but although in the summertime we do go to the market and we tend to, we stock up.
K: Ok you feel you're getting more fruits and vegetables in the summer, and they are probably better quality?
H: Absolutely. They're tastier so we buy them.
K: Ok, that's true.
H: You know what I mean.
K: Yeah.
H: Whereas if we go through Loblaws in the middle of winter and you're like 'well the cucumbers were disgusting this week so I didn't buy any' and you know 'the broccoli was five dollars a head so I didn't buy any' or, you know whatever...It's a little bit more acceptable and you know, a little bit more tasty. (Helen)

People feel most secure about produce they grow themselves or buy **in season** from local stores. (There are more comments on seasonal notions below). Others question the quality of processed food. Some individuals went so far as to say that much of what we buy today is actually something completely different than we think it is. Consider the following comment:

K: That's all my questions, is there anything you wanted to add?
L: Not really, no.
K: No big opinions on vitamins or...taking...or products or....?
L: I mean I think that probably eating the food in one way is better, but then I don't know, they put so much, like food I guess, you never know, they do so many things to it. (Laura, a sixty-three year old retired homemaker and mother of two grown children)

A: Yeah but who knows if an orange is an orange anymore. (Arthur)

Third, respondents worry about GMOs and potential contaminants or toxins, such as

pesticides and their breakdown products that are present in our food supply.

> *A:* [speaking about omega-3-6-9 oils]...*it's supposed to be really good for you and I would consider taking that if I didn't eat a lot of fish and fish is something I'm iffy on because, you know, like all of the research on how the PCBs, versus the health benefits, it's hard to...you know.*
> *K: Yeah. A lot of foods it's a toss-up. Like if you can't get organic vegetables sometimes you're wondering-*
> *A: that's it*
> *K: -how many should I eat and...how many...?*
> *A: That's it. Like everybody was asking me 'do you make your own baby food'? And I said 'no' because...honestly, I'm buying produce that's grown in Mexico, who knows what their pesticide laws are, you know. It gets here, it's probably weeks old and I'm trying to...I don't have sterilising equipment or whatever, you know a lot of people are making their own baby food. I'm like 'are you crazy'?! I think it's worse, I do think it's worse. The Heinz stuff is water and vegetables. You know, picked and processed in this, you know, sterilised plant.* (Amy, 34 year old married stay-at-home mother of two young children)

Compounding uncertainty about the food supply, are the worries people have about the quality of their diets. Most people I spoke with told me that they think that their diet is fine, generally speaking. Almost every interviewee, however, qualified this statement with comments on the ways in which they could improve their diet, or by identifying some small inadequacy in their dietary strategy. Only four respondents told me that they think their diet is good, period. Diets are perceived as imperfect based on various types of criteria. For example some people feel that they eat or don't eat at critical times of the day. Some skip breakfast, others eat their suppers very late in the evening. Other respondents told me that they think their diet lacks certain components, usually a category defined in the Canada Food Guide like meat, whole grains, dairy products or fruit/vegetables. The latter category is the most common element cited as missing, and the one that seems to cause the most anxiety in respondents. People have really taken to heart the new dietary guideline to eat five to ten fruits and vegetables per day. Several of my respondents quoted these figures exactly, for example Samantha and Veronica:

S: I say, 'well, I'm not eating all that I should eat, the five to ten fruit and vegetable'.

V: I'm eating my ten portions of vegetables and fruit everyday. (Veronica, 27 year old single woman, works full time)

Many interviewees think they eat too much 'junk' food, or believe that their diets are too concentrated in fats, carbohydrates or protein. Consider the words of Joelle, a sixty-eight year old retired homemaker and married mother of three grown children:

J: So I'm trying to exclude butter, you know, butter and ice cream and...desserts I don't eat that much of anyway, um....I think my main culprits are probably butter, was probably a big one....and eggs, I love eggs.

Others feel that their diet simply doesn't have enough variety, or isn't balanced, and for some of these individuals the problem isn't that they don't eat the 'good' things, but rather that they don't eat good things on a regular enough basis. Some respondents feel they eat a good variety of foods over the course of a week or two, but don't believe that on a daily basis they are getting what they need. Many people speak about binging habits, or cycles of eating well for periods of time interspersed with periods of poor eating.

Some respondents judge the quality of their diet on the variety of colours they eat. A diet that contains foods of many colours, especially the vibrant colours of many vegetables like greens, oranges, reds and yellows is considered a healthy and well-balanced one. Crisp foods strike people as more healthful than limp, wrinkly, tasteless ones. Consider these statements:

A: I just rely on my diet, like...I just make sure that our diet is really...you know...I've got the spinach and the sweet potatoes. Every meal has every colour. I'm really obsessive about it. Like if you look on the side of my fridge you can see that every meal is planned for the whole year. (Amy)

H: Yeah. And watching nutrition programs and stuff where you...or following the food guide, and you just know that darker vegetables tend to have more vitamins in them, that kind of thing. (Helen)

J: I do like potatoes and I like what you can do with them so I tend to make a lot of things with potatoes, and rice. But that's not the only vegetable that we have every night, we have some other, a green or yellow or...(Joelle)

K: Yeah, ok, you eat a lot of fruits and vegetables...
L: I look at the different colours, I mix the colours and all that kind of thing, so yeah. (Leah)

Generally speaking everyone I interviewed had clear notions about what is a 'good' or 'bad' diet, most criteria for the latter falling under the categories of eating too much 'bad' stuff, eating too little good stuff, or not eating on a regular schedule. Almost every interviewee told me that they take vitamins because they don't have complete confidence in their diet or in the food they are eating. Many of these people are not quite sure what they might be missing so most of them take a multivitamin to 'cover all bases'. A few of these individuals, however, supplement in specific ways because their diet deviates from the norm in specific ways, for example, many vegetarians take B12 and iron supplements.

Quantitative Notions

Apparent in the discussion above is the importance that people give to quantitative tools of various kinds, for example food guides or diagnostic tests like blood analyses. Quantitative themes are omnipresent in my interviews demonstrating the important roles they play in how people approach vitamins and vitamin consumption. For example, as discussed above, many respondents told me they supplement because they are not eating their 'five to ten' vegetables per day or because they are neglecting one of the major food groups as defined by the Canada Food Guide. Informants definitely feel their diet is amiss if they don't eat their three squares. Some are aware of daily dosage requirements of specific vitamins or minerals and read bottle labels diligently trying to optimise or maximise their

consumption of certain nutritional factors. Even my informants who had the least vitamin knowledge are aware of the existence of Recommended Daily Allowances (RDAs) and believe that failure to ingest these quantities of vitamins might lead to poor health. Without exception blood tests are taken as a gold standard of knowledge. No one I interviewed questioned the rationale or theory underlying blood testing to diagnose deficiencies. This doesn't mean that everyone who receives test results indicating that they lack certain vitamins proceeds to change their dietary or supplementation habits. But there are indications that quantitative information provides rationale for taking certain vitamin products and therefore undergird some informants' ability to maintain supplementation regimens. Consider the words of Eric, a thirty-seven year old married father of one infant child, who works full-time:

> *E: It's not that I don't believe in them, I just believe that you don't need extra unless...*
> *K: You have that kind of problem?*
> *E: Unless you have something that a doctor, or some diagnosis that says you should be taking them.*

Sources of Information

Advice coming from the official medical community is given only slightly more credibility than that from lay or alternative sources. Many respondents check in with their doctor about their vitamin consumption but few heed the advice they get without altering or at least questioning it. Some people completely ignore their doctor's advice when they deem it ill-informed or ill-suited to their lifestyle or dietary habits. Many respondents decided to start a vitamin regimen without any consultation with their doctor. Some of these checked in with their doctor later but mainly just to see if the doctor had any serious reservations about their vitamin consumption. Many respondents get information from medical doctors not through office visits, but rather

via magazine articles written by doctors, or on radio stations which have health segments hosted by medical doctors and the like.

Aside from medical doctors people seek vitamin advice from naturopaths, either in person at health food stores, or in books. Some informants get information off of the internet, advice for which the provenance is difficult to ascertain. Many respondents said they get vitamin information from various popular media, like newspapers, magazines (running, mothering, etc) and television. School, work and pharmacies are other places where respondents gain knowledge. Many respondents cited specific places where they had obtained vitamin advice, for example a Reader's Digest article that touted vitamin E as an Alzheimer's preventative. Some referenced public debates like the Linus Pauling affair. Therefore information gained from popular media sources is important in that it is abundant and also consciously inserted into peoples' vitamin knowledge.

Finally, much of what people learn about vitamins comes through conversations with family, friends or through what some called 'old wives tales', general information that seems to float around in society such as the notion that vitamin C is good for colds or that vitamin A is important for eye health. People who find themselves in similar lifestyle/health situations, like pregnant women, vegetarians or people who share genetically inherited deficiency problems will often trade information about vitamins.

The quality of the relationship between advisor and patient seems to have a bearing on the assimilation of information. For example, some interviewees told me that they sometimes heed advice from friends over that of doctors. Although the doctor is understood to be better educated in matters of health, his/her knowledge of the patient is less personal. Sometimes friends or family are understood as better

equipped to grasp the patients' situation and therefore give better advice on how to regulate health through advice on vitamins. Furthermore, advice from well-informed friends or naturopaths is sometimes sought over that of medical doctors because the former are physically more accessible. For example Sally had this to say about getting dietary advice:

K: Ok...any information you have, like any knowledge you have about vitamins or products or the molecules or anything, where do you get that from? Books, friends, doctor?
S: Um...I guess just in the media.
K: Yeah, newspapers, magazines, TV?
S: Newspaper, magazine, TV and friends, I would say, my friends who have a science education.
K: Like Esther.
S: Usually Esther. I'll usually consult her about anything, um....
K: Like if you saw something on TV, like that it was great to take megadose vitamin E, or whatever, it's good for this, and you had maybe had a little problem with this, so you'd phone Esther and say 'what do you think about megadosing with vitamin E'?
S: Yeah. For example, I heard when I was pregnant that you need be careful to not have too much iron, and then I thought 'Well, if I'm taking iron in my multivitamin then what does that mean'? So I would either consult Esther or my doctor, or both, you know. But it's easier to call Esther than get an appointment with my doctor. So my friends with science degrees, nutrition degrees, or physicians.
K: Ok, and then other little bits of information here and there from, like you said, media-
S: Magazines, yeah. Or if I heard an interview on the radio or something like that. I used to work on a show where we had a nutritionist on once a week and I produced her segment so that meant that I would discuss with her, in advance, what she was going discuss on the show. So I would, just in conversation with her, I would ask her a little bit more information.
K: And then you would hear about things just being on that show.
S: Exactly.

Orientations Towards Nutrition and Health

Many respondents spoke of self-responsibility when it comes to issues of health, diet and supplementation. Self discipline with respect to eating habits, discipline in maintaining a vitamin taking regimen, and taking responsibility for regulating ones' own body are recurring themes in many interviews. For example.

L: I feel if I could do something then I should do it. (Luba)

L: I started getting, um, like I would get ear infections and throat...to the point that there was nothing...over time it would go away...but the last time I went to a doctor, like a GP, he says, 'this is not normal for someone who doesn't smoke'.
K: Hm-hmmm.
L: Um...so I don't know if that just like made me....like I said 'I've got to start trying something' but I didn't want to, you know, I didn't want to be on the antibiotics and all this so...you know, I started reading about the vitamins, might be able to boost your immune system and that, so I started trying that. (Leah)

K: And what do you like about taking them, they make you feel better?
E: Yeah, well I feel like I'm trying to, if I'm feeling sick or you know, I'm trying to get to the bottom of always not feeling well. Yeah, I feel that's the main reason I take them, just to try and feel better, prevent feeling sick. (Elaine, 29 year old woman, unmarried, works full time)

A few respondents, however, had a somewhat more laissez-faire approach to their bodies, diet and health, or followed moral compasses that led them away from what they saw as good nutritional practice. For example consider the words of Linda above. Above all else she is driven to eat food that is aesthetically pleasing. Another respondent, Garth, has eating habits that are politically guided by notions of animal welfare. For him health is a secondary consideration when it comes to eating and supplementation.

For many respondents, then, notions of morality and eating/supplementation habits are intimately entwined. Some feel strongly that they are responsible for their own nutritional health, the result is to pay close attention to diet and vitamin consumption. For other respondents, different moral imperatives such as animal rights supercede those of ensuring that one consumes healthy food. Sometimes the obligation felt by people to eat in a socially AND nutritionally correct fashion coincide as for Jennifer:

J: I'm, you know, a stay-at-home mom, but I guess part of the reason that I made the choice to stay home was the food issue...you know, that I couldn't do a whole food diet, I couldn't do everything from scratch, you know, whole ingredients, natural ingredients, all of that, if I was working at _____.
K: Hmm-hmm, yeah, you don't have time.
J: You just don't have time, and if I did do that and if I was working then I would spend every waking hour at home getting things ready and in the freezer.
K: And that's not healthy either.
J: It's not, no it's not...so people that are working these crazy lives are juggling, working these crazy jobs and juggling these crazy lives, they are sacrificing their nutritional quality, the quality of their nutrition on a regular basis as a matter of choice, and, I don't think they realise that, and to me nutrition is, it's not nutrition for the sake of, you know, satisfying your hunger, it is a philosophy, it's a way of life, it's a FUNDAMENTAL CHOICE. It's a family value, it's all those things, everything.
K: Ok, it's not just your health that's at play here, it's basically sitting down with the family to eat, showing your kids what are good eating habits so that they can take them into their adulthood and then teach their kids, it's not just keeping you healthy, it's more than that, it's a family social thing, basically.
J: Exactly, it's a health choice, it's a health choice primarily I would say, but it's because...the choice that I've made, it's not something that can be bought out of a package, it is something that has to be prepared. That takes time.
K: It's a lifestyle.
J: It's a lifestyle.
K: Yeah, ok.
J: So, therefore our whole, the other choices we make in the life are affected because there is only so much time. So that's what I am teaching the kids is, you know, nutrition is important to their bodies, important to their health so the way to get it is this way, with whole foods. The way you don't get it is, you know, is going to McDonald's sort of thing. So that impacts the family income, impacts that I'm home with them, impacts other values. So, to me it was such an important choice, our life would be completely different if I hadn't made that choice about nutrition.
K: Ok, so if you weren't interested in this way of nutrition, you would have a completely different life, so this is the core.
J: Absolutely. That's why I say that it's a fundamental family value, fundamental. And the other thing which I find with nutrition, there are two other things, two other huge points I find with nutrition. Go grocery shopping with a child. You have a lot of teaching opportunities, you can teach them about the world, this red pepper came from Israel, this yellow pepper, this one came from Holland, and then there's, think about the things you can talk about with Israel and Holland, you know.
K: Ok, so geographical...or political, social issues, ok...I know this country has very bad labour conditions, we don't buy it from there because it is hard for people to work there...

J: Right, exactly.
K: This one it comes from the farm next door, you know people can live off their salary in Canada let's say...or you know it doesn't have to go on a big bus for five days, and then it's all wilted.
J: That's right. Strawberries in season, locally, strawberries from California that are old, you know that, social issues. Pesticides, my kids know about pesticides. They know organic versus non-organic which ones cost more, you know, you make a decision if you can't afford them all, well let's go with the root vegetables because, you know that the pesticides used in root vegetables are more dangerous, blah blah blah blah. And they learn so much from that, there's so much more than a grocery store.
K: Ok, yeah.
J: Now the other huge teaching opportunity, and just important life lesson, is the sociology that comes with these choices, um, and we choose not to go to McDonald's, that is a FUNDAMENTAL CHOICE. And the reason why is deforestation, nutritional components, you know, the Super-size It, you know that documentary Super-size It, Fast Food Nation type of issues...To eat at McDonald's, is you know, they're evil. And, you know, they know that, they know that they have never been to McDonald's and they know that sometime in their life they will, the choice will be theirs and theirs alone as to whether they go or don't go. We've had so many discussions about it and he says when the time comes he will, first of all, discuss it with us, and, second of all, he will understand that you know, children have been, um, their land has been taken away to make this food. Their lifestyle's been taken away, you know, the things that come with eating fast food.
K: Yeah, and it's not just health, it is health, but it's also, yeah...
J: Absolutely...
K: ...the environment.
J: And the environment, exactly. So, um...so that's huge for me. That's important to teach cause that's the world we live in.

Finally, for others, although they feel that one is responsible for ones' own health, they take a more hedonistic approach to diet, maintaining that one has the right to eat food that is tasty as well as healthy. Some of these respondents believe that tasty food might also be good for the body because it brings pleasure to the eater, rather than feeding the body as a nutritional machine.

Time

Respondents' vitamin consumption is linked in various ways with temporal

notions. For example, many people take their vitamins in the morning, most with breakfast. Some respondents specifically avoid taking vitamins with meals, others are very careful to take their supplements with meals, while still others have no preference either way. For some these habits are based on information they have acquired asserting that vitamin are better absorbed when taken with meals, or the opposite, that some vitamins are eliminated when taken in conjunction with other nutrients. For others, vitamin taking at meal time is simply a matter of routine, a habit that helps them to remember to take their pill. One respondent, Patrick, told me that he takes his vitamin at night because first, he finds his mornings too hectic and he therefore can never remember to take his pill, and second, because he feels that by taking his vitamins at night he is setting up his body for the next day:

> *P: I figure taking it in the evening I'm setting myself up for the next day, I'm going to have a good day the next day, chuckle. Give myself an edge, you know, all the help I can get. I figure the next day, well at least I've got that done.*

Most respondents feel that vitamins should be consumed on a daily basis. Not all of them actually do this, but most did express their volume of consumption as a function of daily consumption, for example:

> *K: Uh, so, do you take vitamins?*
> *J: Um...I take it once in a while when I think about it, but nothing progressive, so I really can't say that I take them full time. I'm might think about it in the winter time.*
> *K: Ok so more in the winter than the summer.*
> *J: More in the winter than the summer. But even then it's not consistent.*
> *K: Ok, not consistent meaning...?*
> *J: Not every day, sometimes not even a couple of times a week, it's you know, it's just sporadic.* (Joelle)

> *D: I'm willing to have a couple of times per week but not every day like they claim on the box, 'take once a day'.* (Dexter, 41 year old married father of one young child, stay-at-home dad)

Despite this tendency to envision vitamin consumption as a daily requirement, most respondents told me that their consumption falls short of this perfect scenario in

various ways, sometimes because of forgetfulness, other times the deviations are purposeful. For example, surprisingly (to me anyway) some respondents failed to take their vitamins regularly on weekends. Sometimes this was, again, due to disruptions in routine, but some people expressed this tendency as an act in keeping with notion that weekends are time off of work. For these individuals vitamin consumption is a chore, and weekends are leisure time.

> *K: Do you have trouble keeping up your schedule between weekdays and weekends. Is it easier to remember to take these during the week as versus the weekend* [she shakes her head], *no, because you eat breakfast an-*
> *E: I just don't do it on the weekend.*
> *K: Oh ok. So this is just a weekday schedule.*
> *E: Probably yeah, now that you mention it, do I do it on the weekend, I don't know. I probably take it at night when I brush my teeth...yeah.*
> *K: Your B6 anyway...*
> *E: Yeah, yeah.*
> *K: Ok so this tends to be a weekday schedule.*
> *E: I don't have cereal in the morning on the weekends so I don't have my...yeah, so you see it's patterns that we develop yeah...* (Emma)

> *K: Would you say there is a difference between your weekday and weekend consumption?*
> *L: Yeah I would, definitely, Like I never, ever, ever took them on the weekend whereas weekdays when I was in school and I had a routine, I would take some.*
> *K: Ok, some people it's the opposite, weekdays it's too hectic and they forget.*
> *L: Yeah, when I have a really strict routine, but on the weekends I refuse to do anything, not even laundry, I do nothing.*
> *K: And you get up later.*
> *L: I get up later and I do what I want, and what I want won't be anything to do with the week, laugh. I make sure to separate the two.* (Linda)

> *S: Say on the weekend.....I don't really feel like taking these big pills, I might not take those.* (Serena)

Besides differences in weekday versus weekend consumption there is a very strong theme of seasonality apparent in my interviews. Eighteen of my fifty interviewees mentioned that their consumption habits change between summer and winter. Seasonal changes in consumption is something that I did not anticipate before

beginning the interview process, but when three of my first ten respondents mentioned that their consumption was seasonal I clued in quickly to this tendency. Respondents take more vitamins in winter than summer. Reasons for this discrepancy include: lack of exposure to the sun; interruptions in routine during the summer hence people forget to take their vitamins; feeling more susceptible to minor illnesses like colds and flu during the winter – this is a reason given by many teachers; perceptions that diet is lacking in the winter either because the food is of questionable quality or because the respondent feels less inclined to eat what they think are nutritious foods (like fruits and vegetables); and finally many of my interviewees, especially the teachers, said that they work much less during the summer and are therefore less stressed and consequently more robust, health-wise.

Generally speaking, vitamins are popular because they fit well into hurried lifestyles. This is because: time-poor people often feel they haven't the time to cook or eat properly hence they feel the need to supplement; because those who are stressed and rushed feel their bodies are vulnerable to vitamin depletion; and because vitamin taking is a quick and easy process (discussed above).

Vulnerability and Risk

The theme of vulnerability is a common one in the interviews and not just with regard to seasonality as described in the previous paragraph. Certain segments of the population see themselves, or are seen by others as vulnerable. Women – particularly pregnant women, older people, children, people who work with children, people with restrictions on their diet - for example vegetarians, are viewed as vulnerable groups.

L: This I got because I'm low in iron, like most women. (Linda)

D: Yeah. I guess in the back of my head, too, I'm thinking maybe that taking vitamins is more something you need to look into as you get older,

or dietary stuff gets harder to maintain, maybe. Or that seems to be my experience, listening to people who are a little further along in life than we are, that they, 'oh you know, I need to get some more calcium going for bones' or what have you.
K: Or they stop eating red meat because they lose their teeth-
D: That kind of thing, exactly, exactly. So maybe in the back of my head too I'm thinking that it's something that, you know, the older generation needs and really where we are, not necessary, so...
K: Somebody who is more vulnerable, nutritionally-speaking?
D: Yeah.
K: For whatever reason.
D: Yeah exactly. (Douglas)

K: And you didn't really take vitamins all your life until these?
G: Correct. Until I became a senior. (Gary)

K: Why did you start those?
L: The multivitamins because when I had a check-up and the doctor mentioned, he asked me about what I took and he said a multivitamin would be good to take.
K: And you didn't prompt him, he brought it up?
L: He just, after I said I was taking B12 and vitamin E and that was all I took, he thought I should take a multivitamin, and I was 60 at the time.
K: Ok, ok, so he thought it was an age thing or whatever, maybe be careful?
L: He thought it wouldn't do any harm and might make sure that you're getting everything. (Luba)

K: Why do you take em?
G: Uhh...nutrition because I don't eat properly, so I'm probably lacking the vitamins that I do need. Especially since we're vegetarian. (Garth)

As discussed above, there are also times when people feel more at risk, for example particular seasons, certain days of the week and periods when peoples' workloads are heavy or schedules hectic.

K: Do you take vitamins?
P: I have taken some but I'm not taking any right now. But over the winter I sometimes do. Multivitamins.
K: Ok, a multivitamin, ok. And you generally take them every winter but not in the summers?
P: Yes...I feel that in the summer I shouldn't need it. Because I'm eating fresh fruit and vegetables and so I figure in my diet I should be getting those things. But in the winter I figure that sometimes the fresh fruit is not so fresh, the vegetables and so on, and so...I guess I feel that I want to give myself all the help I can get in terms of the immune system and so on.
K: And in the summer you figure you're getting that one way or the other?
P: Yeah.

K: But the winter your food might be...
P: You're feeling at a lower ebb in the winter anyway, I think, so nutritionally you feel you want to give yourself as much help...although I know you don't want to overdo...vitamins are needed in small amounts. (Patrick)

D: I took vitamin B, what are they called, Stresstabs, at one point, they're really good for giving more energy, whatever, when my kids were younger and I was tired, but briefly...
K: Cause of stress. Yeah.
D: It was fatigue more than anything.
K: You probably just needed sleep?
D: Oh yeah, well I had four kids and, you know, I was running around and working. You know, it's normal.
K: And it is stressful because your life is packed full. When you have kids especially.
D: Very, very full, that's why I took those for a while. But I couldn't see really much difference. (Della)

Certain activities are also linked to increased bodily vulnerability, for example when people travel or when they adopt an excessively demanding exercise routine.

S: I use them for travelling also. I always travel with a bottle of vitamins. And I always have vitamins in my bag at work.
K: Oh really, ok!
S: Yeah.
K: So if you feel like that scratch in your throat....
S: Right, like I say I take them in the morning but sometimes if I feel something coming on even at work, I have them in my bag, I pop em. I have my Advils and my vitamin C in my bag and...
K: Ok and then you travel...
S: I do quite a bit of travelling and I always have vitamins with me, well it's in my work bag so...
K: Especially cause travelling, that's the time, when you're talking about stress at work, that's usually-
S: Yeah, you get on a plane and you get off and you hardly eat and that night you kind of feel garbage, and the next morning you feel crappy. You get up and you're like 'oh I better grab a vitamin'. I'm pushing my system a little bit. I can tell, I've got a very sensitive...I'm very in tune to how I feel and I can tell when my system is down a little bit or if I'm tired. (Simon)

A: When I go away or something, when I travel, when I go to a hockey camp or something, going down to Florida or whatever, and we're travelling, I'll take the vitamins and I'll take the echinacea with me.
K: Ok, cause it's a time you can't afford to be sick.
A: Yeah, and you're flying and stuff.
K: Oh, ok, because you know you're going to be under stress?

A: Yeah, you might get run down, I mean travelling is very tiring, obviously.
K: Especially for a hockey camp, you're travelling and then on top of that you're doing something physical.
A: Yeah, and again, you're probably not eating as well because you're somewhere different, maybe staying in hotels...
K: Eating at restaurants.
A: Yeah. Or sometimes not, laugh... (Arthur)

K: You don't take anything else, generally speaking?
E: No. I have in the past, but not right now....in the past I have when I was exercising very heavily, taken vitamin C...(Esther, thirty-three year old married, pregnant with first child, on maternity leave from a full time job)

J: And vitamin C is good when you work out a lot. (Justina, 25 year old single woman, works full time)

Thus various people, at certain times, living specific lifestyles, are seen as, or feel themselves at risk. Risk is also sometimes seen as applying to the individual in more than one way. For example people living busy, stressful lives might feel themselves at risk because they cannot find the time to eat properly, and because they believe that stress leeches B vitamins out of the body. Pregnant women are doubly at risk nutritionally-speaking, because they are eating for two at a time when their diet may be more restricted than normal. Many perceive women's bodies as drained by busy lives and by loss of menstrual blood.

D: Well, women try to please everybody and so women just burn themselves out totally, running, running. My daughter works for an insurance company and she works with people who are on disability. And she was so shocked when she got into this business. Because she said all her clients are women in their forties who have just crashed and burned from going so hard, so long. So it's like a cautionary tale to her already, she sees that just one day they have this meltdown. And that's it, and then they can't work. They're on disability for a year. And they go back, but they have to go back slowly and it takes a big chunk of their life, you know. They just can't carry the load, you know. (Della)

M: At certain times, particularly in the ensuing years after having children, I would take them...a multivitamin on a very irregular basis around the time when my period was going to start, because I would just get really like...
K: Lethargic?

M: Lethargic and iron deficient and tired and...so I didn't take it all the time but I would just take it right around that time to help boost a little bit.
K: Regularly following your period?
M: No, just before, just before, like I could feel the exhaustion coming on.
K: Ok so you were taking it specifically for that. Did you feel like it helped you?
M: Yes.
K: Ok, and you felt a difference with them.
M: Yeah.
K: And iron especially, if you're low on iron-
M: Well I think it was the iron cause I would just get like SO exhausted I couldn't...I'd sleep ten hours and couldn't open my eyes. So I think it was just an iron...and probably had to do with, with especially this one's [indicating her youngest daughter] *birth, chuckle.*
K: Ok so you needed, you felt like it was iron mostly.
M: Yeah, yeah. That's what I felt, I mean I had no doctor tell me that, but that's what I felt, and I knew that taking a multivitamin helped so...
K: ...you did feel it made a difference?
M: Yeah.
K: And...why did you stop then? You just fell out of the habit or...?
M: Um, I kind of fell out of the habit and I also find that I don't...fall into that exhaustion now, so maybe, I don't know how much of it was like just because of my period or being so close to having given birth or because I had three children under the age of 4. That's...you know, like now life is different a little bit too so...
K: Ok, so it might have been things like lack of sleep and other things too.
M: Yeah, might have been other things, and just like at that point it would just all build up.
K: And you might not have had a chance to eat as well if you were that...over-tired too?
M: Exactly.
K: Ok so there were probably a few things that came together to make your health a little more precarious?
M: Yeah, yeah.
K: Ok, ok, and so you didn't really have trouble remembering to take them I would guess?
M: No because I would just feel like, when I would feel that exhaustion I would just start taking them, and usually, it wasn't even at first that I realised it was around my period, it was usually I would start taking them and then within like a day or two my period would start so...
K: You started to connect the two?
M: So I started to connect it, yeah. (Madeleine)

Risk, then, is a central theme in my interviews. Respondents run a nutritional obstacle course every day, dodging dietary dangers and taking their chances with various diet, supplementation and lifestyle choices. People pose so many questions to

themselves. What does my body need in terms of nutrients (because I am a man, a woman, an athlete, pregnant, etc)? Am I getting what I need out of what I eat? It is impossible to find clear answers to these questions. The quality of food is precarious, and a 'good' diet is difficult to define - even harder to follow, especially when daily life is so hectic. Furthermore, every body is different. Consider the words of Eric:

> *E: And some people need different vitamins than other people. So when you have a multivitamin, who knows if it is good for you. Is it good for the seventy year old woman? Or is it good for the thirty year old man, I have no idea. So the fact that the multinational or the pharmaceutical company creates these multivitamins that are supposed to be good for everybody is not a...*
> *K: Yeah, it's only good, officially anyway, or made for the average person, which never exists.*
> *E: Exactly.* (Eric)

People suspect that unwanted items are in their food, but they cannot be sure. Pesticides and GMOs worry people but they are impossible to detect with the naked eye.

> *A: If a tomato comes off your plant you know. That's as fresh as you're ever going to get. You know cucumbers and... but you can do that two months of the year. Other than that you're relying on the local grower, what's he spraying on his things, you know? I don't think you can stop it. The things you are eating that you think are organic aren't really even organic!*
> *K: Well sometimes, but even then whatever is being sprayed on the field next door...*
> *A: Yeah! Even when it's organic there's stuff in the rain, you know, we're living outside a metropolis. For more than 100 kilometres there's pollution in the rain. But people feel better you know.* (Arthur)

> *V: Like when I give the kids fruit, I'm thinking, 'how much pesticide is on that fruit'?* (Victoria)

Respondents are unsure of what vitamin products to take, in what quantities. They wonder if there are dangers associated with taking too much or too little. Also they do not know what brands are reliable.

> *J: But, yeah, it could be detrimental, depending on the quantity, I don't think with the quantity that you take...I don't know...but I don't see how it*

> *could affect a lot your organs and stuff like that. But there's no study proving that, or I don't know it.* (Jordan, 33 year old married man, works full time)

> *A: I stay away from the cheapies, the no name brands...*
> *K: Just in case they're not as good quality, kind of thing?*
> *A: I guess so, yeah. I don't know if there's a difference or not. I haven't taken the time to sort of research it all that much in depth, to be honest with you. I don't know if there are any articles that sort of guide you on which vitamins are better and which ones are worse.* (Allan, 43 year old married father of two young children, works full time)

Despite the fact that some respondents find tablets safe in general because of their small size as mentioned above, many people feel that pill taking entails a certain degree of risk. So people also ask themselves what risks are involved when taking these pills.

> *S: A pharmaceutical company has concocted this and who knows what else is in it.* (Sally)

Many vitamin products are packaged in childproof capped containers. Although no respondent mentioned this fact specifically, some must notice this when they open the bottles influencing their notions regarding vitamin safety. A few respondents told me that they keep their vitamins out of their children's reach.

Running alongside this vein of risk and the worry it entails, however, is a certain degree of laissez-faire. Most interviewees expressed to me their frustration with having too many questions and too few answers regarding vitamin consumption and related issues, but, most reason out their answers based on the information they get, choose which supplements to take accordingly, and then let the issue go. Most feel that a perfect answer to their nutritional questions does not exist, or at least that it is not within their grasp.

Most interviewees feel that vitamin taking is the best overall solution when they have reasoned out the gauntlet of questions mentioned above. At the end of the

day, most people feel that vitamins are safe, especially when compared to the alternatives; pesticidal food or harsh chemical drugs.

> *D: And to be honest, if I had the choice of taking something synthetic like something made by Merick or Merck or Frosst, I would much rather take something vitamin. I would much rather take a vitamin.* (Dana, 38 year old woman, divorced/single, works full time)

> *E: Like I've tried every vitamin in the world to prevent having to take meds meds, you know.* (Elaine)

Very few people mentioned suffering side effects related to vitamin taking and very few vitamin products require prescriptions. This probably helps minimise individual fears about safety.

Vitamin-taking also represents an appropriate answer for those looking for quantitative answers to quantitative questions. While the vitamin content of foods is a mystery, vitamin tablets are believed to contain exactly such-and-such quantities of this and that vitamin.

Many respondents do not weigh out the potential good and bad of taking vitamins. They feel that taking vitamins is doing something good for the body, period.

> *S: I would just have this comfort that I was doing something positive for my health.* (Sally)

> *V: I just felt that if at least I took vitamins in the morning, I mean maybe I'm wrong, I don't know a lot about it, but, I figure, you know, take a couple of those One-A-Day type things, like I used to take Centrum, I figure at least I'm covered, I'm getting something healthy in my body.* (Vivian, late thirties, married, unemployed)

Multivitamins are particularly helpful in relieving nutritional worries. Many are designed for specific demographic groups thus they answer many individuals' questions about the needs of various types of bodies (women's, men's, children's, etc). They are supposedly complete products, in that they claim to contain one hundred percent of the RDA values.

Vitamins of all kinds have good preservation qualities so respondents don't feel

they need to worry about tablet dosages diminishing over time. They believe that product claims written on bottles agree perfectly with what tablets contain. In fact, many interviewees are unaware that vitamin products expire. Vitamins look the same over the passing of months or years, so when one might worry about a wizened looking apple, one has less reason to question the quality of a pill that looks brand new.

> *K: So you eventually threw out the rest?*
> *T: No, I mean it's not like they can go bad...can they?*
> *K: They have expiry dates, some of the individual vitamins, I can't remember which ones, degrade very quickly.*
> *T: When I buy milk I check the dates but I don't do that when I buy pills.*
> (Teresa)

Despite the fact that vitamin taking creates extra uncertainty and worry for my respondents, they relieve more anxiety than they cause, they are the answer to more questions than they pose. The greatest tyranny of vitamin taking appears to lie in how they weigh on peoples' minds because they are so hard to remember. Most people, however, work them into a routine thus solving the problem of remembering, while those that never manage to take them regularly only torture themselves to a point over forgetfulness. Most respondents view them truly as 'supplements' in that they believe that when they forget to take their vitamins they can survive on their food consumption alone. Despite the notion that vitamins are to be taken 'once-a-day' people are content to take them 'once-in-awhile'.

Language Use/Rhetoric

Interviewees used particular words when they talk about vitamins. They quote brand names, comment on the vocabulary of vitamins, and speak metaphorically. Studying the way interviewees talk about vitamins gives indications about how people fit vitamins and vitamin taking into conceptual categories. It also gives clues about

where people are getting their information from.

Many interviewees quote brand names, use brand names as a product description and quote directly from advertisements. For example many of the respondents call multivitamins either 'One-A-Day' or 'Centrum' even when they are not referring to these actual products.

> *K: You specifically have bought a name brand on purpose?*
> *S: Well I, just to me that was THE multivitamin. I can't even tell you of another name brand of multivitamin.*
> *K: Ok, it's like Kleenexes are tissues.*
> *S: Exactly, so I would actually say, if someone asked what I took, I would say Centrum.*
> *K: Yeah a lot of people describe them as that 'I take my Centrum'. As if a Centrum is THE multivitamin.*
> *S: The multivitamin, so that's um-*
> *K: Not for vitamin C, they never say a brand.*
> *S: No, no, no, it's a multivitamin. So it's that, I guess it's that marketing hammered home that's so deep in the brain because...*
> *K: You have done exactly what they want you to do.*
> *S: Exactly*
> *K: Which is to associate their name with...that name is that product.*
> *S: Yes, exactly. Isn't that bad, terrible!* (Sally)

> *V: I figure, you know, take a couple of those One-A-Day type things, like I used to take Centrum...* (Vivian)

A few interviewees insist on using only name brands. These people told me that this is because they believe in name brands in general, because they have been won over by these products' advertisements or because they perceive differences between these and equivalent products.

> *J: So I just take vitamin C. It just helps with your gum health and stuff, and so does Centrum, like if I take a different multivitamin, like my mouth goes to hell. Like....there's something in this that helps keep my mouth healthy.* (Justina)

> *K: What do you dislike about them, and that can be anything?*
> *A: No. I don't have any problems with them at all.*
> *K: No, ok, no ethical...no health...they don't make you nauseous?*
> *A: They don't make me nauseous...um...there's I guess a little bit of an inconsistency in the cost and generally I go for the ones that are a little*

more expensive, if not middle of the road, type of thing. I stay away from the cheapies, the no name brands. (Allan)

V: But I feel I've chosen a pretty safe product, relatively safe. And that I've researched at least, I'm not just grabbing the Life brand, not that there's anything wrong with the Life brand, but it doesn't have the backing.... (Victoria)

D: And I never buy them at the grocery store, always at the health food store, I always get, if I can, organic, if not, yeah.
K: Ok so you try to get some....
D: Like high end. The high end. Like certain brands are better than others, so I always try to get the better... (Dana)

Not everyone puts more faith in name brands, however, as several respondents told me they don't care what brand they use.

At least one respondent quoted directly from a commercial:

J: And if I wasn't taking Materna, it's only cause I'm post-partum, you take it when you are pregnant and post-partum, and if I wasn't, I'd take Centrum.
K: Ok, normally you take Centrum, ok.
J: That's from A to Z. (Joanie, 34 year old married mother of three small children, on leave from a full time job)

When respondents use words like 'balance' I suspect that some have picked up these terms from advertisements. This is only a supposition. I think that commercials do have a big impact on people, however, because thirty-four interviewees told me that they get information from commercials. For example advertisements let them know that a product exists or what certain products are recommended for. And according to Teresa vitamin advertising is so ubiquitous that it is hard to avoid.

T: You're sort of bombarded with it [advice about folic acid] *with television ads. There's a lot of television ads, so when you're just watching TV you're not looking to get information about vitamins, it's just there from commercials.*

A few respondents are quite adamant in their denial of responding to commercial messages. Consider the words of Esther:

K: And TV, that's another one, in terms of sources?
E: Like commercials and stuff for vitamins influencing me?

K: Yeah.
E: No. If anything I would say it probably turns me off more because I don't really trust what's going on. To me as soon as they're pushing something I would second guess it, if it was coming from the TV, I think. And to me it's so exaggerated, like 'I couldn't get out of bed and now I can do Salsa dancing because I took Centrum' or whatever.
K: Ok, giggle, you tend to be sceptical about what you see. (Esther)

However, every one of these individuals, upon further questioning on the issue, told me that if faced with a nutrition problem they would consider consulting their doctor about a vitamin product they saw advertised, and, also told me that they are aware that many products are on the market because they see them in adverts. These facts are probably more important than they first appear given that so many individuals told me they have trouble remembering to BUY their vitamins. Commercials may, if nothing else, serve as reminders and therefore triggers for purchasing supplements. Also, apparently some respondents believe that commercials go a long way to guilt-trip people (especially mothers) into buying vitamins.

S: And when I was pregnant I took Materna....but one girl at the pharmacy convinced me to buy...I think it's Life, the generic, whatever the Jean Coutu's version of it was...and I didn't know why she was pushing it. It must be because they get some sort of...there's some benefit to them to sell more of their own I think, at the Jean Coutu. But when she told me the price difference I bought the generic, but I had friends that would not take the generic and they would only take Materna. So...
K: So why is that, eh?
S: Well it's because, it's just this fear about, whatever, doing the right thing for a kid. But what I did, I can tell you this is another little vitamin bit of information, I took the 2 bottles of Materna and the generic and I checked them, and they were identical.
K: In terms of-
S: Quantities, ingredients and quantity, levels of the different ingredients, and then I was taking the generic.
K: Ok so you checked.
S: I checked, yeah. And I consulted, actually, the books....um....and prenatal class and all that to find out what amount of folic acid they were recommending...yeah...there is a lot of pressure when you're pregnant to take that, even before you're pregnant actually. I don't know if this is important to your study but I was actually taking the Materna from before I was pregnant.
K: Yeah, when you were thinking about getting pregnant.
S: Yeah.

K: Cause your folic acid, right at conception, you're supposed to have a certain level or whatever, ok. So there's a lot of pressure on...
S: Yeah.
K: I think probably, in terms of how important it is, it probably is too, but at the same time I know, I'm sure pharmaceutical companies completely...I mean you notice how many ads on TV have to do with 'are you taking care of your child properly'? This is the easiest way to sell people things. 'Are you sure...'?
S: Scaring people.
K: Yeah it is.
S: The most burning ad ever, I think, was the Goodyear Tires, when they used to have the baby crawling on the tire. Saying 'there's a lot riding on your tires'. (Sally)

Specific words were used by many interviewees and are worth describing. Balance is a common one. People speak often about seeking lifestyle and nutritional balance. Another golden grail of nutrition and lifestyle is moderation. Most respondents see moderation, as opposed to excess or denial, as the proper path in both life and nutrition.

K: Ok, ok, so you rather go towards food?
J: Yeah, yeah
K: Cause you've heard that vitamins can be potentially dangerous especially if you take a lot?
J: If you take a lot of a particular one, it could be. I think multivitamins are probably safe but...
K: Even them I guess if you took tons?
J: Yeah if I took tons, yeah, they could be dangerous, moderation is the key. (Joelle)

Sally made these interesting comments about the words 'vitamin' and 'supplement'.

S: That's what I was thinking when I was buying these vitamins, it's good, vitamins, great, you know.
K: It is a by default way that people approach them to begin with, a lot.
S: Because vitamin, the word 'vitamin', there's nothing wrong with vitamins, right. So when you're talking about the difference between vitamins in your food and vitamins in a bottle, right, but we're calling them vitamins, we're not calling them...maybe if there was a different word for them, if you called them supplements, then I probably would not want to take them. Because when I read about health things, and I like to work out a lot, I'm not interested in taking SUPPLEMENTS. For example, I wouldn't take those protein supplements that people take, and they mix

in this protein powder with their yoghurt and everything. I just find that very unnatural and I just won't touch that.
K: Funny, but you'll take vitamins.
S: But I'll take vitamins... Vitamins like Centrum, I see it as this safe, sort of it's just vitamins. I wasn't making the distinction between 'vitamin' and 'supplement' until now. (Sally)

Clearly the use of either one or the other of these words can have strong impressions on how people perceive vitamin supplements.

A few respondents also raised the question of vitamin nomenclature. Why are vitamin molecules named after letters of the alphabet, they wondered, and why are there no vitamins F, G, H, etc. I believe these are more important questions than they first appear. Having simple names like A, B and C, may help people keep track of which vitamin is which when they are reading about these compounds, discussing them with others, or purchasing products. According to Fiona (see below) who did pioneering vitamin research, researchers dropped the letter names as soon as they knew the compounds' structures. The chemists always used the terms riboflavin for vitamin B2 and niacin for B3 for example. All of my respondents used the letter names. They seemed to be more comfortable using these terms. Regarding the missing letters of the alphabet, it is possible that naming vitamins by letters makes people think of them as sets similar to other sets like playing cards; either complete or incomplete. People who conceptualise vitamins in this way may be easily persuaded that they don't want to be missing an element of the set. What good is the alphabet without the letter 'm' for example? How much fun is it to play Hearts without the Queen of Spades? Because they have been named the way they have, perhaps people feel impelled to ingest full complements of vitamins. My respondents' comments demonstrated that they do worry about missing individual vitamins and many who take multivitamins said they do so in order to ensure they are getting a dose of everything.

The interviews were loaded with metaphorical language and themes. Recovering from illness or maintaining healthy nutrition habits are often expressed in metaphors of war. For example many people say that they '*fight colds*'. Other metaphors used included: *Juggling or balancing (diet or lifestyle)*, '*people are working these crazy jobs and juggling these crazy lives*' (Jennifer), '*it's not really balanced on the plate, not really*' (Samantha); sports or gaming metaphors, '*I'll cover all my bases*' (Lola), '*Vegetables was my weak suit*' (Linda). Religious and magical metaphors abounded. They can be seen in the following phrases for example,

> *Those LB ones are miracle pills, they really, really, are.* (Elaine)
>
> *My guru is Dr. Jo Schwartz.* (the radio doctor from whom she gets vitamin advice) (Oksana)
>
> *And echinacea, I take it religiously when I have a cold.* (Lola, 33 year old married woman, works and goes to school)

Finally many respondents personify the body, for example telling me that their bodies speak to them and that they in turn listen to their bodies. Consider the words of Madeleine:

> *M: I don't know, but I think a lot of, for me, my food cravings tell me what I'm missing.*
> *K: Ok so you listen to your body?*
> *M: Like I said I'm not a big meat eater but suddenly I'll just be craving like a big steak or something. I'm not nearly a vegetarian by any means, but I'm not a person who makes meat the centre of my plate and puts a couple things around it...although being married to my husband now I've become more that way.*
> *K: Laugh.*
> *M: But you know, like I'll find myself craving things that I don't necessarily eat on a regular basis and I think it must be because somehow I have a connection with...*
> *K: Your body's telling you.*
> *M: My body's telling me I'm missing something that I...it's also saying you can get from that source.*
> *K: Ok. So you listen to your body.*
> *M: I listen to my body, I don't always do what it says but, haha...*
> (Madeleine)

Assumptions that vitamins are safe are revealed in many interviews by the **way** people speak about these products. Many an interview started with the respondent commenting on the boring nature of my topic. Consider the words of Allan for example

> *A: Vitamins are boring, laugh, what am I going to tell you, laugh!!! They're vitamins, you know'.*

Another person asked me if I was burdened with such a dull thesis topic because it was assigned to me. As described in my methodology section, this is one reason why I had to take a somewhat 'chatty' approach to performing my interviews, which resembled not so much interviews as conversations. People didn't know what to say to me on this topic unless I pushed them to speak. That interviewees find the topic of vitamins ho-hum or mundane can be interpreted as an indication that many believe vitamins to be safe. Interviews about Vioxx or thalidomide, for example would generate much more interest and commentary.

Other comments that betray interviewees' notions of vitamins as safe include:

> *J: I mean if I had it sixty years ago as a child and they're still using it I have a hunch that they would have caught up with anything by now if it was detrimental to one's health.* (Joelle)

> *L: Yeah. Because I see it inoffensive...right...not like a big intervention, so I think 'oh you know, ok, I'm going to take this'.* (Leah)

> *A: So if we take them away now there would be rebellion so...*
> *K: I can imagine.*
> *A: So we just keep giving them to her. Cause they can't hurt.*
> [Amy speaking about giving her daughter Flintstones Vitamins]

> *X: I don't think it hurts to take any of them, and I don't think it makes any difference whether you take them or...if you're getting enough vitamins it doesn't hurt to take another one. Like even if you get enough through your food, through your diet, it's not going to hurt you. They're completely innocent.* (Xavier, 33 year old married man, works full time)

> *M: Well and actually, that's interesting too, and that's where that whole safety question of vitamins...He* [a nephew that came to visit for a while]

was actually prescribed Flintstones vitamins because they were like cute and, they wanted him to take them and what have you, well my kids started to feel like they were being left out of something because he was getting this...
K: Candy?
M: Candy....quote, unquote, every day. And it did actually get to the point, and I was actually just thinking about this, this morning, when I was thinking about doing this interview, how stupid my whole attitude was about it at the time, but it's like 'hhhh, it's just a Flintstones vitamin, if one...', I mean I gave them to him whenever I gave them to him, and often others weren't around, but if others were around then I'd say 'ok well have one', because it was easier than having the fight about how come he gets them and they don't. And I was thinking, you know...had he been prescribed insulin...I wouldn't have just said to my kids 'ok, well you can have it too', chuckle.
K: Even if it was a tasty syrup or whatever.
M: Yeah, chuckle. Like 'you can have it too'. Or if he had been prescribed some sort of tasty medicine for some sort of chronic lung problem or something I wouldn't have been like 'well you can take it too'.
(Madeleine)

Political Notions

I was surprised by the dearth of political commentary in the interviews. Because of my own misgivings about certain aspects of pharmaceutical practice I had expected that many interviewees would want to express similar notions. It is possible that I was trying so hard to cover my anti-pharmaceutical bias that I didn't steer the conversation towards this topic enough. Only five people mentioned political issues. One of these raised concerns about pharmaceutical industry animal testing:

K: Do you dislike supporting pharmaceutical companies, anything like that?
G: That's partly why I don't take medication, cause of whatever testing they do, particularly on animals and stuff like that.
K: Ok, generally speaking you are conscious of, in some ways, avoiding taking a lot of pills, generally, because you don't want to support companies that test on animals, as much as you can?
G: Yeah. (Garth, vegetarian for reasons of animal welfare)

Another said this to me, with no prompting on my part:

K: Ok, ok, you don't feel there's any hurt in taking one of these [referring to multivitamins]*?*

G: No, I don't think so, at the moment. I'll wait for you to tell us otherwise, laugh.
K: Yeah!!! Giggle.
G: You don't know when you're supporting an industry, you know, that's just living on peoples' anxieties, you know.
K: You don't know, yeah.
G: But...it's not too, too expensive, so why not...
K: ...you are a little, at least bothered enough to have mentioned it even though it may not be a major issue, but bothered that you might be supporting an industry that's preying off of peoples' anxieties.
G: Yeah, I mean I'm not sure there's enough integrity....
K: In that industry?
G: Well in related industries where they might be taking a small possibility and kind of building it up in order to sell product. But...you know...
K: But when you've weighed that out you've decided to take it?
G: Yeah, it's weighted out, it's been a pretty close, chuckle...but I went along. (Gary)

Other political comments included those of Teresa and Sally:

K: Do you have any trouble buying pharmaceutical company products?
T: That's such a hard question to answer because they're everywhere, like look at a company like Procter and Gamble, like my sister works for them now, so I know a little bit about it. It's like they have their whole pharmaceutical division but then they also sell pies...so...we're supporting them...
K: One way or another.
T: One way or another, it's almost impossible to avoid them completely, or Crest toothpaste.
K: Ok, so this one little vitamin thing is not going to be the make it or break it of that?
T: No, not to me, but mind you, I would rather buy No Name than Jamieson or the....
K: Yeah Centrum, that comes from a big company.
T: Yeah, yeah. (Teresa)

S: Um, I have trouble with the pharmaceutical industry and maybe I'm not as informed as I should be about the connection between the drug industry and vitamins because it's almost as if, in my mind, vitamins are sort of generic, even though they're sold by Centrum, or sold by different people...
K: You would associate them with where you would get, like, herbals, small stores...?
S: Yeah, maybe not as being natural things but thinking....I wouldn't be thinking in my mind of vitamins as being the same thing as Tylenol.
K: Ok, as part of the pharmaceutical industry?
S: Yeah. Even though I probably should, given my...
K: _____, where I worked makes Centrum. Ok, so I wonder if other people don't think that! I should ask people.

S: And that's probably, I actually never thought about it before but it's probably pretty silly considering that I have a business degree and reasonably educated.
K: Well a lot of people don't think about it.
S: I just didn't think of it that way, Whether I would buy Centrum or a generic brand, you know, whatever, the Jean Coutu brand, Life I think they call it, I'm not sure, I'm not thinking of it as the pharmaceutical industry, as I would be with other drugs- WITH DRUGS, cause I'm not thinking of it as a drug. (Sally)

In these latter quotes I was first to broach vitamin consumption as political. No one spoke of pharmaceutical production as polluting or raised any other ecological issue related to supplementation.

Economic Issues

Economic issues, on the other hand are forefront in the minds of many interviewees. Many respondents commented that supplementing is expensive. Remember Linda's words '*I don't like the idea that you would need a pill to get what is free. I paid thirty dollars for a little bottle of ninety tablets.*' Most respondents, however, also told me that they can easily afford their vitamins and very few told me that they let cost affect their level of consumption in a significant way. Exceptions include, Dana, a recently divorced woman who is acclimatising herself to the higher expenses of living as a single person, and students; the most economically vulnerable of my respondents.

The fact that most of my respondents are middle class probably explains the minor role that cost plays in consumption levels for my interview cohort. A few interviewees also mentioned that good quality food is expensive so for some vitamins may appear as a relatively cheap alternative to food. Consider the words of Helen quoted above, speaking about the price of broccoli bought during the winter season for instance.

Finally, most respondents told me that they make a point to look for products on sale, and a few respondents manage to minimise the cost of vitamin purchases by making insurance claims. Under some circumstances vitamin product expenses may be refunded by insurance companies. Of my interviewees, very few indicated that they were able to make such claims and none of these were amongst the group who are living on the economic edge.

Peace of Mind and the Placebo Effect

Many respondents made reference to psychological facets of consumption. For example, out of fifty interviewees, nine mentioned that their perceptions of vitamin efficacy might be due to a placebo effect. I did not prompt these responses, all nine interviewees raised the placebo effect spontaneously.

> *K: Do you feel a difference between when you take them and when you don't? Like when you take the C do you feel it cuts your cold?*
> *S: Yeah I do, I feel like it, I don't know if it's a placebo effect, but I feel like it helps out a lot.* (Simon)

> *E: I think a real placebo thing happens too.* (Esther)

> *K: And you take echinacea because it's an herbal?*
> *L: Yeah, because I've had good experiences with it getting rid of a cold.*
> *K: Ok, so you've done it before and it actually worked?*
> *L: Yeah-well, maybe it's psychosomatic but I found it worked.* (Lola)

Others spoke of taking vitamins purely to achieve peace of mind. For these individuals vitamin-taking is a way to quiet anxieties about nutrition or diet, for either self or family members. These respondents were often unsure if vitamins were actually doing something physical to the body, but were certain that they were doing some good in that they helped quell worry.

> *T: Generally I don't like taking them, I don't buy into that whole...I would think that by taking them I would have a free pass to not eating well...So the good thing about taking them, is, for the pregnancy, which is the main*

reason I have been taking them, is to relieve stress for my husband, so that's one, and it relieves stress in me, at least I know I've done all I can do. (Teresa)

Finally, Elaine, who has some serious health problems, worries that dwelling on her body and its problems, could make her more sick.

E: Like if you are constantly thinking of that. There's that line, you know. If you're thinking about it that's what can make you feel sick, you know, if you think about it too much.
K: If you obsess on it.
E: Exactly.

Gender

Gender issues were rarely discussed during interviews. This may have been because of the wording of my questionnaire, in which gender topics were not specifically addressed, but this might also be because few interviewees see vitamin consumption as a gendered activity. A few gender issues were raised, however. As mentioned above, women's bodies are seen as more susceptible to nutritional deficiency than those of men. Pregnant women in particular are viewed as needing supplementation. Also, mothers are often perceived as having hectic lives and in consequence to be in need of nutritional help. Madeleine for example, told me that women are often '*keepers of the family*' and their supplementation reflects this. Of the couples that I interviewed, however, fathers were as likely to dole out vitamins as mothers.

Finally, much market segmentation in vitamin products is drawn along gender lines. Many products are made specifically for women or men, for example One-A-Day Women's or Men's formulations, and Materna. Other products, although not designed exclusively for one gender group, are marketed heavily towards either men or women. For example osteoporosis preventatives like Calcium/Vitamin D are perceived as needed mostly by women, or multivitamin products containing lycopene

are touted as products important in maintenance of prostate health and are therefore marketed strongly for men.

Vitamin Therapy versus Health Insurance

For most respondents vitamins are viewed as belonging to one of two categories; prevention/cure or health insurance. Some interviewees voiced this distinction in terms of vitamins taken for therapeutic reasons versus those taken for general health, for example

> *K: Ok, that's it, is there anything you wanted to add about vitamins, opinions or anything I haven't asked you?*
> *G: I'll probably think of a dozen things once the interview is over. No...I can't think of....there is an interplay, of course, between these supplements and your actual medical therapies, you know, for various conditions you have. I mean you can see an example in vitamin B12, that is medically indicated whereas some of the others are just maybe giving you a bit of comfort, put you in a comfort zone so to speak.*
> *K: So some vitamins you feel are more medicines and some are more like food?*
> *G: Well yeah, I think there is a boundary on your subject, where there is an interface with what is medically indicated versus what just seems to be a question of good sensible nutrition.* (Gary)

Other respondents used different terminology but the distinction remains clear. Many interviewees, then, see some vitamin consumption as targeted, for example supplements taken to prevent or cure specific ailments, while other consumption is a way to achieve better general overall health. Within the former paradigm, however, respondents didn't mention taking vitamins as a means to avoid deficiency diseases such as pellagra, scurvy or beriberi. Apparently these illnesses are not concerns for the people that I interviewed. Respondents in my pool of interviewees are more concerned with osteoporosis, cancer, colds/flu and psoriasis as opposed to deficiency diseases. The only exceptions to this rule were the people who suffer from anaemia caused by low B12 or iron levels.

Vitamin C and Multivitamins

The two most commonly taken supplements are vitamin C and multivitamins. Vitamin C is taken or has been consumed by almost all fifty interviewees. Reasons cited for taking vitamin C include: cold prevention/cure, taste, cancer prevention, gum health, general health maintenance, improved iron absorption (when taken in tandem), and improved immunity. Similarly, almost all respondents take or have taken multivitamins. Reasons given for taking these products are: gum health, improved energy levels, improved vision, improved immunity, general health maintenance, and pregnancy (i.e. Materna). Of the fifty respondents, a few take multivitamins but do so only to acquire one or two of the many constituents. They take a multiproduct in these cases because: they have heard that one constituent is better absorbed when taken in that format; they have experienced good results when taking the multivitamin; or when they want to combine their desire to take both a specific ingredient and a multivitamin.

Abstaining

Very few of my respondents do not take vitamins, and of these few, most have taken vitamins in the past and foresee the possibility of taking them at some point in the future. Only four interviewees are what I call abstainers, people who have almost never taken a supplement, take none now, and do not predict that they will consume vitamins in the future. These respondents are Raymond - 56 years old/married/father of two grown children/works full time, Abigail - 24 year old/married/full time student, Jacqueline - 49 years old/unmarried/full time worker, and Keith - 67 years old/married/father of two grown children/retired but still works part time.

All four abstainers are self-described 'sensible eaters' who feel healthy.

K: Do you take vitamins?
R: No I don't take any vitamins.
K: None at all.
R: No.
K: And why not?
R: I guess I figure I eat sensibly and don't need anything to supplement.
K: And you feel good?
R: I feel fine. (Raymond)

A: I think it's because I've never really been sick for most of my life. I don't get colds easily, I've never gotten the flu. So I just feel like generally I'm healthy so I don't need to take it. (Abigail)

They also talk about '*leaving well enough alone*' or express unwillingness to '*fool with nature*' or to follow nutrition fads. For example, consider the words of Keith:

KW: Ok. Um...could you imagine any circumstances where you would take them, like your doctor prescribed them, you go see him and you end up finding out you have a...some kind of physiological problem or....?
K: Well, only if a doctor prescribed them, I don't fool with nature.
KW: Ok. Ok, yeah, you rather just leave well enough alone?
K: Yeah...I think if you take the things that you don't really need you upset the balance.

None of the abstainers expressed uncertainty regarding the quality of their food supply. Three of the four described themselves as people who avoided taking pills in general. Two of the four mentioned that economic considerations play a part in their unwillingness to buy vitamin products. Other reasons cited for avoiding vitamin products included not possessing enough vitamin knowledge, preferring to eat real food, finding vitamin supplements aesthetically unappealing (Abigail), lacking information about whether or not vitamins are safe (Jacqueline), and finally not having the habit carried over from childhood of supplementing (Raymond and Keith).

Finally, it is worth noting that a few respondents described themselves as 'abstainers' when I contacted them by phone to request interviews, but when performing the interview I found that they were not people who fell into this category as I define it. For example, two respondents who told me they take no vitamins on the

phone, actually revealed during interviews that they take vitamin C when coming down with a cold. Other respondents were on temporary hiatus from supplementation but had imbibed considerable amounts of products in the past and foresaw the need to take vitamins in the future. Evidently some people define themselves as vitamin takers or abstainers based on temporal or quantitative criteria that differ from my own.

What is Bought, What is Consumed

Informants spoke of two important issues that must have an impact on vitamin consumption statistics. First, many informants told me that they sometimes discard vitamin products either because they have ceased to ingest them or because the bottles have passed their expiry dates. This fact is critical for accurate interpretation of consumption statistics. What people are buying is not commensurate with what they are ingesting.

Second, a few interviewees told me that they ingest some vitamins incidentally. By this I mean that they are buying products for reasons of ingesting one or two of many constituents. For example, Linda is taking a multivitamin with iron solely for the iron content. Her doctor told her that iron should not be taken on its own and to buy a chelated product.

> *L: The doctor only recommended this vitamin, it's chelated, he said make sure it says that. A lot of cheaper multivitamins have iron but it's not chelated so it won't be absorbed into your body....and he said only take it as a multivitamin.*

Ultimately, Linda is consuming a daily portion of every vitamin simply to get the iron that she wants. Another respondent, Victoria, takes a vitamin AC antioxidant combination approximately three days a week. However, she has also heard that for echinacea to be efficient it must be taken with vitamin C, so when she feels a cold coming on she takes both echinacea and vitamin C tablets for a four or five days in a

row. But, Victoria doesn't want to buy an extra bottle of vitamin C just for this reason, so when she takes her echinacea she actually combines it with the vitamin AC product. Therefore in these cases Victoria's consumption of vitamin A is incidental.

Some respondents also brought up the fact that many foods are fortified with vitamins, considering this type of consumption as part of their other supplementing regimes. It is true that it is almost impossible to eat in North America without consuming some products that are fortified, therefore almost every person in North America supplements, whether they are aware of it or not.

Also worth mentioning at this juncture, is a curious fact that I found out from my respondent Esther. Esther and I had our interview when she was eight and a half months pregnant. During the conversation we discussed her plans regarding supplementation for the baby. She thought she wouldn't, not because she was against the idea, rather because she felt she would not need, and therefore would not want to feed the baby vitamins. Only under exceptional circumstances did she envision herself adding vitamins to the baby's diet. However, in a conversation we had after she had her baby, Esther told me that she was actually adding liquid vitamin D to her aspirated breast milk under instruction from the paediatrician. According to Esther this is common practice in Canada. Vitamin D, which we get from our diet, is also a vitamin our bodies produce when we are exposed to sunlight. The thinking behind this practice is that babies are not exposed to enough sun to produce the vitamin D they need to supplement that found in breast milk (Whitney and Rolfes 1993: 351).

I find it interesting to consider the implications of fortifying what might be considered by some to be the most perfect food, breast milk. If this practice is common then the first food many North Americans eat is fortified. Fortifying breast milk may have important effects on how we perceive supplementing; as necessary or

unnecessary, as safe or unsafe, as normal or abnormal. Surely anything fed to new born babies will be considered safe by many individuals. Eating fortified foods as a child, for example fortified breast milk, may engender habits of supplementation that continue into adulthood. Remember that fortification of breast milk is done in the home by the parents, therefore doing so will be a conscious act and therefore supplementing may come to be seen or practised as normal.

Fiona – A Vitamin Researcher

One of my interviews stands out against the rest. Familiar with my project, my neighbour suggested that I interview his elderly aunt 'Fiona'. This was to be an interview unlike the others. Fiona was a retired researcher who had worked in a prominent North American university nutrition laboratory from the early 1940s until her retirement in 1983. My questions to her would not be about vitamin consumption. I wanted to know about Fiona's experiences working in the field of nutrition at a time when vitamin research was in its heyday.

I arrived at Fiona's apartment building mid-morning on a sunny summer day. Fiona was waiting for me as the elevator doors opened at her floor. She wore a comfortable looking blousy cotton dress and walked supported by a Zimmer frame. Her nephew had told me that she had been having trouble with her knees. We walked, chatting, down the hallway to the apartment together. Once inside, we continued chatting casually sitting at the dining room table for a bit. Then I began the interview.

I wanted Fiona to do the talking and I could tell from the moment I turned on the tape recorder that she would speak with little prompting. Unlike many of my other conversation-like interviews, this one took a short question, long answer structure. Chuckling while recounting her various research experiences Fiona was a superb

interviewee with a sharp sense of humour. Her natural storytelling abilities brought her interesting memories to life for me. Fiona's octogenarian status meant that she had been alive since the "beginning" of vitamins so she was able to reveal information that up until that point I had only been able to find in books.

Fiona's information complements my understanding of the history of vitamins as described in chapter one. She spoke about the reasons vitamin research was started in the first place: scientists were looking for the underlying biochemical and dietary causes of deficiency diseases. It was believed that when the biochemical processes were elucidated, deficiency problems could be eradicated by altering peoples' diets. Fiona told me that the main thrust of this research was conducted during the Second World War. Governments, both in Europe and North America, were under pressure to find efficient ways to properly nourish both civilians at home and soldiers at the front. Fiona made specific reference to pregnant women who were subject to war time rationing in England. Correct feeding of pregnant women was a priority, but produce was expensive and difficult to come by, so the government wanted nutrition researchers to tell them the most efficient ways to achieve these ends.

According to Fiona it was never the intent of the research to create supplements. When I asked her how and why supplements came into being, she told me this:

> *F: We never dealt with supplements at all. The amount of vitamins that is required to prevent the diseases that we were familiar with is so small. Nobody even thought of supplements.*
> *K: It was really diet. You were more interested in vitamins in a diet, in a regular food diet?*
> *F: Yeah.*
> *K: Ok. So...it was quite soon after all these discoveries that people started to make supplements. What did you think about that?*
> *F: Oh well...well for instance with vitamin C, during the war in England...They were very good. They managed to give the pregnant women a good diet during the war. And it included...they tested to see how much vitamin C they needed, and I've forgotten now what the amount*

*was, but it was a very small amount that they needed. And so they managed to give it to all the pregnant women. Well then of course the people who are che-che-che (*making this sound in her cheek*) after money, think "oh boy, vitamin C is some's good, more is better". So they made supplements and stuff. But I could never go along with the supplements because...*
K: ...the reason why I'm doing this is because...billions of dollars of these are sold every year, billions, it's a huge market, so I'm trying to figure out why, why do people take them?
F: They're trying to make money on it.
K: It's just a money question, yeah. That's what I'm...
F: From my point of view it's money.

In Fiona's opinion, vitamin supplements were only created for commercial reasons. If business interests hadn't stepped in, vitamin molecules would likely have remained in food.

Discussion also turned to issues of vitamin safety.

F: In fact, right now, I've probably got macular degeneration developing, and when I went to see the...is it optician?
K: Ophthalmologist? Optometrist?
F: Optometrist...
K: Yeah there's three of them and I never know which one is which! Laugh.
F: Yeah optometrist. She said there's a new substance out, ask the ophthalmologist if you can take it. So the next time I went to see him he reached up on the shelf and he said, "yes, here it is, take it". And I took it for a few days and then I looked at the formula and there was...fourteen thousand international units of beta-carotene!
K: Really!
F: Now I know that you can have a toxicity from vitamin A, whether you can have a toxicity from beta-carotene I'm not sure. Beta-carotene is changed into vitamin A.
K: It's a precursor.
F: Yeah. And so I wrote to the company and I said "what are the side-effects of taking this"?
K: It's a huge dose, yeah.
F: An enormous dose and nobody seems concerned about it.
K: That's interesting eh.
F: Yeah, so then I went to renew the prescription the other day and they said the company discontinued making it. They were giving another one instead. He gave me all the information and said, "phone your doctor and find out whether you can take this".
K: He never suggested to you maybe to eat carrots or...
F: Oh I do anyway. I do anyway. My diet is...you know, we eat lots of vegetables and so on. There's no way I could be short of beta-carotene.
K: And he never asked you that, he never...

F: No he wasn't concerned.
K: So this could actually be hurting you, even though...
F: That's right. That's what I'm concerned about.

Fiona is concerned about the cavalier attitude some people (in this case her doctors) have towards supplementation.

Much of the narrative was also dedicated to themes of food sociality and lifestyle:

F: The family don't sit down together for meals. They're all...the boys are rushing off to play soccer and the girls are going for their swimming lesson and...I remember once when I was working in, I don't remember the name, chuckle, I think it was called Household Science at that time...we had a four year course and the girls that came into first year, I remember when I first joined the staff, Janet MacNamara said to me, "now one thing I'd like you to do is to get to know the first year students well enough so that when the marks come up in December somebody will know whether this is what is to be expected of them, or whether there is something in their background or...you know, perhaps they've had a death in the family and therefore they're not able to work, to concentrate". She said, "I want you to know the first year students". So one thing we used to do is invite them in groups of about six or eight I guess. Margaret [Fiona's sister] used to cook a meal and then we'd invite them and we'd sit around, extend the table, and we'd all sit down, and while they chatted to one another-
K: You would listen.
F: I'd listen and pick up what I could about each one, you know, get to know them. And I remember one girl, she was from Springfield, and she said, oh she enjoyed it so much, she said, "you know we never sit down with the family to eat". She said they're always one after the other, grabbing it and away we go. And I remember paying ten dollars, TEN DOLLARS!, for a roast of beef about that big, chuckle.

K: ...it's funny because if you go back fifty years people didn't really know very much about vitamins, but people ate well so they kind of didn't need them.
F: Exactly.
K: And now we know all sorts of things and what you should eat and a lot of people don't eat well anyway. You know what I mean, it's very funny.
F: Well they skip breakfast for one thing...because they haven't time. Off to work [clapping her hands]. *And then comes lunch time and they think "Oh well, that's fast, we'll get that"* [clapping her hands].
K: Fries and a hotdog, yeah.
F: And then they get home at night and they're so tired they can't be bothered cooking vegetables, they just have something quick [claps hands].
K: Yeah...people don't take the time.

F: I think too...indirectly - and can't blame it entirely - the fact that women are working out of the home is making a difference.

In this interview purportedly about vitamin research, much of Fiona's commentary addressed topics of food sociality. Evidently for this woman food is not only nutrition, it is also socially important. In fact for Fiona the two seemed intimately entwined.

The interview lasted a little over an hour. When the tape recorder was turned off and put away she gave me a glass of juice and we chatted a while longer. Then I left. This interview experience was unique and Fiona's insight into the history of vitamin research invaluable. I am deeply indebted to this informant.

Two Tales of Vitamin C Revisited

After performing my interviews I came to understand how the two vitamin tales I recounted in my introduction are allegories for many of the vitamin consumption issues raised by my informants. Advertising, perception of food as vitamins, diet, etc, are critical components of these two stories and are also important themes in my data.

Chapter 5: The Material Culture and Medical Anthropology of Pharmaceuticals: Dialogue with the Data

Given the multiple, sometimes conflicting perspectives on the topic of vitamins and vitamin use voiced by my informants, and given the drug-food hybridity of my research object, many different analytical frameworks could be used to work through the data I collected. In what follows, I have chosen to use a combined "material culture" and "anthropology of pharmaceuticals" approach to frame my discussion and arguments, however, because I found this body of work offers the most comprehensive and potentially illuminating range of perspectives on the themes that emerged in the course of my sorting through the interview data. As will be shown, issues of compliance, notions of time and safety, the social critique of advertising, the material qualities of vitamins, stigma, metaphor, the senses, the quantitative aspects of supplements, economic issues, and self-responsibility (or responsibilisation), are all treated at length in this literature, making it a good analytical match for my data. The first seven sections of this chapter are accordingly devoted to a discussion of these particular dimensions of pharmaceuticals.

It bears noting that only a few texts in the vast literature on the anthropology of pharmaceuticals are explicitly concerned with vitamins. This work is particularly pertinent to my topic and therefore requires special attention. The vitamin literature is summarised and discussed in the second to last section of this chapter, entitled Vitamins are Food as Well as Drug. Opening up the analysis to food themes, this section is followed by the last, entitled Food. This is where I analyse data that merits discussion because it goes far in explaining vitamin consumption, but also information that simply hasn't been addressed in the previous pharmaceutical analyses because it deals exclusively with food.

Material Qualities: Practicality, Metaphor and Stigma

Material Culture Literature

Material culture discussions touch on many themes related to pharmaceuticals. For example, authors discuss why objects (or 'things') get created in the first place and the reasons behind them taking the forms they ultimately do (Dant 1999; Latour 1987, 1991), Glassie 1991; Clarke 1999; Pfaffenberger 1992). When objects are created they often embody the ethos of the time, place or persons associated with their creation. Some authors (Clarke 1999) also discuss how a thing changes from being unknown when it is first appears on the social scene, to becoming a known-but-dispensable or indispensable item.

Latour (1987) and Clarke (1999) discuss the complicated process involved when a 'thing' is born in the world of science. Individuals, institutions (like the media or government agencies) and objects (like technologies) play a part in the making of things, and in their eventual acceptance or rejection once released into the general population. Chance, personalities, bureaucracies, strategy, competition, controversy, reputation and qualities of the thing itself all play parts in the outcome of any scientific undertaking. Latour (1991) also discusses the unpredictable nature of creation. Scientific projects run off-track, and objects are often used in unpredicted ways once released into the wild (Corrigan 1997; Michael 2000; Latour 2000) Henry Glassie agrees:

> Function, as it were, both precedes and follows structure. The structured object may be followed by unanticipated functions. (1991:259)
> "Use" is a creative act. (1991:263)

Thus things are made by creators and then re-created by users. Furthermore, once created, things act on the world that surrounds them (Glassie 1991). In fact, according to Latour (1991), some objects are made with the express intention of acting on us. He writes, for example, about weights attached to hotel room keys, put there to discipline

patrons into handing them in at the reception desk when leaving the premises. Other objects physically guide or limit humans, such as an open or closed door. Furthermore, objects can discriminate. For example a heavy door will let physically strong people pass while denying access to those less able (Latour 1988).

Many material culture authors (Berger 1992; Pellegram 1998; Dant 1999; Dittmar 1992; Latour 2000; Pfaffenberger 1992) emphasise the importance of the aesthetic and practical qualities of objects. Colour, shape, design or size can affect the way an object is perceived and used by individuals or the greater society. For instance, some objects will become popular because in using them, their aesthetic qualities convey the message the user wants relayed. A person may choose to drive a sleek sports car as opposed to a minivan because in doing so he/she believes he will be putting out the message that he is carefree and adventurous. The flip side of this notion is, of course, that sometimes inferences are made about people based on their material possessions. Other objects achieve popularity because of their superior functioning. The same owner may also drive the sports car because it is a solid well-functioning vehicle, for instance. Barthes (1991) in his discussion of clothing adds to these notions by saying that not only are things burdened by meanings based on practical and aesthetic considerations, meanings also get attached to things because of the way we talk about them.

Meanings may be embedded in form but also, when objects have similar forms meanings may be transferred from one to the other (Dupont 1991; Latour 1996). Similarly, when objects perform the same functions, it may be assumed that they should have similar forms. When considering an object one should determine what roles it plays in lives or societies. Do other objects perform equivalent roles? (Berger 1992) Why was this object selected when an equivalent may have been used? (Dupont

1991)

Besides aesthetic qualities, when studying an object one must also ask what kind of item it is. Is it clothing or a tool? One should also consider where it is usually found; in a kitchen, park, shirt pocket? These characteristics may help one to understand the range of people who may use the item or its potential movement through space (Berger 1992). It is also important to query how objects relate to considerations like gender, race, socioeconomic class and ethnicity (Berger 1992; Clarke 1999; Hebdige 1988). Clarke (1999), for example, writes about Tupperware use as it relates to changes in women's identity and roles during the early twentieth century. Also with respect to Tupperware, Clarke discusses advertising, the forms it can take and the roles it plays in infusing things with meaning.

Several authors (Dant1999; Livingstone 1992; Latour 2000; Graves-Brown 2000) discuss social interaction vis-à-vis objects. Livingstone states that

> (Technologies) may facilitate interaction between people, and they may substitute for that interaction, providing instead a social interaction between person and object. (1992:121)

Cases in point: telephones enhancing the social lives of people who live alone, or radios left on in a house to keep people company. Latour (1988) couches the same argument using a different term, 'delegation'. Human duties can be delegated to things. Locks and keys can replace doormen for example. Technologies may also alter family household dynamics. Computers will disperse people, whereas family members assemble around a television. People will chat in front of a fire but will sit silently in front of a television set.

Technologies can be the cause or result of individualization (Livingstone 1992; Graves-Brown 2000). For example, eating meals at different times is more easily done in a house with a microwave employed to heat up meals one at a time as

family members eat alone. According to Graves-Brown (2000) despite being distinctly human creations, technologies have the effect of degrading our humanity by speeding-up or individualising activities that are more socially rewarding when performed leisurely, in groups. Similarly, Dant (1999:133) refers to the 'space-time compression' brought about by technology. Technology speeds up life, and humanity and sociability are the price to pay for the security they provide. Furthermore, Graves-Brown believes that with technology we come to forget our corporality:

> It is clear that the freedom offered by technology in contemporary society is purchased at a price, (for example) increased formalisation and finessing of our dealings with our bodies (accompanied by a) general change in domestic arrangements... (and) profound retreat from public space... Surrounded by technology we are no longer fully social beings and this is partly because we have come to forget our embodiment...What is perhaps distinct about the technological culture of the twentieth century, especially of the last fifty years, is the progressive use of a fundamentally social product, technology, as a means to neutralise, distance and deny one's social existence, a process in which the producers of technology have been knowingly complicit because privatised experience promotes consumption which in turn boosts profit. (2000:161-164)

Metaphor in the Literature

According to the material culture authors, technologies, like medicines, have the potential to desocialise or commodify human interaction. Van der Geest and Whyte (1989) also write about medicines as vehicles of individualisation. They discuss this phenomenon, however, within a framework of metaphor. According to these authors, medicines take on meanings, and many of these meanings can be attributed to their form, to their concreteness as things. Pills appear to have their own powers of healing, separate from the people who made or dispensed them. Therefore medicines represent a unique form of healing wherein therapy can be separated from human interaction. Compare medicinal healing to surgical healing, for example. While surgery cannot be separated from the surgeon, pills, small and portable, can be taken alone. Pills appear to possess the power to heal on their own, hence the placebo effect. Medicines mean healing. Therefore they heal as a function of nothing else but being medicines. This

characteristic makes medicines democratizing. Pills can be taken by anyone so anyone can harness their power. Medicines are therefore liberating, they help people to help themselves (van der Geest and Whyte 1989; Montagne 1988).

Medicines also have meanings because they are associated with where they are made and who dispenses them. Products purchased at pharmacies may be perceived differently than those purchased at health food stores, for example. Where the product is bought affects its "identity". The high or low esteem, in which people hold the pharmaceutical industry or medical profession, can be transferred to products. Here metonym is at work. The parts are the whole; the pills are the physical manifestation of the power of the pharmaceutical industry. This, according to van der Geest and Whyte, explains why drug manufacturers pay such close attention to product appearance and packaging. The image of the product is synonymous with that of the company (van der Geest and Whyte 1989; Vuckovic and Nichter 1997).

The meanings associated with medicines can "influence drug-taking experiences and direct drug-taking behaviours" (Montagne 1988:417). For example, patient compliance or non-compliance with pharmaceutical regimens can be highly dependent on the metaphorical meanings the drugs have in their life. *Drug is remedy* and *Drug is poison* are common metaphors, so are *Drug is life* and *Drug is death.* These conceptualisations of drugs will have the effect of either turning people toward or away from drug taking. Drugs can be a symbol of the power of science and technology, therefore authority and control. They can also be used as symbols of defiance. Elicit drugs are often taken in this context. Consider LSD use during the 1960s for example (Montagne 1988).

According to Montagne (1988:418) "even today medicine and society refer to some drugs in a magical context". Saying that drugs "work wonders" or are "magic

little pills" can inflate expectations of effectiveness or detract from ideas that drugs can be dangerous. Metaphors can highlight or hide (Lakoff and Johnson 1980). For example, when people refer to vitamin takers as "fanatics", they are drawing on religious themes thus hiding the potential danger of taking excessive amounts of vitamins. If the word "addict" was used, taking large doses of vitamins would appear akin to the excessive consumption of hard drugs and would therefore seem like much more serious business.

It is important to remember that metaphors can also REFLECT our ideas however. Metaphors may shape how we conceptualise the world but they can also be reflections of how we perceive our world. For example, we may refer to people who take large amounts of vitamins as fanatics BECAUSE we perceive vitamin taking as safe (Lakoff and Johnson 1980).

Pharmaceutical companies take advantage of the potential to fuse form with meaning in their advertisements (Montagne 1988). Advertisement depicting mothers taking care of their children are good examples. In these instances the manufacturer wants the medicine to mean "care". Meanwhile, the fact that the woman is excessively busy means something too. As Vuckovic says "being busy has a certain cachet", it means you are important (Vuckovic 1999:63). The ultimate message is: very busy and therefore very important people can still "care" for their children by purchasing this product (Vuckovic and Nichter 1997). Drug advertisements are particularly powerful when they can infuse products with emotional meanings. According to Abramson (2004) two thirds of drug ads do just this, demonstrating the faith pharmaceutical companies put in this strategy.

Drug companies also want to make sure that few associations are made between their products and negative meanings.

> The American Pharmaceutical Association has recently taken the position that "substances used in lethal injections [in executions] are in fact not "drugs" because their intended use is not therapeutic". The term 'chemical' is preferred, instead of 'drug'. The pharmaceutical industry has begun an effort to change the public's perceptions of the substances they use for medical or therapeutic reasons. From now on, the preferred term for such substances is 'medicines', instead of 'drugs'. The emphasis in both cases is on the metaphors and meanings of various words and phrases (Montagne 1988:422)

Negative and exaggerated stereotypes of ill people dominate adverts (Clarke1990; Vuckovic and Nichter 1997). Commercials create and reproduce stereotypes of women and elderly patients for example, in a bid to increase sales. People come to understand these groups as having precarious health (Rose 2001). Doctors and patients who internalise these meanings are more likely to prescribe or buy the associated products. Market segmentation goes a long way in helping this process. Through individuated products (Materna, Centrum Silver, Flintstones) and advertisements for them, certain segments of the population are singled out as vulnerable. Vuckovic and Nichter (1997) say that children and seniors are particularly targeted in this manner.

Medicines also play a role in concretising illness. 'One of the most popular "movements" accomplished by metaphors in everyday life is from inchoateness to concreteness' (van der Geest and Whyte 1989:353; Katz and Marshall 2004). For example, when we are unwell we feel "waves" of nausea. 'Concretistic and mechanistic images of illness and health are familiar in popular speech' (1989:355). We refer to the heart as a "ticker". We understand illness best when we are able to grasp it, when it is concrete. Medicines and diagnostic tests like blood analyses help ground illness. In fact medicines ground illness so well they are sometimes used as diagnostics themselves. Taking medicines proves to others that illness exists so that the sick role may legitimately be used (Parsons 1951; Vuckovic and Nichter 1997).

> Once an illness identity has been established, patients may be reluctant to give up the chemical marker of that identity (Vuckovic and Nichter 1997:1296)

Because pills are concrete, they appear the perfect healers for illnesses and bodies made concrete by metaphor. Because pills are things, they concretise illness itself when they are taken. 'If the problem is physical, then the remedy should be physical. Medicines appear the perfect answer to the problem' (Van der Geest and Whyte 1989:355).

The Material Nature of Pharmaceuticals

Some of the notions discussed in this last section resonate well with those in the material culture work summarised above. Material qualities of medicine, such as tablet or packaging appearance, count. Medicines, and by extension pharmaceutical companies, will be judged on these criteria. Drug companies are also very careful about the names, colours and shapes they give their products. All of these characteristics can affect how the product is perceived. When marketing is geared towards children, for example, product names and shapes are linked with popular cartoon characters like the Flintstones and Garfield. Children find these products appealing. They are also attracted by products that resemble candies, hence the colour and taste of most children's vitamins (Vuckovic and Nichter 1997). Parents might believe that vile tasting concoctions, like cod liver oil, are better for their children, but given the hectic nature of their lives, they are happy to have a product that the children take easily and quickly. Adults like candied medicines as much as children, but for adults it is their time saving qualities that appeal.

Because tablets are discrete entities, knowing how much one should take is easy. Taking exactly the right dose is made simpler by counting pills rather than measuring liquids, for example. Because medicines, and in this case I refer specifically to tablets, are small and portable they can be taken anywhere and

consumed privately (van der Geest and Whyte 1989).

Stigma in the Literature

Medicines' 'thinginess' has other ramifications. For example, because medicines can be taken in private, they play a role in reducing stigma when illness is shaming (van der Geest and Whyte 1989). Medicating labels people, for better or worse. It can confer either status or stigma on the taker (Conrad 1985). For example consuming epilepsy medicine in public announces to others that the taker has this condition. Supplementing with Materna lets others know that the taker is in pregnancy mode. This is information that people may or may not want out there. According to Conrad, between status and stigma, the latter is the more likely outcome of taking medicines publicly. This is because many people dislike taking pills and because many illnesses are stigmatizing (AIDS, epilepsy, erectile dysfunction). Given the choice to medicate or not, most people would rather not, and when medicating is deemed necessary most people would rather keep it private.

> There is a widespread belief in our society that drugs create dependence and that being on chemical substances is not a good thing. Somehow, whatever the goal is, it is thought to be better if we can get there without drugs (Conrad 1985:34)

Brand names products can serve as status markers, while using generics can be stigmatizing. This is because generic products are perceived as lower quality and less effective. The higher prices charged for brand names confer status upon them (Vuckovic and Nichter 1997).

There is another potential stigma issue with medicine taking, however, aside from that related to public/private consumption of pills. Taking some medications can relieve the taker of symptoms that are stigmatizing. One of the reasons why epileptics comply with their medication regimes, for example, is to avoid having seizures in public (Conrad 1985).

Vitamins' Material Form in the Data

Most vitamins are tablets. As predicted by the material culture and pharmaceuticals literature, this fact affects how they function and are conceptualised by the interviewees.

Because they share the same form, many respondents make a conceptual connection between taking vitamins and taking drugs. This link casts vitamin ingestion in a bad light because pill popping is viewed negatively, or at least as an action of last resort by many respondents. Because taking drugs is perceived negatively taking vitamins is too, but, only to a certain extent. Although respondents spoke about pill taking as an act to be avoided, vitamin ingestion, although not optimal, is seen as a qualitatively different act. Vitamin tablets consist of food molecules and are therefore not really like other pills according to many respondents. So although vitamins' pill form causes them to be conceptualised negatively, it is not a deal breaker, because as far as pills go vitamins are the least evil. In fact some respondents didn't feel that they should even be considered as belonging to the same category as hard drugs. Pill taking, when it is vitamin taking can even be conceptualised as positive, for instance when vitamins are consumed on a health kick. In these cases supplementation is a self-defining act. Vitamins are taken as part of an overall healthy mindset and bodily regime.

Only a few respondents, most of them industry employees, knew that vitamin products are made in pharmaceutical companies. Several interviewees expressed considerable surprise when they found out that vitamins are made at places like Wyeth and Glaxo. Despite the fact that vitamins are made into drug formats, people do not associate them with drug production. Sally is one of these individuals and it is evident from our conversation that because she was unaware of the provenance of

supplements she tended to think of them as food rather than drugs, and therefore failed to associate vitamins with some of the more negative aspects of the drug industry. Most people I interviewed appeared to take no exception to the pharmaceutical industry, so for them, where vitamins are made is neither here nor there. However, for a few respondents, like Sally, consumption of vitamins might have been curbed or stopped completely if they had known that vitamins were pharmaceutical products.

As tablets, vitamins do mean healing, as van der Geest and Whyte assert. The proof lies in the fact that many respondents spoke of being healed by the act of taking a tablet alone (the placebo effect). I was surprised by the number of respondents who said that they thought the efficacy of their supplements might be based in a placebo effect. Sometimes it is vitamins, rather than vitamin molecules, that heal.

The fact that vitamins do not degrade in appearance probably contributes to their high consumption levels too. One of the ways in which people identify 'good food' is by aesthetics (Parr 2004; Mintz 1985). Crisp, colourful, plump vegetables, for example, struck my respondents as healthful. Wizened, limp, dull-coloured produce give the impression of being nutrient-poor. Therefore vitamins' indestructibility, manifest in their always pristine appearance, contributes to their popularity. Vibrant colour and good taste are also helping some other formats' (liquids) popularity (Figure 2 - the product is called "greens+", it turns purple in water and is tasty).

Because vitamins are tablets the active ingredients are embedded within the form. It is impossible to pick out and take only some of the vitamin molecules, therefore ingredients are consumed incidentally. Vuckovic and Nichter (1997) describe similar incidental consumption of pharmaceutical ingredients. Multi-products are purchased and then consumed for only some of the actives. The underlying

impetus for incidental ingestion for vitamins does not match that for other pharmaceuticals, however. According to Vuckovic and Nichter patients take multi-products in this way because it is more convenient or economical to do so. My respondents consumed these products for the sake of convenience (Victoria), but also because they believed they had chosen a superior product (Linda) or they wanted one ingredient to activate the other, for instance Oksana takes vitamin D with her Calcium for this reason.

As many material culture and pharmaceuticals authors noted, tablets' size can have an effect on how they are perceived. Because tablets are small forms, vitamins can be perceived as relatively innocuous. Also, because they are small vitamins can also be taken discretely. Despite the fact that taking pills is somewhat stigmatising, it is an act that can be performed in secrecy thus rarely causing embarrassment. When tablets have to be taken in public, discretion is possible, therefore stigma can be minimised. In consequence, according to the literature, stigma plays but a small role in reducing consumption of pharmaceuticals in pill format. It appears that the same holds true for vitamins.

Because taking vitamins is not stigmatising in and of itself, however, stigma plays even less of a role in decreasing consumption.[C] While medicines like birth control are hidden away, vitamin bottles are left out, so pills are forgotten less often. This was how many of my respondents remembered to take their pills. Furthermore, not taking vitamins can be stigmatising. Pregnant women, like Teresa, take vitamins to keep up appearances and to avoid the stigma of producing an unhealthy baby (Rose 2001; Katz and Marshall 2004). Other pharmaceuticals can be taken to reduce stigma

[C] Besides, because vitamins are therapies for so many conditions, if one is taking them against a stigmatising problem, like vitamin E for erectile dysfunction, no one need know that this is the fact. Vitamin E is also taken as a preventative or remedy against heart problems, slow healing, Alzheimer's. No one need know specifically why an individual is taking a particular vitamin.

too, for example epilepsy medicine. Stigma, then, can increase or curb consumption of pharmaceuticals (including vitamins) of all kinds.

Vitamins, as pills, are quick and easy to ingest. This is a definite plus when vitamins are compared to food. Vitamins fit well into the lives of hurried people, which a lot of my respondents are. Interviewees take vitamins under almost any conditions. Requiring only water, and even this need can be eliminated by taking chewables, vitamins are easily consumed anywhere, anytime.

The fact that vitamins are available in liquid formulations increases the number of possible consumers. Liquid vitamins are added to baby bottles and are taken by people who have been incapacitated by dental problems or the inability to swallow solids. Just as numerous vitamin formats increase consumption because they expand the pool of potential consumers, vitamins available in no taste, good taste and bad taste formats also ensures that every consumer can find the product he/she wants. Many respondents choose products based on these criteria.

Vitamins as pills, are portable, indestructible and long-lasting, attributes that contribute significantly to high consumption. Vitamins are taken on trips, a time when people feel they are needful of supplementation. Vitamins are stored at the office and carried around in briefcases increasing their chances of being consumed. Because remembering was one of the greatest difficulties my respondents reported when discussing reasons why vitamins were not taken, any activity that simply increases statistical chances of coming across vitamins, or having vitamins around when the idea to take them pops into ones' head, must increase their consumption.

Pills are forgettable. One problem that vitamin takers share with other drug takers is the difficulty they experience remembering to take their pills. This was a problem that most of my respondents mentioned, yet it was also a problem with which

many had come to terms. Through exercises of the mind and more importantly, through techniques of the body, people are able to work vitamin consumption into a routine despite how difficult it is to remember to take pills.

Because they are tablets vitamins' active ingredients and their quantities are 'known'. Prominently displayed on the bottle label, this information can be easily compared to other products, with RDA values, or to patient requirements. Respondents make use of these numbers and have confidence in them. They believe that come what may with their food intake, vitamins can be relied upon to supply a full days' complement of vitamin molecules. Furthermore, people have confidence in quantitative food guides. RDAs and the Canada Food Guide are informing a lot of eating and supplementation practices. RDAs may even contribute to the idea that vitamin consumption should be a daily undertaking (Hacking 1982). The reductive nature of vitamin technology, then, contributes to their popularity. What of negative conceptions of reduction then?

Because they are food reduced to pills, vitamins have the potential to individualise and desensualise eating but only a few respondents find this worrisome, the Jetson quoters being two[D] (Douglas 1972, 1982; Haden 2003; Mintz 1984; Mennel, Murcott and von Otterloo 1992). Interview comments lead me to believe that few respondents see vitamins as having the capacity to undermine habits of eating sensually pleasing, sociable meals. Most interviewees do not have these concerns because either they still eat very sociable, sensual meals, to which vitamin consumption is superfluous, or, because they do eat desocialised and desensualised

[D] Because the topic of conversation was vitamins, discussion during interviews tended to evolve around nutritional topics. Therefore respondents may not have spoken much about food sociality because it didn't appear to fall within the scope of the interview topic, i.e. lack of talk about food sociality during my interviewees does not necessarily mean that interviewees aren't concerned about these issues. It is clear however, that few interviewees were worried about vitamins causing desocialised eating. My interview topic opened up every opportunity for individuals to speak about desocialised eating with respect to vitamin consumption.

meals, but this was WHY, as opposed to BECAUSE, they take vitamins. In other words, vitamins are neither the cause of, nor represent a form of individualised or desensualised eating for most respondents. Rather, vitamin consumption is something one must do because eating habits have already gone to the dogs. In fact, in an age where children often scrounge their own meals without adult supervision, perhaps vitamin giving represents social behaviour, albeit in a diminished form. Vitamins have to be given to children by adults, an interaction that involves some social exchange. Therefore vitamins may be less individualising than food under some circumstances.

Finally, vitamins may not only have effects on social dynamics, they are also a kind of barometer of social ties. Vitamin giving appears to be confined to close family members only.

Pharmaceutical Profits and the Role of Advertising

Pharmaceutical Profits in the Literature

Medicines are moneymakers. The pharmaceutical industry is one of the most lucrative manufacturing activities in Canada. Continued growth, and therefore profitability, is predicted for this industry (Clarke 1990). Pharmaceutical companies employ many strategies to maintain their profitability. These include: patent protection, producing brand name products, and employing clever and diverse advertising, marketing and publicity tactics (Clarke 1990).

Patent protection, which currently grants exclusive rights to pharmaceutical manufacturers for seventeen years, limits competition and therefore keeps prices high. Moreover, the seventeen year patent expiry date can often be extended by creating new drugs similar to the original. Dosage levels can be altered or new indications

found for old formulations (Abramson 2004).

Brand name products have much greater profit margins than their generic equivalents so drug companies promote their use. This is done through various direct and indirect methods. Pharmaceutical representatives visit doctors' offices and pharmacies, distributing literature, offering free samples and discounting prices. In their presentations to doctors detailers discourage the use of generics. Pharmacists, who are asked to make product recommendations, are often owners of the establishments where they work; therefore it is in their best economic interest to sell products that have greater profit margins, usually these are brand name products (Clarke 1990; Lexchin 1989).

Advertising, marketing and publicity campaigns are not limited to those described in the paragraph above, however. Pharmaceutical companies advertise aggressively to patients themselves. In the U.S., Direct-to-Consumer (DTC) advertising opportunities were severely limited until 1997, when changes in legislation relaxed the conditions under which pharmaceutical products could be advertised to the public. Since then, pharmaceutical companies have stepped up their advertising considerably. According to the Economist Intelligence Unit (08 Aug 1998; 21 Apr 2001) dollars spent on DTC drug advertising in the United States increased from 55 million in 1991 to over 2.5 billion in 2000. By 1998 spending on prescription drug ads exceeded that spent on beer advertising. [E]

This money isn't spent for nothing. A *Prevention* magazine study published in 1998 found that ninety percent of a survey group had seen a drug advertisement, a third had visited their doctor as a result, and eighty percent of the doctors consulted had agreed to prescribe the requested drug. The same study found that products

[E] Although DTC is not allowed in Canada many adverts reach Canadians via television signals and magazines that cross the border. So this phenomenon exists in this country too, albeit at less exaggerated levels (Abramson 2004; EIU 08 Aug 1998).

featured in adverts were perceived as safe and that patients took more of their drugs and remembered to re-fill them, as a result of seeing ads (EIU 08 Aug 1998). DTC advertising is effective in creating brand name recognition and loyalty (EIU 08 Aug 1998; EIU 21 Apr 2001). Also, because many of these adverts include toll-free numbers and websites which viewers are encouraged to visit, they serve as their own feedback mechanisms. Marketing information is collected from the calls made to phone numbers and visits to internet sites. John Abramson, a family doctor who is retired from a small New England practice, has personally experienced the effects of DTC commercials.

> My patients were not immune to the effect of all this advertising. They increasingly requested and occasionally demanded these expensive new drugs for their arthritis symptoms and various other aches and pains (2004:5-6).

There are also less economic deterrents to buying drugs than ever before because managed care plans and HMOs now dominate U.S. health insurance (Abramson 2004; EIU 08 Aug 1998). Unlike indemnity coverage, which dominated health insurance up until twenty years ago, these programs cover the bulk of prescription drug costs. For many, these new health care plans mean access to critical medications and decreased worry over unexpected treatment expenditures. However, Abramson identifies problems with this new trend in health care. For example, less critical thinking is going into patients' decisions to medicate. Many Canadians have insurance similar to that described above (Lloyd 2003). For example, all of my respondents, because they are Quebecers, have either collective or provincial drug coverage.

Drug companies interpret these trends as a positive move toward patient empowerment. DTC advertising generates better public awareness and understanding, of both medical problems and the therapies that can treat them. Supporters of this

form of advertising say that patients will be able to take more responsibility for their own health if they have direct access to all medical information (EIU 08 Aug 1998; EIU 21 Apr 2001; Moynihan, Heath and Henry 2002; Mintzes, Bonaccorso and Sturchio 2002). Most of the commentary levelled at DTC advertising, however, is negative. Critics blame this form of advertising, and the companies who sponsor the adverts, for over-medication, fear-mongering, medicalisation of ordinary life processes, expanding disease definitions with a view to expanding markets, constructing illness in order to increase sales, changing "lifestyle" drugs into products people feel they cannot live without, obscuring social and political explanations of illness, treating personal problems as medical, conceptualising risk as disease, framing prevalence estimates to maximize the size of a medical problem[F], replacing non-drug with drug treatments, and increasing iatrogenesis (Moynihan, Heath and Henry 2002; EIU08 Aug 1998; Mintzes, Bonaccorso and Sturchio 2002; Clarke 1990; Rose 2001). Quite the list. While drug companies and industry supporters tout advertising as a means for average Americans to take control of their own well-being, Abramson (2004:152) turns this notion on its head by saying that this medium actually taps into viewers 'desires to take charge of his or her health' and then perverts this goal by promoting behaviour least likely to produce this outcome.

Worrisome as drug advertising is, Abramson (2004) feels that advertisements do not pose the greatest threat to North American drug consumers. Advertisements are at least up-front. Everyone can identify commercials and knows what ends they serve. The bigger risk lies in slickly orchestrated awareness campaigns. Public relations firms design "medical education programmes" for example (Moynihan 2002). What used to be an advertising campaign is now more sophisticated, and not

[F] Pharmaceutical companies make diseases look more prevalent than they are by making the products they sell appear commonly used. They do this to promote the conclusion that the targeted illness is widespread (Lloyd 2003).

just in name. Medical education programmes do not involve the simple introduction of a medicine to a patient or doctor. Rather, first the medical disorder is established as a disease state in the minds of patients and medical personnel. Next the solution to the problem, the drug, is introduced. Finally, "support" is provided for everyone involved. A case in point discussed by Moynihan, Heath and Henry (2002) is Irritable Bowel Syndrome – IBS, with its companion drug Lotronex (GlaxoSmithKline). The medical education programme for this disease-drug complex included: setting up an advisory board, establishing best practice guidelines, organising IBS meetings, producing a newsletter and creating a patient support program. The planting of "advertorials" as Moynihan calls them, in leading medical magazines was another programme strategy.

Similar tactics have been used for osteoporosis treated by alendronate (brand name Fosamax). In this case complicated disease-mongering campaigns were set in motion to convince the public that osteoporosis risk factors are portents of the disease. Trial statistics were manipulated to make it look like alendronate plays an important role in risk reduction, when indeed, there is no proof that it does. Pharmaceutical companies sponsored both meetings where the disease was being defined and media awards offered to journalists. The manufacturers have also developed financial ties with researchers, and have funded patient groups, disease foundations, studies of therapies, and advertising campaigns for both the disease and the drugs. Within these contexts the silent nature of osteoporosis is played-up, surrounding the disease in an aura of fear. Meanwhile, the definition of osteoporosis is controversial, and the link between increased bone density, which the new osteoporosis drugs are supposed to improve, and reduced fracture risk is not established. Furthermore, focusing on drug solutions to osteoporosis, whatever its definition may be, has diverted attention away from inexpensive non-pharmaceutical interventions like smoking cessation, diet

change, fall prevention programs, or exercise (Moynihan, Heath and Henry 2002; Abramson 2004).

Advertising, then, is not the only way that pharmaceutical manufacturers get their message "out there". Sophisticated public relation campaigns are another means of spreading information that suits industry interests. Abramson (2004) identifies this type of activity as part of a greater problem of co-option of medical science. Public relation campaigns are only one of many ways in which the integrity of the American medical system is being undermined. He feels that corporate influence is tainting almost every facet of the health system. Other examples of co-option explained by Abramson include: disempowered and compromised regulatory agencies, excessive government lobbying, commercially sponsored medical education, manipulation of free media coverage, financial ties between supposedly independent medical experts (working as researchers, physicians or as journal writers/editors, for example) and medical industry; in short commercial takeover of much medical knowledge and practice.

> There has been a virtual takeover of medical knowledge in the United States, leaving doctors and patients little opportunity to know the truth about good medical care……Medical science has become deeply flawed, manipulated to serve corporate interests……..At best, the medical knowledge produced by commercial interests is restricted to the medical problems that are most profitable to study. And at worst, research is manipulated, misrepresented, or withheld, with the goal of maximizing sales. (2004: xiv-xvi, 110)

The corruption discussed by Abramson represents serious problems that are prevalent and widespread. Consider the following regarding regulatory agencies. FDA officials often begin their careers in the industry, or are hired by pharmaceutical firms after working at the agency. This type of migration fosters values that are sympathetic to industry within regulatory agencies. Recent (2001 and 2003) inquiries at the FDA have shown that some regulatory staff feel uncomfortable voicing scientific opinions

that do not favour drug manufacturers (Abraham 2002; Abramson 2004). When industry complained about the long waiting times for drug approval, and what they perceived as excessive regulation during the 1970s and 80s, the FDA relaxed the rules and accelerated the approval process. These changes were made possible, in part, because pharmaceutical companies paid the FDA for faster service. The result: today fees collected from manufacturers make up 12% of the FDA's budget. Furthermore, when the FDA reviews data they rely on the advice of expert scientists. These scientists need to be impartial in order to assure proper treatment of files. Unfortunately, sometimes up to 90% of FDA advisory committee members have conflict of interest (Abraham 2002; Rose 2001). American agencies are not the only ones having their integrity undermined; similar problems exist within the Canadian regulatory system (Clarke 1990).

Problems of integrity similar to those experienced at regulatory agencies are occurring in every other sector of the health system. Some brief examples: doctors receive corporate sponsored educations and then are exposed to "continuing education" in the same vain when they attend commercially funded seminars, are bombarded in their offices by corporate generated literature, or are courted by free-sample-wielding pharmaceutical sales representatives (Clarke 1990; Abramson 2004). Medical journals, important resources for all physicians, have come under attack by commercial forces. The result is the publication of misleading or purposefully incomplete information in some of the most respected journals, like the *Journal of the American Medical Association* (*JAMA*) and the *New England Journal of Medicine* (*NEJM*) (Abramson 2004). Even the CPS (*Compendium of Pharmaceuticals and Specialities)*, which is the doctor's desk top, most relied-upon guide to prescribing, is described by Clarke (1990:289) as "basically a tool to promote the interests of drug

companies" (Lexchin 1989). The CPS, which, by the way, has been recommended by the *Canadian Medical Association Journal*, is replete with errors and dangerous omissions (Clarke 1990). It is also, and I have confirmed this myself, chock-full of advertisements. The American equivalent of the CPS, the PDR (*Physician's Desk Reference)* has been described as 'paid advertising' by the Public Health Service. It is prepared, approved and financed by the manufacturers themselves. It too is full of advertising (Mintz 1967).

Advertising and Pharmaceutical Profits in the Data

Many of the terms respondents used to describe vitamins, vitamin taking, or the reasons they take vitamins are also notions found in commercials. Balance, moderation and juggling are examples. People spoke about juggling/balancing diets and lifestyles, for instance. Within the first months of 2006 alone I have personally seen at least two television commercials based on these two themes.[G]

Advertising may be guiding supplementation routines. People feel that vitamins are daily fare and that they are best taken at certain times of the day and year. These habits have been promoted in adverts of decades past, discussed by Rima Apple, but they are also present as themes today, for example the product named One-A-Day promotes daily consumption by its name alone. Current vitamin habits may be based in historical antecedents (Mintz 1985). Many respondents supplement and don't know why. It is a habit. Notions of supplementation as daily or seasonal found in older vitamin adverts may persist today, passed on from one generation to another. That certain people are nutritionally vulnerable, the elderly, vegetarians, women for example, may be ideas that have entered peoples' minds by way of commercials past

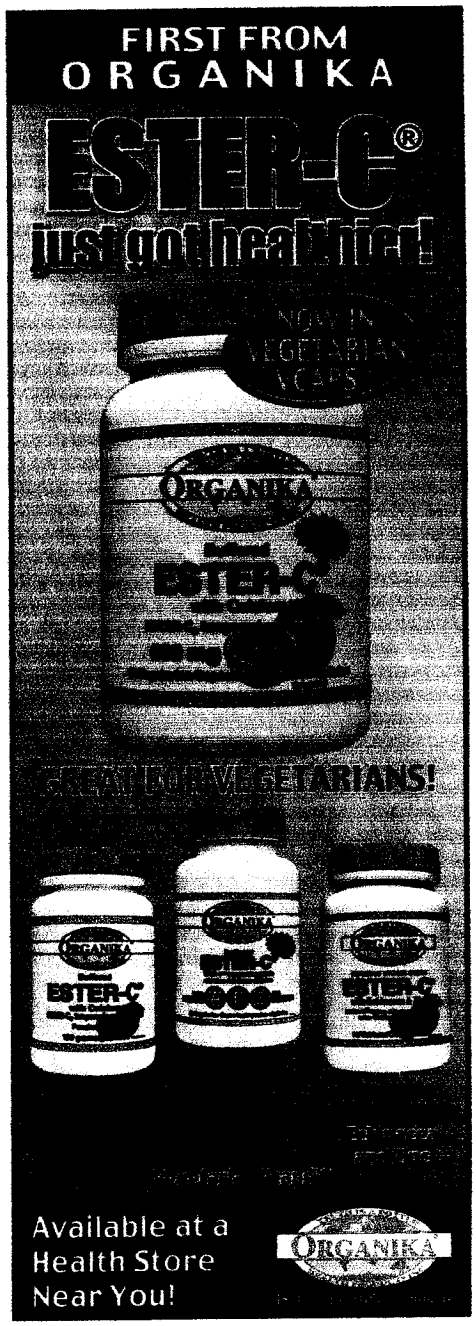
[G] March 04, 06: Centrum commercial broadcast on HGTV showing people juggling their way through life. January 18, 06: Centrum commercial broadcast on WPIX wherein the product's superior 'balancing' of ingredients was discussed.

or present (Figure 4 and 5).

Respondents, especially parents and particularly women, feel the pressure to both take and feed vitamins to their children. These pressures come from many places: mothering magazines, newspapers, the grapevine, family members and commercials. It appears that parents are learning from advertisements how to "care" for children with products (Figure 2). I also wonder although I did not research this, if there is any commercial funding backing the articles about folic acid and the like. I do know that *Prevention*, which has a paid circulation of three million, allegedly takes in ten million dollars per year on supplement advertising (Richards 1991:46). Perhaps some of the supposedly neutral information parents are getting is rooted in commercial campaigns to boost sales.

I didn't interview children so I don't know if they see vitamin commercials or not. I believe they do. Children do perform a kind of advertisement with their parents, however. Because they like their vitamins (or because they like what they've seen on TV in advertisements?) they pester and remind their parents to feed them supplements. This is a form of advertisement by proxy. In fact, information about vitamins that is exchanged amongst family, friends and neighbours or that floats around in the form of old wives' tales may be largely informed by advertising too...'And they told two friends...and so on....' Marketing guru Seth Godin refers to individuals who (unknowingly) disseminate commercial messages as "sneezers"[H]. They pick up a trend or idea from commercials and then spread it far and wide providing second-hand, free advertising for marketers. I could not tell from my data if messages passed between friends and family had their provenance in bodily experience, commercials or elsewhere.

[H] He appeared on Venture, aired on the CBC, January 29, 06.



journal articles, the Encyclopedia of Natural Healing, alive's HQ (Health Quotient) Assessment and Recipes October 2002 77

Figure 4: Organika Ester-C advertisement. (Source: *Alive*, October 2002, p. 77)

Figure 5: Abundance advertisement. (Source: *Alive*, October 2002, p. 51)

All of my respondents, but one, told me they had seen vitamin commercials at some point or another, somewhere. Not everyone thought they were susceptible to commercial messages, but I wonder, given Abramson's findings about the advertorial nature of many supposedly neutral media pieces, if all of my respondents would recognise every commercial they saw. I know I wouldn't. Most respondents are reminded by commercials to restock their vitamins and many would consider asking a doctor about a product if they were introduced to it in a commercial message. People, myself included, remembered seeing specific advertisements, quoted from commercials ('*A to Z*'), used brand names as product descriptors ('*Centrum is THE multivitamin*'), and show aversion to generics; all signs that commercial messages are informing their supplementation ideas and practices. Finally, interviewees told me they get a lot of vitamin information out of newspapers and magazines, off television and radio programs, from doctors, etc..... information that may be traced back to corporate sponsors and is therefore potentially a form of disguised advertising. This type of publicity spurs consumption. Pharmacists report being able to guess what the topics were on recent talk shows by trends in product requests (Vuckovic and Nichter 1997). I have also had a similar experience. While working in a health food store in the late eighties I had half a dozen customer requests for oat bran in one weekend. This was just before oat bran became a health food 'hot item' so these queries appeared bizarre. I finally clued in to what was causing this trend when one of the requesters showed me a recent Montreal Gazette clipping touting the positive effects of oat bran on the heart.

It also appears that 'genuine' reporting on vitamin issues is taken up by the pharmaceutical industry and used to promote their products. Evelleen Richards (1991:49) speaks of at least one instance in which controversial high profile vitamin

research has been used by the pharmaceutical industry to promote their products. Hoffmann-Laroche's vitamin C line was given a considerable boost during the 1970s by the exaggerated publicity generated by the battle that took place between the Mayo Clinic and Linus Pauling. Given the large quantity of vitamin C ingested by my interviewees, the fact that one respondent made reference to the Linus Pauling specifically, and the confidence respondents had in the therapeutic value of this vitamin versus colds and cancer, it is clear to me that these dynamics of influence are in effect.

Vitamins can be advertised without the restrictions applied to other pharmaceuticals. Because of this, both the amount and type of advertising reaching consumers differs from that of drugs. First, because of DTC laws, North Americans have been exposed to vitamin commercials for a lot longer than drug commercials. Second, vitamin commercials portray their products in a different light than drug equivalents. For example vitamin commercials are not characterised by the quickly worded, scary sounding list of potential side effects that are heard in drug adverts such as diarrhoea, dizziness, constipation, dry mouth, or the ever-ominous sexual side-effects. Ultimately these quantitative and qualitative differences in advertising lead to the painting of divergent pictures of what vitamins and drugs are. Several respondents made reference to the fact that vitamins have been around for ages and therefore if they were unsafe somebody would have caught up with that fact by now. These notions may have some basis in vitamin advertising, namely the fact that DTC vitamin advertising has been around for decades and that side-effects of vitamin taking are not mentioned during commercials.

Vitamin advertising is ubiquitous and therefore serves as a constant reminder to supplement. Commercial messages encourage high daily consumption.

Furthermore, in advertising vitamins appear as a safe, undrug-like product (Figure 6). These are all factors that work in favour of their consumption.

My data indicate that advertising is both informing and driving vitamin consumption. Themes in commercials match up well with those raised by interviewees (Figure 7: here a religious or magical theme. The pills are angelic. Figure 8: winter is the season when we are most susceptible to colds and flu). Whether or not this is a case of society influencing advertising or vice versa, I don't believe it fruitful to launch into a chicken and egg discussion here. Ultimately the advertising industry has managed to latch onto some powerful vitamin concepts that resonate with the ideas of their client base. This is what is important. In this regard my data match up very well with the literature.

One last point deserves mention with regard to vitamins as products that generate profits for pharmaceutical companies. Not all supplements are made by large corporations, some are produced by small firms. Therefore not all vitamin profits go to the big pharmaceutical companies. Most of my respondents' vitamin use, however, consisted of big name products, like Centrum, One-A-Day, Flintstones, Stresstabs and Materna. Therefore, I do not engage in discussion on product lines which generate income for companies that may have little in common with the large corporations, in this text. It is important to mention, however, that this other realm of vitamin production and consumption exists. The few respondents who did use products made by small manufacturers did so because they perceived these products as higher quality or more safe than mainstream ones. For example Victoria and Jennifer have carefully selected supplements containing no artificial dyes or sweeteners.

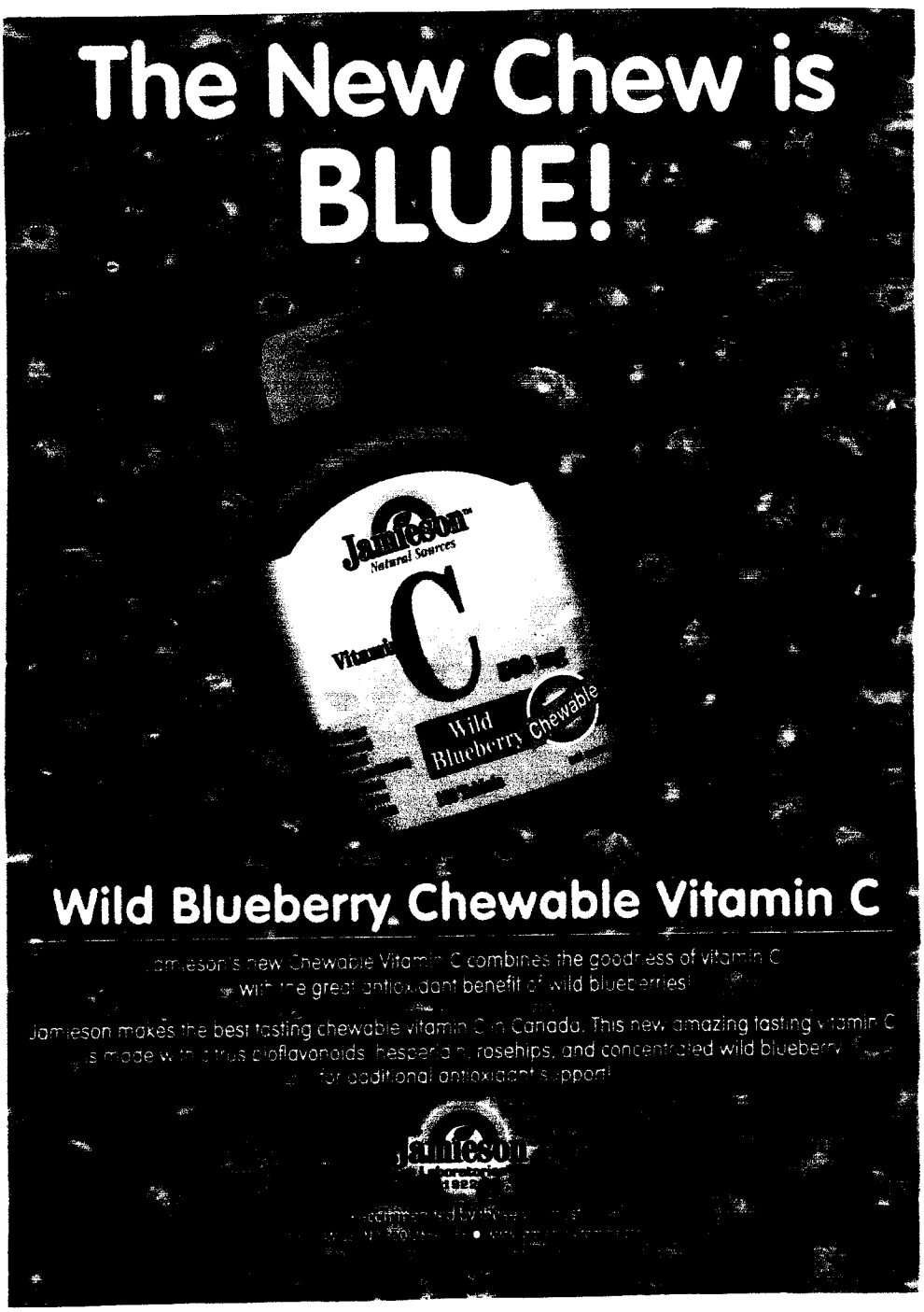


Figure 6: Jamieson Wild Blueberry Chewable Vitamin C advertisement.

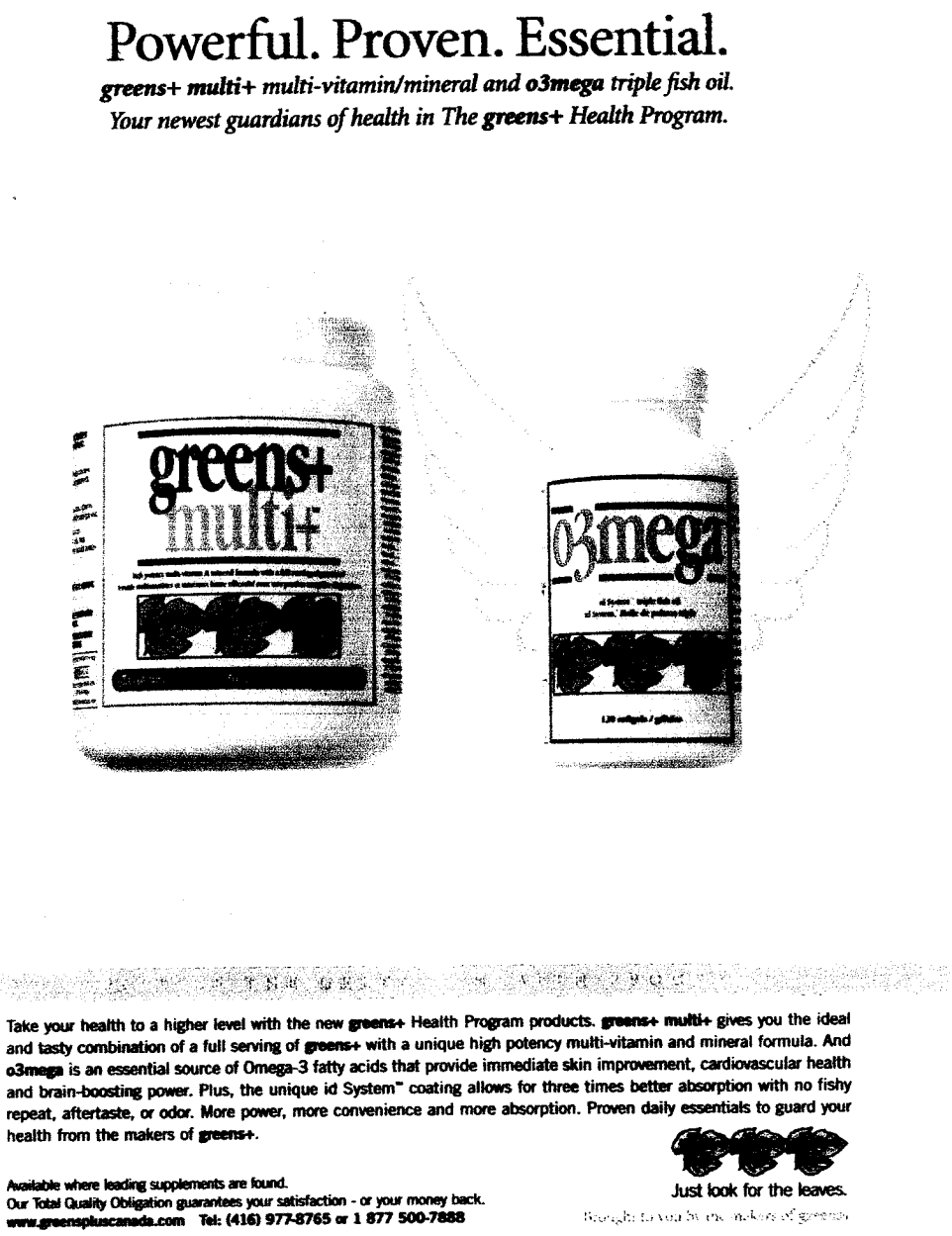
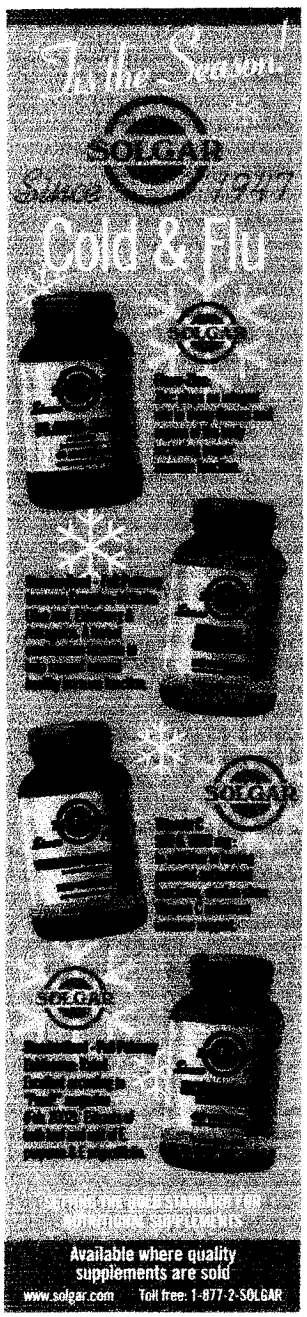


Figure 7: Greens+ Multi+ advertisement. (Source: *Alive*, October 2002, p. 65)



42 October 2002

Figure 8: Solgar Cold and Flu advertisement. (Source: *Alive*, October 2002, p. 42)

Losing Confidence in Medicines: Issues of Safety

Safety in the Literature

It is clear from the discussion above that the North American Medical establishment is riddled with integrity problems. There is a lot of information available to North American patients - pharmaceutical companies make sure of that - but much of that information comes from co-opted sources. Even if physicians manage to avoid succumbing to some of the more obvious commercial influences – the sales reps, the golf weekends sponsored by company XYZ – they could still be keeping up on current medical issues by reading the *NEJM*, unaware that this information might be spun too. Even if many patients are unaware of the extent to which medical science is co-opted and commercialized, they certainly hear about drugs like Vioxx (which regulators approve, patients request and doctors prescribe largely thanks to corporate influence) and consequently lose faith in the medical system. In other words, whether or not they are aware of all the machinations going on behind the scene, they are certainly aware that drug companies are raking in money, and they hear about problem drugs like Vioxx. So while drug companies make huge profits, patients receive poor health care and experience powerlessness in their quest to obtain sound (or at least well-intentioned) medical information.

Although medication use is on the rise in the U.S., there may be a movement away from "drugs" towards alternative remedies (Vuckovic and Nichter 1997). Vuckovic and Nichter believe there is a breach in public confidence in medicine caused by negative media coverage and patient knowledge of drug side effects. Beside these "harsher" appearing medicines, milder remedies, like vitamins seem less threatening.

> An increasing number of Americans have begun to experience information anxiety regarding medicines. Unable to sort through the huge influx of information delivered by the media, the public is often confused and left with the impression that "everything is

> harmful". Concern about the toxicity of the environment contributes to this state of anxiety. For these people, drugs, *with the possible exception of vitamins*, are seen as less protectors against environmental threats and more as threats in themselves (my emphasis) (1997:1298).

In an effort to offset the negative perceptions of medicines, many manufacturers market their products emphasising what they *do not* contain:

> Images of safety are engendered by ads which emphasise "no sodium, "no caffeine", or "no narcotics" (1997:1298).

Meanwhile the dyes, preservatives and artificial flavourings that are present in pharmaceuticals, along with their iatrogenic effects, are ignored.

Patients engage in pharmaceutical pluralism in an effort to minimise potential hazards of taking drugs. For example parents will try to consume, or feed children, milder medications like herbals, only turning to harsher OTC or prescription drugs as a last resort (Vuckovic and Nichter 1997). Generally speaking, herbal products are perceived as weak medicines as compared to OTC, which in turn are believed to be weak in comparison to prescription drugs. Vuckovic and Nichter (1997:1291) wonder if these perceptions engender a "cavalier attitude" toward the use of the supposedly weaker/safer medicines.

Safety in the Data

Few interviewees voiced concerns about the safety of vitamins. Even those that did seemed to consume these products almost indiscriminately. There were only two people who worried about the safety of supplementing (Madeleine and Helen- who were concerned about forming habits). They too had used a considerable quantity of vitamin products despite their concerns.

Safety issues appear to play a big role in vitamin consumption. Concerns regarding safety that might hold back consumption of other products simply don't

come up with regard to vitamins. Many interviewees told me that when they have health problems they try supplementing first, then only move on to harsher medications if vitamin therapy fails. Vitamins are perceived as safer than OTCs and prescription drugs and people are willing to try them first in their trajectory of treatment. Vitamins are, then, perceived as safer than other drugs, a fact that works in their favour. For most medical conditions people want to try them first; starting with a 'lesser evil' product is the way to go.

This wasn't just the case with less serious illnesses like colds and flu. Respondents take vitamins against cancer (Victoria) and depression (Emma). When it comes to strength and safety vitamins are able to walk the fine line. People are taking them against serious illness so in some cases they are perceived as strong or efficacious. Yet they are taken in large amounts with little thought because they are believed to be safe.

With respect to quantities consumed, my data also show that vitamins are perceived as safe even taken in large quantities. There were a few people who spoke about the possibilities of taking too much vitamin E or A, but again these concerns were few and far between, they were voiced with little emphasis, and, often people were not being careful of what they consumed despite voicing concerns about consuming large volumes. A few respondents were unaware that taking some vitamins in large quantities can cause serious harm, even death (Whitney and Rolfes: 294-366). Many respondents take a multivitamin and several other products simultaneously, and a few told me they take '*a ton*' (Dana) of vitamin C when they are trying to fight a cold.

The fact that many respondents take vitamins for no other reason than taste indicates the extent to which vitamins are perceived as safe. Several people told me

that they keep a bottle of vitamin E or C around because they like it. Discussions about taking vitamins for taste usually include disclaimer comments of 'oh, and of course they are supposed to be good for you too, so what can it hurt'. 'If they are good for you and they are safe, why not consume them' is a common approach.

Other proof that supplements are perceived as safe is found in the extent to which people will give these products to their children. Every single respondent who has a child still at home (this does not apply to adult children) gives or has given them vitamins. Many give them out simply to keep the peace. Parents are careful to keep the bottles out of reach, however, and they respect dosage levels more carefully than they do for themselves. However, amongst my parent respondents, explanations of giving vitamins to children are also couched in 'good for you' and 'cannot hurt' discourses.

The language used by respondents demonstrates that they believe vitamins are safe. As just discussed, people come right out and say 'it can't hurt', for example. There were also cases of people thinking that the word 'vitamin' itself denoted healthfulness and safety.

With respect to safety, then, my data match very well with those in my literature review. Patients are worried about risks inherent in drug-taking and are therefore turning to 'alternative remedies' like vitamins because they appear to be safe, or at least safer than other medicines.

Time Is Money

Time in the Literature

Alternative therapies are experiencing an increase in popularity in the U.S. (Vuckovic and Nichter 1997). Not only are these products considered safer than

allopathic medicines, they are also available without prescription, saving patients time and money. Time, equals money, plays a huge role in medicine choices and decisions to medicate (Vuckovic 1999). In *Fast Relief: Buying Time with Medications* (1999) Nancy Vuckovic discusses how North American time famine is driving increased consumption of medicines. For example, drugs are popular because they can be consumed quickly in comparison to other remedies, like herbals, which need preparation (such as teas which require brewing), or are slower acting. Parents, particularly women, take medicines or feed them to their children because they cannot take time off work. This is not most parents' ideal in terms of healing strategies, but harassed by hectic schedules, they do whatever it takes to get through their days (Vuckovic 1999; van der Geest and Whyte 1989).

> Several women had used herbal and homeopathic medications on occasion, and thought that these remedies were a safer or more natural way to care for themselves or their children (Vuckovic 1995). Nevertheless, they often did not have time to wait for these slower-acting herbal products to take effect. Tina believed that vitamins and herb teas could help treat many illnesses, but "they take forever and no one has forever" (Vuckovic 1999:61)
> The long-term goal of maintaining a healthy body becomes overridden by the short-term goal of getting through the day because the latter is seen as more pressing and as having a more assured outcome....The allure of natural products and the belief that using fewer medicines overall is better than using more fade amid the exigencies of daily life, while use of allopathic medicines increases because they are convenient, easy to use, and fast-acting (Vuckovic 1999:62).

The need for quick relief results in consumption of fast-taking and fast-acting medicines, but it can also spur people to take greater amounts. Patients sometimes perceive that taking more medicine will produce better, faster or longer-lasting relief. Prophylactic use of drugs also contributes to consumption figures. People desperate not to fall sick take medications ahead of time in a bid to cut off illnesses they think they are going to get. For instance, exposure to someone with a cold will promote individuals to take vitamin C. "At riskness has become a state, like illness, to be managed by medicines" (Vuckovic and Nichter 1997:1293; Rose 2001; Katz and Marshall 2004). In some cases, like that for vitamin C preventing colds, people take

the medicine because they feel they cannot get sick, they must not miss work. The vitamin C is taken to buy time. People also take medications prophylactically in a bid to buy time later in their life. For example people also take vitamin C against cancer. In these cases the time bought is an extension of life, an increased lifespan.

Drug taking becomes a habit and consequently patients worry less about over-medicating and side effects, and, they become more willing to medicate for nonpathological conditions. Greater reliance on medications causes lowering of patient tolerance to discomfort. Lowered tolerance for discomfort leads to more medicating, and a self-perpetuating cycle of drug consumption is established. According to Vuckovic (1999), increased demand for pharmaceuticals, brought on by lowered tolerance to discomfort, prompts manufacturers to expand product lines. Increased choice incites consumer to buy ever more products, lowering tolerance even further. Again, a cycle of perpetually increasing consumption is created. In consequence the definition of what is "normal" changes. It becomes normal to medicate and abnormal to ride out symptoms. Definitions of health, illness and acceptable behaviour change (Vuckovic 1999; Rose 2001; Katz and Marshall 2004).

> Symptoms associated with the stresses of modern life – fatigue, sleeplessness, indigestion – are treated by medicines which become part and parcel of one's daily routine. For many people, routine use of medicines to mitigate symptoms leads them to no longer see these products as "medicine". Pharmacists note that some patients only report routine use of medicines after careful prompting because they have ceased to consider that taking these products is out of the ordinary (Vuckovic and Nichter 1997:1297).

Katz and Marshall (2004) go so far as to say that people may be ostracised if they resist treatments that return them to a state of functional health.

Turning to medicines can distract individuals from adopting lifestyle and behavioural changes necessary for long-term health. Symptoms of poor health are masked, bad habits persist, and patients are promoted to continue medicating long term. For instance, instead of changing eating habits that are causing health problems,

patients consume vitamins, laxatives or antacids. The health problems remain unchanged so patients continue taking the medicines (Abramson 2004; Vuckovic 1999). Quick-and-easy medication masks not only individual symptoms, but by extension symptoms of greater social problems that are causing illness in the first place.

> "Quick fix" products are available to alleviate the symptoms of environmental and social distress, providing a level of functional health which mitigates the need to resolve the underlying causes of the symptoms (Vuckovic and Nichter 1997:1298).

Time shortage causes stress, which in turn causes illness. Time-poor individuals are less able to establish good sleep, diet and exercise regimens; therefore they fall ill more often. These are other ways in which time famine effects the consumption of medicines (Vuckovic 1999).

Time-poor people are also less likely to seek care when they are ill. Time and wages are lost sitting in waiting rooms. Doctors' offices are inconvenient to get to. Meanwhile pharmacies are often close by, open long hours, and provide home delivery services, so to save both time and money patients use medications bought at drug stores. Often multi-products are chosen because they save time. If one multi-symptom product can be bought, it will save trips to the pharmacy and ingestion of multiple products, which again takes time. Also, sometimes people use products FOR their side effects, for example using birth control to control cramps or cold remedies as sleep aids. Although some people question the safety of products with long lists of ingredients, many adhere to a "more is better" philosophy of medicating. Meanwhile, some patients believe that it is safer to take one multi-action, rather than a few single-action products, to treat symptoms. The "more is better" philosophy also promotes the consumption of brand names over generic products. Generics are perceived as less effective (Vuckovic 1999; Vuckovic and Nichter 1997; Nichter and Vuckovic 1994).

There is conflict inherent in these discussions on safety and time. Products are taken for their time-saving qualities but are simultaneously disliked because they appear unsafe. Vice-versa. Safer, slower-working products are sometimes shunned when they cannot be worked into fast-paced lifestyles. Many products, then, are unable to meet the two important qualities that North Americans seek in their medications, speed and safety. Vitamins, considered alternative medicines in these discussions, are quick and easy to take because they are pills, and are easy to buy because they are OTC, but they are not fast-acting. Therefore they possess some, but lack other qualities coveted by time-poor patients. Meanwhile, vitamins are perceived as mild and therefore safe, positive qualities as far as North American consumers are concerned. However, they are not always considered powerful, and sometimes a strong medication is what is needed to be able to get on with a hectic life.

Much of the time theory matches up with that discussed in the material culture section above. Medications, as biotechnologies, speed up life, and people living sped-up lives do more medicating. 'Medicines have joined the ranks of other time management products' (Vuckovic 1999:62). They enable time-poor people as they pursue unhealthy lifestyles, and they individualise and desocialise activities. According to Vuckovic (1999), medicating children or other loved ones can substitute for care when people have no time to give personal attention. Because of this more medicines are given during the week then weekend. Time is in shorter supply during the week so there is less time to take care of self or others. Besides this, when parents feel they cannot miss work children have to be medicated so that they can be dropped off at daycares with their symptoms hidden (Vuckovic 1999).

Advertisements for medicines play on these themes.

> Medicine advertisements reify the relationship between medicine and the compassion for one's children by using photography, narrative text, and viewers' knowledge of a sociocultural lifeworld to create stylized accounts of desirable social relations (Goldman

1992; Williamson 1978) that occur in conjunction with medicine giving. These ads dramatize the time pressures inherent in U.S. life and promote products as the logical solutions to these pressures. They acknowledge that time constraints make it difficult to provide traditional remedies and home care while at the same time sanctioning their replacement with commodities. The depiction of a mother caring for her sick children – bringing them from sickness to health, relieving their suffering – makes medicines prized not only for their use value (e.g., reducing fever), but also for their exchange value as an idiom of concern (Nichter and Vuckovic 1994). Not only health, but also affection, is commodified (Vuckovic 1999:59).

Time and Money in the Data

Many of my respondents take vitamins because they live hectic rushed lives. Time famine makes it difficult for them to eat well, or cook "proper" meals so they take vitamins to make up for perceived gaps in their diet. Vitamins are also quick and easy to take and hurried respondents appreciate this fact. Many also feel that their bodies are drained by the stress inherent in their way of life. These people take products like Stresstabs to replenish bodies ravaged by busy lifestyles. Della, for example, took supplements when her kids were younger, hoping that these products would increase her energy during times of stress and sleep deprivation.

The interviewees are also taking products prophylactically. For example, a few, mostly teachers, take vitamin C to fend off colds and flu. These people believe that because they work with large numbers of children with runny noses and unwashed hands, that they are regularly exposed to 'whatever is going around'. With regard to taking medications to cut short illness times, many respondents feel vitamins are efficient in this regard, at least with respect to colds and flu. Many told me that they perceived their illnesses were shortened by taking vitamins and they took these products for that reason.

I saw little evidence, however, of people taking vitamins so that they wouldn't miss work as Vuckovic (1999) did in her study. Vitamins differ from many of the drugs discussed in the literature. Vitamins may cut colds short, but they aren't fast-acting or symptom-masking (which are traits that Vuckovic speaks of), therefore it

wouldn't make sense to take them as a way to get through a work day anyway. Respondents are trying to avoid falling ill, but no one said that taking time off was a problem. Nobody told me that they couldn't miss work because of lost wages, nor did anyone avoid visiting the doctor because they couldn't afford to go. A few respondents did tell me that they use what Vuckovic and Nichter refer to as "lay referral networks" (family members and friends with whom they exchange vitamin advice), but they did so when they felt they didn't have the time to visit a doctor.

In other words, my respondents do take these products to avoid the discomfort of illness and to save time, but for most, money is not an issue. My data, then, agree with the pharmaceutical literature in that people appear to be taking vitamins because of time famine. My data are not agreeing with this literature, however, when it comes to consumers trying to avoid expense. This incongruity can probably be attributed to the makeup of my interview cohort. My respondents are largely middle-class and all are Canadian. Therefore my respondents pay nothing per visit to see a physician, and, few have money troubles in the first place. Most are probably paid for sick days. Those who are financially strapped, the students and newly divorced Dana, do not ingest vitamins as a means to get to work so they can collect their pay. Instead, vitamins are not purchased by these informants in the first place, because they represent an unaffordable expenditure in and of themselves.

Therefore time worries are driving vitamin consumption, while money worries appear to do the opposite for my respondents. The more economically vulnerable of my interviewees avoid buying vitamins.

To Take or not to Take: Compliance

Compliance in the Literature

Stigma associated with medicating can lead to non-compliance. This can be because taking medications is self-defining. "I take Prozac, therefore I am depressed". Medicating regimes serve as constant reminders of illness states and few people want to be sick. Stigma can also affect compliance because in some situations it is very difficult to consume medicines secretly. Then again, as mentioned above, stigma can lead to better compliance, for example when medicines mask embarrassing symptoms. Furthermore, sometimes medicating as self-definition can promote compliance. For example a patient might say, "By taking my pills I am taking control and helping myself back to good health". Or, when using the sick role, a patient may use medicating as a way to avoid the stigma of being labelled a malingerer (Conrad 1985; Parsons 1951; Rose 2001).

Non-compliance involves taking medications in frequencies or quantities other than those prescribed. Non-compliance with drug regimes is very high. At least one third of patients do not take their medicines as directed, in fact some do not take them at all (Conrad 1985). Others dip into friends' or family members' medicines when these have never been prescribed. There are many reasons why patients do not take their medicines as directed. Sometimes the patient-physician relationship is lacking, for example sometimes doctors' instructions are unclear, or physicians' poor bedside manner leaves the patient disinclined to follow his/her instructions. Patients also have their own knowledge regarding health and illness, apart from that being conferred upon them by the doctor, and they use it to alter medicating regimes as they see fit. Sometimes this is done in a bid to exert some kind of control in the doctor-patient relationship. Regimes may also be altered in response to power struggles in the home

environment. Often family members will coax or remind a patient to take their meds. Patients may respond to these pressures by reducing consumption when they perceive the reminder as interference. Other times family members' nudges are taken as helpful reminders, in consequence medications will be remembered (Conrad 1985; Vuckovic and Nichter 1997).

Patients are less likely to comply when medicating regimes are complex or have long duration. Other non-compliance can be attributed to bodily factors. For instance, when diseases are asymptomatic, or when drugs have undesirable side effects, patients are less likely to take them. Patients are also more likely to take medications (whether this represents a case of compliance or non-compliance depends on the situation) when they feel susceptible to the illness, or feel that the illness is serious. Medicines are taken to reduce worry (Conrad 1985).

> Increasingly, medicines are used to buy peace of mind in an uncertain world where one must constantly be prepared for rapid change and specialized response (Vuckovic and Nichter 1997).

Some patients are compliant for no other reason than that drug taking is a habit for them. Medicating in these cases is done with little reflection (Conrad 1985). Much reflection does go into consumption that is self-testing, however. Many patients alter their dosages and frequencies with a view to reducing dependency on the drug. Most people will stop taking the medicines if by self-testing they come to perceive their meds as inefficacious. Drug taking will also fall to the wayside if it doesn't fit well into peoples' routines. Economic factors can intervene too. Some patients cannot afford their medicine (Vuckovic 1999; Conrad 1985; Vuckovic and Nichter 1997)).

Compliance in the Data

With respect to the body, my data regarding compliance agree perfectly with

those of Conrad. Patients who feel symptoms are more compliant than those who don't. The idea that reminders from family members can either promote or demote consumption, are also upheld in my interview data. While nudges to take vitamins usually spur consumption, sometimes individuals (like Helen) perceive the coaxing as criticism or interference, and they therefore resist taking their pills. Respondents who were concerned about serious illness or who felt particularly susceptible to certain illnesses had a better chance to take their vitamins than others. Medicines were taken by my informants to reduce worry. This also agrees with the compliance theory. Respondents also found it hard to keep up supplementation for long periods of time. They constantly started and stopped consumption, only to start again later, probably because many perceived vitamin consumption as a regimen for life. Vitamin consumption as either habit, or conversely, as self-testing were also phenomena I observed with my informants. Respondents took vitamins without reflection, and many stopped consumption when they perceived no results. Vitamins were also dropped when they didn't fit into informants' lifestyles. Finally, economic factors affected compliance for some respondents. Dana, for example, had been an avid vitamin-taker until she divorced and buying supplements became a hardship. All these behaviours support Conrad, Nichter and Vuckovic's theory regarding compliance.

Personal Responsibility for Health

Self-Medicating and Self-Responsibility in the Literature

Rose (2001) identifies a trend in the latter half of the twentieth century towards self-responsibility for health. The state, which formerly played an important role in caring for the well being of its' population, has become an enabler, facilitating citizens in their own pursuit of good health. Individuals are increasingly obliged to

manage the state of their own bodies, and they are guided in these efforts by complex networks of government campaigns, pharmaceutical advertisements and self-help organisations.

It is evident from the compliance discussion above that self-medication and self-responsibility play important roles in pharmaceutical consumption. Doctors have a lot of influence on what is consumed, but patients don't always consult physicians and even when they do they don't mindlessly obey instructions. Because patients are the ones who actually put the drugs in their mouth (or elsewhere), it is they that largely determine what is taken.

North Americans have become accustomed to self-medicating. As Young states "Americans have been prone to take things into their own hands, NOT consulting physicians, BEFORE consulting physicians, WHILE consulting physicians" (1977:111). The last four decades have seen a trend of increasing self-medication mainly because many drugs that used to be prescription became available OTC during the 1960s (Lloyd 2003). The recent expansion in DTC advertising also contributes to a form of self-medication. If doctors are prescribing drugs because they are badgered into doing so by advertisement-influenced patients, then one might say it is the patients that are making the ultimate decision to medicate.

Previously discussed, the drive to increase self-medication can be considered a path to patient empowerment, but many (i.e. Nichter and Vuckovic 1994) believe that only pharmaceutical companies are empowered by this trend. Self-medication involves increased attention to the body and it's functioning, therefore people become hyper aware of symptoms and medicate accordingly. The cycles of disease-treatment-disease, or perhaps more appropriately treatment-treatment-treatment, described above, are initiated by the movement to self-medicate. Self-medicating quickly

becomes self-overmedicating (Lloyd 2003). Furthermore, self-medicating constitutes an individual approach. The more people are trained to take care of their own health, the less attention is paid to broader environmental and occupational causes of illness (Vuckovic and Nichter 1997; Katz and Marshall 2004).

Difficulties in obtaining medical care promote self-medication. It is easier, faster and often cheaper to purchase a product oneself than to make an extra trip to the doctor's office (Vuckovic 1999; Vuckovic and Nichter 1997; Lloyd 2003). Lack of faith in the medical establishment also pushes some people to self-medicate. Patients often have a network of family and friends with whom they swap information. These "lay referral networks" are valued because they are made up of people who have knowledge gained through experience, and because it is easier and cheaper to get information from these individuals than from a physician (Vuckovic and Nichter 1997).

An increased emphasis on taking personal responsibility for health, and, the huge number of products from which one can choose, also promotes self-medication (Vuckovic and Nichter 1997; Rose 2001; Katz and Marshall 2004). Pharmaceutical companies recognise that when people self-medicate, their sales increase. In order to foster this trend pharmaceutical companies create advertisements promoting the self-help ethic, expand product lines, and lobby to convert drugs from prescription to OTC status (Vuckovic and Nichter 1997; Abramson 2004).

Self-Responsibility in the Data

Themes of self-medicating and self-responsibility were abundant in my interviews and my data regarding these issues matches well with that in the literature. Many respondents do decide their own vitamin routines, either before consulting their

physician, despite what their physician says, or without consulting a physician at all. This is probably neither here nor there in terms of numbers of vitamins consumed, however, given that many doctors seem to be "coming around" to a pro-vitamin point of view. Self-responsibility, however, does seem to spur vitamin consumption. Many of my respondents feel that if it is something they can do, then it is something they should do. So they take their vitamins.

Roles Played by the Body

The Body in the Literature

Despite the fact that pharmaceuticals are applied to the body, taken into the body and then act on the body, little of this literature is dedicated to theorizing.....the body. The body receives a slight nod of the head within the metaphor, stigma, and compliance discussions, but explicit references are few and far between. Vuckovic and Nichter's comments in *Changing Patterns of Pharmaceutical Practice in the United States* (1997) are an exception.

> Another issue in need of research is whether medicinal fixes have diminished the importance of conceptual frameworks and embodied knowledge as guides for health behaviour. Have symptoms which once served as criteria for assessing illness severity become blurred? Has the habit of using cough syrup to mask breathing sounds or levels of respiratory distress and the masking of fever and pain through use of analgesics affected perceptions of illness? Has the use of medications alienated individuals from the ability to hear the "voices" within their own bodies? (pg. 1297)

The idea that we are hyper-sensitive to symptoms, because this is what pharmaceutical companies have trained us to do, is discussed in the self-medicating theory. Compliance authors note that asymptomatic patients take less medicine. When we feel healthy, we don't medicate. Yet, the time literature asserts that North Americans take products that gag bodily signs so as to be able to get on with busy lives. How can these two notions be reconciled? Do we take medicines cyclically?

When discomfort disappears, medicating stops, only to be resumed as soon as symptoms return? As Vuckovic and Nichter note, these questions need to be answered.

The Body in the Data

My data show that the body plays an important role in vitamin consumption. For example, people receive messages that something is lacking from their bodies. These messages are responsible for initiating vitamin consumption and for reminding individuals to buy and consume these products afterwards.

Other individuals feel that their bodies are innately vitamin deficient because this is the information they are getting from the world around them. Many sources of information, for example friends, medical personnel, medical texts, advertisements, popular media and the like, portray certain individuals as vulnerable. People come to believe that as they get older or when they become pregnant their bodies need supplementation (Rose 2001; Katz and Marshall 2004).

Although the mind, through memory techniques and rationalisation, plays a part in remembering to supplement, the body plays the crucial role in vitamin remembering strategies. For example, the body sends messages of discomfort to the brain as in the cases of interviewees who have psoriasis or colds. The body can also trigger consumption by craving some of the tastier varieties of supplements. Furthermore, respondents plant vitamins in the path of their body going through its daily habits, reaching for cereal bowls or toothbrushes. Finally, when vitamin taking has become habit, part of the vitamin-taking momentum is in the mind. People think 'I've always taken vitamins so I will continue', however, some of the habit of taking vitamins is imprinted in the body. Bodies go about their daily routines, taking

vitamins because it is going through motions it has become accustomed to (Bourdieu 1997). Part of the reason why so many vitamins get forgotten during the weekend and summer is because routines have been broken.

Although under-theorised in the pharmaceuticals literature, the body plays a prominent role in vitamin consumption according to my data. Most of what my respondents told me agrees with the literature, people appear to pay close attention to bodily signals and medicate accordingly. However, something ignored in the literature is the fact that sometimes listening to the body means hearing it say 'I am fine, don't mess with me'. The abstainers, although a small percentage of my group, show that sometimes paying attention to the body results in leaving it alone. It is possible, and these individuals prove it, that some people don't listen to commercial messages and advice from friends to take vitamins, but listen to their bodies instead, and in this case the body tells them not to medicate.

With regard to Vuckovic and Nichter's idea that medications may gag the body or that symptom-relieving drugs may stop people from looking farther than a bottle of pills to solve their problems; I observed the latter phenomenon but not the former. Vitamins do not gag the body as some other meds do in the sense that they do not physically mask symptoms. Vitamins do, however, provide temporary relief for physical ailments that might warrant closer inspection at an environmental or social level. For example, because they take vitamins to make up for substandard food or diet, people may be less inclined to alter eating habits or lobby the government in a bid to change food production regulations.

Something not given a lot of attention in the pharmaceuticals literature, perhaps because it has not been researched, is how people feel about medicines healing whole bodies versus body parts. When understandings about health and illness

shifted from whole-body to magic bullet notions at the end of the nineteenth century, how much of the old galenic view of the body persisted. The existence of multipronged medicines today might represent some carry-over in galenic understandings of healing. Vitamins could easily have carried over these types of meanings. They are multi-products in so many ways. There are many different vitamin molecules and each one performs several functions in the body. When the rules about advertising for medicines were tightened up in the early twentieth century, perhaps vitamins, because they could still be advertised liberally, carried on the whole body legacy that patent medicines had left behind. Respondents questions regarding the letter naming of the vitamins, and my supposition that this indicates that people think of vitamins as whole sets, indicates that further inquiry is warranted regarding how much vitamin popularity can be explained by their being whole medicines suitable for treating whole bodies.

Vitamins are Food as well as Drug

Vitamins in the Literature

There are three texts in the pharmaceuticals literature that need to be reviewed in more detail than the rest because they deal exclusively with vitamins: Vuckovic and Nichter's *Changing Patterns of Pharmaceutical Practice in the United States*, Rima Apple's historical survey of *Vitamania* (1996) in the U.S., and Evelleen Richards' work, *Vitamin C and Cancer: Medicine or Politics?* (1991). Vuckovic and Nichter's article, based mostly on conjecture, suggests reasons why some individuals may consume vitamins. I summarise their suppositions and then compare them with the data. With regard to the Apple and Richards' texts, both provide substantial historical information about vitamin consumption. These works informed my historical review

in chapter 1 and therefore provided the bases for my arguments regarding current consumption based on historical precedent. All three works also deserve extra attention because they discuss the food-like nature of supplements, something that is not addressed in the non-vitamin literature. I use these vitamin specific texts in my analysis of the food related data coming out of my interviews.

Vuckovic and Nichter

Vuckovic and Nichter (1997) have dedicated one short section of the journal article *Changing Patterns of Pharmaceutical Practice in the United States* to vitamins specifically. In this section Vuckovic and Nichter discuss the reasons why vitamins may be consumed. According to these authors, increased fast food consumption coupled with constant media attention focused on the link between nutrition and good health, drives parents to take vitamins, and feed them to their children. Individuals who feel unable to prepare nutritious meals because of lifestyle and time constraints may supplement in a bid to make up for missing nutrients. Americans may also feel that lifestyle stresses, compromised immunity and environmental attacks on the body can be corrected by taking vitamins.

Diet in the Data

My data agree well with Vuckovic and Nichter's assumptions about vitamins being used as antidotes for poor, fast food diets. Very few respondents use vitamins as an EXCUSE for bad eating habits, rather, supplements are used after the fact for people who feel their diets are lacking. This finding refutes the argument made by Whitney and Rolfes (1993:365) that vitamins are taken by people so that they can then eat irresponsibly. Whitney and Rolfes (1993) also say, however, that those who

are in the best of health tend to take vitamins. Junk food eaters aren't the only vitamin-takers, health food enthusiasts supplement too. This trend I did see in my data. Many of the respondents added vitamins to their routine when they went on health kicks. In these cases, the better they were eating, the more healthy their mindset, and the better their chances of remembering to supplement.

Evelleen Richards – *Vitamin C and Cancer*

Evelleen Richards' text explores the vitamin C and cancer controversy. The two antagonists in this dispute are Doctor Charles Moertel of the Mayo Clinic and Doctor Linus Pauling. During the 1970s and 80s Linus Pauling made multiple attempts to convince the orthodox medical community of something that he believed; that vitamin C is a therapy for certain types of cancer. After studying his data and performing two clinical trials, the Mayo Clinic, along with some prominent publications, like the *New England Journal of Medicine*, rejected Pauling's conclusions. Consequently, vitamin C has never been adopted as a therapy for cancer in the mainstream medical system.

Richards studies this conflict taking a social constructivist approach. She believes that the vitamin C and cancer controversy provides a good case for studying the ways in which truth and knowledge are "produced, accepted and applied" in the world of medicine (pg. 2). She sees the struggle between Pauling and Moertel as a battle between alternative and orthodox medicine. Because each of these medical paradigms relies on fundamentally different notions of what health and good science are, they can never come to terms over vitamin C's viability as a cancer treatment. According to Richards "scientists working in different paradigms are, in effect, living in different worlds. It follows from this that what counts as true or false belief

depends upon which paradigm a scientist works within" (pg 4). Despite what we may have been hearing all ours lives, science is not neutral. Political, economic and social forces shape medical science's practices and theories.

Richards' goal is too use a constructivist approach to show the true nature of scientific endeavour, to demonstrate that negotiations within medicine are inherently political processes. In the battle between Pauling and Moertel, Richards shows that although Pauling's alternative paradigm garners some support from like thinkers (lay media, a few colleagues and much of the public, for instance), Moertel's views on vitamin C, which fall within the orthodox paradigm, are ultimately upheld because he has some very powerful people and institutions on his side, and, he has better access to funding. No one is right and no one is wrong. Each view of vitamin C's efficacy is upheld within its own paradigm. It might appear that orthodox medicine came out on top because it is more rational, but in reality this is not the case. Moertel "won" because he was better able to mobilise supporting economic and political resources.

Rima Apple - *Vitamania*

The goal of Apple's work is to "explore why we (Americans) take vitamins" (pg. 1). As mentioned above, she takes a historical approach to answering this question, seeking answers in the various roles that vitamins have played over the past century. Throughout her text Apple embeds vitamins within a greater social context of regulatory agencies, researchers, pharmaceutical companies, pharmacists, doctors, even grocers, and of course consumers. The two main topics explored and discussed by Apple are the role that marketing has played in vitamin promotion and the way that vitamins' food/drug duality has been negotiated by various actors in the vitamin story, in a bid to control vitamins' production, distribution or consumption. I will summarise

these topics one at a time.

According to Apple, vitamins have been marketed and publicised with impunity in the U.S. Vitamins have virtually advertised their way into the hearts, minds and habits of Americans. Commercials are responsible for creating vitamin needs and wants, and, of course, for playing upon existing needs and wants. Also, commercials have played a critical role in instructing Americans on the best ways to consume these products, taken daily, at breakfast, and the like. Many of the advertising strategies described by Apple are similar to those used today. Both stick (fear, guilt) and carrot (hope) tactics have been used. "Supplements are helpful to busy, conscientious mothers" is a recurrent advertising theme. According to Apple, ubiquitous advertising over a long period of time has normalised vitamin consumption. Americans don't think twice about the huge amounts of these products they consume.

The goals in the struggles for control of vitamins are health, power, and profit. Throughout the last fifty years, various groups have wrangled over vitamins in a bid to get what they want. For regulatory agencies/physicians this is power, and health for the citizens they (ostensibly) protect; for pharmaceutical companies/pharmacists/grocers power and profit are sought. Consumers want power and health. All the actors in these struggles play up either vitamins' food or drug nature, in a bid to achieve their goals. Grocers, for example, want vitamins to be food so that they can sell these lucrative products in their stores. Meanwhile pharmacists treat vitamins as drugs, because if they are drugs pharmacists have the professional authority to sell them, and consequently reap their profits. Patients want vitamins to

be food because when they are less regulated they have more say in what products they buy and consume.

Three great battles stand out over the rest in Apple's text. First, the grocers versus pharmacists battle over control of vitamins sales during the thirties and forties which culminated in 1976 with, second, the passing of the Proxmire Amendment which effectively and finally ended the FDA's bid to categorise vitamin as drugs. And third, the Linus Pauling Affair (described above) in the 1970s and 80s. All these battles and their outcomes have contributed to vitamin popularity. First, all three battles served as inadvertent (or is it?) publicity for vitamins, thus boosting their sales. Second, in all these disputes the "food side" won the battle. When vitamins are treated like food they are easier to buy and appear safer to consumers. Third, the vitamin C battle managed to convince people that vitamin C is not only food-like, but that it also possesses some of the more positive qualities of drugs. Moertel might have won the battle, but much of the North American public absorbed the idea that vitamin C could be used therapeutically, despite the official medical findings (Apple 1996; Richards 1991). Pauling won the war.

> Drugs are dangerous, vitamins are safe. The vitamins are *foods* - essential foods, required by human beings for life and good health. They are safe, even when taken in large amounts (i.e. therapeutically). Side effects occur only infrequently and are rarely serious. (Pauling, 1986 as quoted in Richards 1991:44)

According to Apple "the mystique, the magic, the allure of vitamins have fascinated people from the time the word was coined in 1912" (1996:179). I agree. Vitamins were exciting then and they are fascinating now. Unfortunately many of my respondents would disagree with Apple. In their collective opinion, vitamins may have been exciting when they were discovered, they certainly tweaked interest during the Great Battles, but ever since, they have been boring.

Vitamins as Food in the Data

There is a problem with using the anthropology of pharmaceuticals literature as a theoretical framework for vitamins. Although vitamins clearly belong to the category of pharmaceuticals in some circumstances, they differ from all other drugs in one very important way. They are also food. This fact explains why the only pharmaceutical literature that addresses food issues substantially, and therefore the true nature of vitamin consumption, is that dedicated to vitamins specifically, namely the Vuckovic and Nichter, Richards and Apple texts. I think vitamins' food-like quality also explains many of the discrepancies found between the pharmaceutical literature and my data. Vitamins food-like qualities are causing them to be perceived as safer than other drugs, for example. Also, I see little evidence that other drugs are being taken as antidotes to poor diets or substandard food. In fact, much of the impetus behind taking vitamins in the first place is completely different for that of other drugs.

Vitamins lack some of the qualities found in many drugs. They don't mask symptoms and they have no soporific effects for example. Furthermore, sometimes supplements are taken to normalise[I] the diet, as opposed to the body. Many drugs, one exception is birth control pills, are taken for their ability to return the body to a state of normalcy. This causes them to be perceived in very different ways by patients.

Because vitamins are diet supplements, taking them appears to be less stigmatising than other pharmaceutical consumption. This may be the case with my cohort because they are economically well-off however. For poorer people, supplementing might serve as a sign that the family is too poor to buy nutritious food.

[I] Stating that vitamins can be taken to return a diet to a state of 'normalcy' as I do in this context, means that I am using 'normal' in a very encompassing sense of the word. What I mean in this statement is that the diet is being returned to what people perceive as 'functional' (Katz and Marshall 2004).

Penelope's story would not be funny if her friend had developed scurvy because he truly could not afford to eat well. Perhaps for some poorer families, then, supplementation is stigmatising, but this cannot be determined from my data.

The pharmaceuticals literature has been helpful in working out some of theoretical dimensions of vitamin consumption. However, clearly one very important characteristic of vitamins, their food-like quality, is largely ignored in this framework.

Food

Vitamin Consumption and Food Quality

My data show that people take vitamins because they lack confidence in the food supply or lack confidence in their diet. In other words they believe their bodies need certain nutrients in minimum quantities and that what they are putting in their mouth is not meeting these requirements.

Where do people get the idea that food or diet is substandard? These notions come from advertisements and the media, both popular and medical, which are sometimes one and the same, from doctors, the government, school and other information sources (Rose 2001). This is where my respondents have learned about soil depletion, the effect of transportation on food quality and what constitutes a good diet. Respondents also perceive their food as nutrient-depleted based on its aesthetic qualities. Limp, tasteless or dull produce, like much of that acquired during the winter, strikes people as nutritionally-poor. Nutritionists who have done studies on special groups have concluded that some are more at risk than others because they are eating unsuitable diets. Specific demographic groups, the elderly, pregnant women, children, etc, are singled out as nutritionally at risk. Information of this kind is disseminated to the public by way of government sponsored education campaigns.

When it reaches the public this is the kind of information causes certain people to be viewed as nutritiously vulnerable (Mennell, Murcott and von Otterloo 1992; Caplan 1997; Rose 2001). Furthermore, although the government is ostensibly trying to guide the public toward good eating practices, simultaneously, they allow the food industry to regulate itself. People are bombarded with fast food advertisements and commercial interests have seeped into school lunch programs (Schlosser 2001; Caplan 1997). My data show that Vuckovic and Nichter are correct in their assumption that constant exhortations to eat nutritiously combined with temptation to eat junky foods drive individuals to buy vitamins as antidotes.

Food and Supplement Safety

Generally speaking supplements and supplementing are viewed as safe. Respondents know that vitamins contain food molecules, in fact they are supposed to contain some very healthy food molecules, and therefore they must be at least on par with food vis-a-vis safety. Only two of my respondents made reference to potentially dangerous ingredients contained in vitamin tablets, and only two expressed worry about the potential for supplementation to become habit forming. Many respondents, when questioned directly about vitamin safety responded that, 'come to think of it', vitamins may not be safe. In other words they only considered this possibility because I raised the issue. The way vitamins are treated in their minds and incorporated into their lives, as revealed in their statements to me, demonstrates that for most respondents, vitamins are perceived and treated as safe, by default.

On the other hand, food, the gold standard of safety, is no longer as shiny as it once was. Processed, genetically modified, pesticide-laden and otherwise adulterated foods cause anxiety. My respondents are not the only ones who worry about additives.

According to Mennell, Murcott and von Otterloo 'there is considerable fear among the consuming public (in industrialised nations) about additives and other strange and suspicious elements in the food' (1992:73) Not only are vitamins considered safe because they are food-like, they are often considered safer than food because most respondents don't know that they may be impure or dangerous in their own ways (contain aspartame or dyes for example).

Food and/as Nutrition

According to Mintz (1985) what a group eats a lot of, is telling. It may even demonstrate what the group defines as food. If this is true, then high consumption of vitamins might be a sign that North Americans thinks of food as nutrition. Metonym is at work, food is vitamin molecules and vitamin molecules are food (van der Geest and Whyte 1989). When my respondents spoke about food, their discussion fell mostly within a nutritional science paradigm (not surprising perhaps, given that the topic of conversation was vitamins). People spoke of food as if it were vitamin molecules, judged meals and diets by how nutritionally balanced or complete they were, and the like. Nutritional discussions far outweighed those regarding food as political, social or aesthetic. Even when food aesthetics was discussed it was often still within a nutrition paradigm. People discussed taste, appearance and texture of food as measures of nutritional quality. Often regular eating habits were described to me as important because the body needs regular refuelling, not because meals are socially important events. Very few respondents raised political issues, for example even when people discussed soil depletion or pesticide-laden food, they were mostly concerned about food quality. Environmental concerns were largely ignored. Only two people, Garth and Vivian, chose to sacrifice their nutritional quality with a view

to attaining political goals, in this case to support animal rights. Pharmaceutical ethics was a topic also rarely raised. Perhaps North Americans have come to conceptualise food largely within a nutritional paradigm. Billions of dollars of vitamin products sold every year...surely this is some indication that a food as nutrition paradigm is alive and well in North America.

My respondents may have good cause to be concerned about the quality of their food and diets. Certainly in researching for this project I have read some disturbing information myself on what might be wrong with North American food and diet. The literature speaks loudly and clearly on this issue. Food coming out of the ground is vitamin-poor, travels long distances and sits in shops for long periods of time. It is also often full of microbes, genetically modified and/or laden with pesticides. Many foods are altered using dyes, colouring, sweeteners and preservatives. Processing destroys many of the nutritional elements in food and North American diets are heavily concentrated on these types of food. Our diets are also concentrated in fat, sugar and salt; we eat out often, and restaurant food is, for the most part, poor quality. Many North Americans lead hurried, hectic lives and diets suffer because of it (Whitney and Rolfes 1993; Mennell, Murcott and van Otterloo 1992; Mintz 1985; Schlosser 2001; Ackerman 2002).

The chances of putting together a good diet are slim to begin with, and then for those who do manage to make it past this hurdle, there is a good chance that their food is either poisoned or depleted. It is not surprising, then, that North Americans turn to supplements. Vitamins (apparent) quantitative completeness and safety makes them a viable alternative or supplement to food when respondents feel that what they eat is unsafe or vitamin-poor.

Chapter 6: Discussion and Conclusion

Deconstructing my Research Question

Why do North Americans consume so many vitamins? My small group of respondents has provided many potential answers to this question. There appear to be a great many reasons why people think they need vitamins. At the same time there seem to be few reasons for not taking them and many people are able to construct vitamin taking strategies to ensure that they do, indeed, end up taking the vitamins they intend to consume.

As discussed above, sometimes vitamins are bought only to be discarded or are taken incidentally; both scenarios which distort actual understandings of how many vitamins individuals intend to take, or really consume. It must be stated from the beginning, then, that my original consumption figures need qualifying as not all vitamins bought, are ingested. Neither can all vitamin consumption be explained in terms of the meanings that individuals attach to these products or the ease with which supplements can be worked into routines because some consumption is incidental, a function of the forms in which vitamin products are sold. The data I obtained from my interviews indicates that these factors are substantial enough to note, but not enough to deflate consumption figures below the level of remarkable. High consumption still requires clarification and explanation.

Three Criteria Necessary for Consumption of Vitamins

I identify three factors that must come together in order for people to supplement. People need to be incited to take vitamins in the first place. Once a decision to supplement has been taken it is imperative that people remain convinced that vitamin taking is a good idea. Finally consumption must become a habit. People

need to remember to actually take their vitamins. I make a distinction between these three factors because they are qualitatively different. For example consider the notion of safety. One cannot argue that vitamins are taken because they are safe. It is safe to eat grass, yet most North Americans do not eat grass. Peoples' perception of vitamins as safe is an enabler, rather than an impetus for consumption. Once a consumer has decided that vitamin taking is a possibility FOR OTHER REASONS, only then will he/she consider issues of safety. Worries about the food supply, for example, constitute a reason to consider supplementation in the first place. Being able to work vitamin-taking into a routine is yet another completely separate issue. Incitement and enablement are not enough. Respondent testimony made this clear. When habits are not established vitamins are not consumed. Vitamin consumption only happens when all three consumption criteria are met.

If one did not know the extent to which supplementation is prevalent in North America one might suppose, given the discussion in the previous paragraph, that vitamin consumption is a highly unlikely event. The circumstances necessary for consumption to take place sound akin to the aligning of planets or selecting winning lottery numbers, yet this is not the case. A large number of North Americans supplement, at high levels. The fact is respondents have a myriad of reasons to take vitamins, possess very few prejudices against supplementation, and succeed in establishing effective vitamin taking routines.

Meeting the Three Criteria Necessary for Consumption

My original research question needs to be changed, then. Instead of asking 'why are North Americans taking so many vitamins?' I need to ask:

1. What is driving people to consider consuming vitamins in the first place?

2. What factors promote or demote consumption once the original decision to supplement has been taken?

3. How are individuals able to remember to take their vitamins?

Here are the answers that come out of my findings.

Why People Consider Taking Vitamin in the First Instance

According to my data people take vitamins in the first place because they believe that the food they eat does not meet their nutritional needs, or is unsafe. People base this conclusion on input they receive from various information sources (enumerated previously) or bodily signals telling them something is amiss. Respondents feel their nutritional needs are not being met because: there is something wrong with their food, there is something wrong with their diet or their bodies are vulnerable in some way. Respondents feel that adapting a vitamin regimen is a step toward returning their diet or body, as the case may be, to a state of normalcy or functionality (Katz and Marshall 2004).

Green and Red Lights

Once an individual has the idea to start supplementation there are various factors that can either impede or enable the establishment of this routine. These factors might be thought of as green and red lights. If vitamins are too expensive, inaccessible, ineffective, unsafe, difficult to take -all red lights - they will be consumed in smaller quantities. Whereas, if vitamin taking is perceived or experienced as affordable, effective, easy, safe, unstigmatising - all green lights, vitamin consumption will be facilitated.

Many of vitamins' material qualities serve as green lights. For example

because they are pills vitamins can be consumed quickly, easily, anywhere, anytime. Vitamins are available in multiple forms so they appeal to a broad range of potential consumers. Although vitamins are hard to remember, the fact that they are portable increases their chance of being consumed.

Vitamins' perceived safety is another green light to consumption. If vitamins weren't safe, individuals might back away from taking them, even if they had rational reasons for wanting them in the first place.

Remembering

Once individuals have the idea that they need vitamins and have found few reasons not to take them, they still must find a way to remember supplementation. That vitamins are difficult to remember works against their consumption. People do forget to take them. However, many vitamins are still consumed, and this is because people work them into their bodily routines. Ultimately respondents' minds don't have to remember the vitamins because their bodies do. Despite being difficult to remember, people succeed in building vitamin-taking routines and therefore still consume them in great numbers.

Advertising plays a crucial role in remembering. Because vitamins are advertised with food-like abandon individuals are constantly reminded to buy and ingest their supplements.

Messages from the body also play a part in remembering to take vitamins. Individuals take vitamins to relieve physical discomfort for example, thus vitamins' therapeutic qualities can be recognised as the reason why people remember to take them. The body also plays role in remembering vitamins when it craves the tastier vitamin formats.

Meeting the three consumption criteria I have identified may appear to be a lofty goal. Billions of dollars are spent on vitamin products every year, however, so evidently the criteria are easily met. Given North Americans' love affair with food and the fact that they consume more drugs than anyone else in the world, perhaps it should not come as such a surprise that a product that resembles both food and drug is consumed in large quantities. Food and drugs are exciting. If they are not boring, how can vitamins be?

The Next Question

Up to this point, I have been discussing the practicalities of vitamin taking more than anything else. But something else needs to be addressed. Not only do I need to divide my original question up into three separate parts. I need to follow it with another, and that question is: 'why have so many people chosen to take vitamins instead of, or as well as, changing their eating habits, finding better quality food sources, growing their own food, or altering their stressful lifestyle?

Think about it. If people take vitamins primarily because they think something is wrong with their food, diet, bodies, or pace of life, why not change what is eaten? Why not alter lifestyles?

This issue has been raised by many of the pharmaceuticals authors I cite in this text, Vuckovic, Nichter, and Abramson are three of them. These authors ask if medicine taking is causing people to ignore greater social issues. I think the answer to this question lies in an analysis of control and agency, like that laid out by Crawford at the end of his text on release and control. I also think the answer is difficult to obtain. There are so many dimensions of control and agency in this activity, vitamin

taking, that I have difficulty knowing where to start this analysis, or where to end it. So many questions need to be answered.

Are North American consumers being fed lies about food quality with a view to selling them products? Or is poor food quality a reality and finding out about it constitutes the first step taken by North Americans in a move toward taking control of their own health, on their own terms?

Are North American consumers dutifully buying into supplementation, or, is vitamin consumption a case of people consciously finding a pragmatic solution to a problem, and then getting on with their lives?

Do the other solutions to poor food quality, poor diet and hectic lives, constitute solutions just as riddled with hegemony issues as vitamin consumption. Or are solutions like growing one's own food or buying produce from a local organic farm, real alternatives, activities that constitute and foster agency?

Are those who don't believe that there is anything wrong with their diets deluded ostriches, or, are they correct in believing that there is nothing wrong with our food? If they are deluded, is it not possible that they are living a better life anyway, by simply getting on with things, not wasting their precious time worrying about getting enough Magnesium and Vitamin D in their diet?

I find it difficult to answer these questions with any degree of certainty. In other words, I am not sure to what extent vitamin taking, often self-medicating activity, is the result of a top-down pharmaceutical and food system that serves up poor quality food, tells people they are nutrient-depleted and then exhorts them to medicate, and, a system that leads them to believe, simultaneously, that they are actually in control of their own decisions, OR, if the power over supplementation is multi-centered. Not only powerful institutions like pharmaceutical companies, but

also consumers, exert agency in this activity.

Perhaps one way to answer these questions about control and agency, then, is to ask another: who profits from vitamin taking? Definitely the pharmaceutical companies monetarily; potentially consumers health-wise.

What my research tells me is that seventy-five years ago vitamins were "sold" to the North American public, and with some convincing they "bought" them. In the period since vitamins first appeared on the scene, they have been worked into routines and habits and have been "resold" constantly to consumers through advertisements. The result is that today, vitamin taking is normal and mundane. Most of my interviewees appear to have bought into vitamins but are unaware of it on some level. Sometimes respondents don't seem to be dedicating a lot of thought to vitamins. Some vitamin consumption is undertaken after careful reasoning on the part of the consumer, but many vitamins are consumed with little reflection. High vitamin consumption, then, can also be explained in terms of what people AREN'T thinking about.

Consider the following. Many people who told me they took no vitamins when setting up their interview turned out to be vitamin consumers, many respondents take vitamins out of habit or because they believe vitamins to be without question, "good for you". Vitamin regimens are often adopted or abandoned at the drop of a hat. Vitamins are easily forgotten. About half the people I interviewed or have told about this project have all but yawned in my face.

Despite the potential that vitamins have to affect health most people find them dull. If people dedicated more thought to vitamins and supplementation; to where these products are made, to whom they are giving their money when they buy them, to alternative solutions to nutrient depleted diets and bodies, to the potential harm that

these products can cause the body; they might think twice about their consumption habits. Pondering these issues might cause many to diminish their vitamin consumption. But because North Americans have been sold on vitamins, they have stopped 'thinking' about them. Vitamins have become mundane, taking vitamins, normal. One of the reasons North Americans take so many vitamins is because they dedicate little thought to them.

Conclusion

In a final analysis all except one of my findings leads to me to align myself with conflict theory. I view vitamin taking as a top-down controlled activity for the following reasons. First, few individuals question the concept of supplementation in its entirety. Almost every respondent found a reason to take supplements. This means that they believe that something is wrong with their food, diet or bodies, information whose origin is likely found in the pharmaceutical industry, or, that they are not assessing the pharmaceutical industry with a critical eye. Second, taking vitamins implies that the consumer is in one of two situations: he/she is either subject to the power of big pharma, or big food. Vitamin taking constitutes either an unnecessary action (because food isn't deficient) and consumers are being convinced to take vitamins by the pharmaceutical industry, or, vitamin taking is necessary because food is poor quality and this means that consumers are not challenging the power of a food industry that is leaving them nutritionally short. Third, the pharmaceutical industry appears to be promoting and controlling much of the thought and practice surrounding vitamins despite the fact that some supplementation appears to belong to competing paradigms. For example, does consumption of non-mainstream vitamin products, described briefly above, necessarily constitute thinking and behaviour that lie within

an alternative paradigm? I believe not. Consumption of non-mainstream products may still result from big pharma pressure. Just because this industry is not reaping the profits, does not mean that it is not controlling thinking and behaviour. Taking vitamins, whatever the products may be, contributes to the notions that are part of the big pharma discourse, that food or bodies are deficient and that vitamins are the way of dealing with these problems.

I believe that those who take vitamins because they have no other recourse fall outside the big pharma discourse. For example I would not characterise those who supplement because they have pernicious anaemia, a disease that cannot be controlled by ingesting vitamins in food or pill, but whose symptoms can only be relieved by a B12 injection, as controlled by either a big pharma or big food discourse. These people need to ingest vitamins, in a pharmaceutical format, no matter the quality of the food supply and apart from any pharmaceutical industry discourse coaxing them to do so.

Despite its leanings towards conflict theory, my final analysis is post-structuralist, however. The factor that causes me to take a post-structuralist stance in a last assessment of my findings is the following: non-consumption of vitamin products by the abstainers. The existence of a competing paradigm to that produced and disseminated by the pharmaceutical industry is evident in the discourse of individuals who take no vitamins, in my opinion. Above all else, the abstainers believe the messages they get from their own bodies, which tell them to leave well enough alone. If these people are taking heed of the message that the food supply is potentially deficient, they are still not succumbing to industry pressures to medicate with vitamins in any form. They are instead challenging big food and big pharma by finding better quality food sources.

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Appendix A

Questionnaire

Name :
Date :
Married? Smoker/Non-smoker?
Children?
Age?

1. Do you take vitamins?
If yes,

2. What do you take (have you taken)?
3. How often do you take them?
4. How many do you take?
5. For what period of time?
6. Why do you take them?
7. Do you feel a difference between when you take them and when you don't?
8. At what time of the day do you take them?
9. With or in-between meals?
10. Does your consumption change between weekdays and weekends?
11. Do you take them specifically when you are sick?
12. Do you have any condition (medical, health, lifestyle situation) that you feel affects your vitamin consumption, even if only peripherally? (Examples: dieting, smoking, being pregnant, age-related reasons, demanding exercise regime, stress, known or presumed genetic or physiological disorders)
13. Does anyone remind you to take them?
14. Do you ever forget to take them even when you are generally in the habit of doing so?
15. What do you like about vitamins or taking vitamins? (i.e. how they make you feel, taste, quick, easy, etc)
16. What do you dislike about vitamins or taking vitamins? (taste, swallowing, expense, easily forgotten, causes nausea, etc)
17. Where in the house do you keep them?
18. Do others in your family take them?
19. Did you take vitamins when you were a child?
20. What are the sources (i.e. books, television, doctors) of your vitamin knowledge?
21. Do you feel you have a healthy diet?
22. Do you think vitamin supplements are safe?

If no,
2. Why not?
3. Are there any circumstances under which you might imagine yourself taking vitamins?
4. Have you taken them at other times in your life? If yes, give details.

Appendix B

Respondents

Note: anyone living common law or in a long term stable union I describe as married.

Abigail:	woman, 24 years old, married, works and goes to school
Adele:	woman, 25 years old, single, works full time
Allan:	man, 43 years old, 2 children ages 1 and 2, married, works full time
Amanda:	woman, 37 years old, 4 children under the age of ten, married, works full time
Amy:	woman, 34 years old, 2 children ages 2 and 4, married, stay-at-home mom
Arthur:	man, 38 years old, 4 children under the age of ten, married, works full time
Dana:	woman, 38 years old, divorced/single, works full time
Della:	woman, 54 years old, 4 adult children, married, works full time
Derik:	man, 67 years old, 2 adult children, married, retired but still works part time
Desmond:	man, 66 years old, 3 adult children, married, works full time
Dexter:	man, 41 years old, 1 child age 3, married, stay-at-home dad
Douglas:	man, 39 years old, 3 children ages 6, 8 and 10, married, works part time
Elaine:	woman, 29 years old, unmarried, works full time
Emma:	woman, 50 years old, 2 adult children, married, works full time
Eric:	man, 37 years old, 1 child age 1, married, works full time
Esther:	woman, 33 years old, pregnant with first child, married, on maternity leave from a full time job
Fiona:	woman, 87 years old, ?children, marital status unknown, retired from full time work
Garth:	man, 35 years old, married, works full time
Gary:	man, 65 years old, 3 adult children, married, works full time
Geoff:	man, 35 years old, wife is pregnant with their first child, married, works full time
Helen:	woman, 33 years old, 2 children ages 2 and 5, married, works full time
Jacqueline:	woman, 49 years old, unmarried, works full time
Janet:	woman, 60 years old, 2 adult children, married, works full time
Jennifer:	woman, 42 years old, two children ages 2 and 5, married, stay-at-home mom
Joanie:	woman, 34 years old, three children ages 2 months, 3 years and 6 years, married, on maternity leave from a full time job
Joelle:	woman, 68 years old, 3 adult children, married, retired
Jordan:	man, 33 years old, married, works full time
Justina:	woman, 25 years old, single, works full time
Keith:	man, 67 years old, 2 adult children, married, retired but still works part time
Laura :	woman, 63 years old, 2 adult children, married, retired
Leah:	woman, 39 years old, 1 child age 3, married, works full time
Linda :	woman, 28 years old, unmarried, works and goes to school

Lola:	woman, 33 years old, married, works and goes to school
Luba:	woman, 62 years old, 3 adult children, married, retired
Madeleine:	woman, 43 years old, 3 children ages 6, 8 and 10, married, works and goes to school
Marcus:	man, 31 years old, married, works full time
Marina:	woman, 38 years old, 2 children ages 1 and 2, married, on maternity leave from a full time job
Oksana:	woman, 65 years old, 3 adult children, married, retired
Patrick:	man, 58 years old, 4 grown children, married, works full time
Raymond:	man, 56 years old, 2 adult children, married, working status unknown
Sally:	woman, 34 years old, 1 child age 1, married, on maternity leave from a full time job
Samantha:	woman, 37 years old, 2 children ages 10 and 12, married, works full time
Serena:	woman, 43 years old, remarried, works full time
Simon:	man, 34 years old, 2 children ages 2 and 5, married, works full time
Teresa :	woman, 28 years old, pregnant with first child, married, on maternity leave from a full time job
Timothy :	man, 23 years old, unmarried, works full time
Veronica :	woman, 27 years old, unmarried, works full time
Victoria :	woman, 40 years old, 2 children ages 5 and 9, married, stay-at-home mom
Vivian:	woman, late thirties, married, unemployed
Xavier :	man, 33 years old, married, works full time