

DIETARY SUPPLEMENTS

Introduction

I chose to research the topic of Dietary Supplements because I want to know if dietary supplements are an efficient and safe way to receive nutrients. I take dietary supplements on a daily basis even though I bought them at a drugstore and the FDA does not regulate them. I want to know if taking these supplements is really hurting me or helping me. Many Americans believe that companies that produce these dietary supplements cannot lie about what the pill contains; however, that is in fact not true. I want to reveal what these dietary supplements actually contain.

Section 1: Background and Problem Statement

- **Web site #1 Name:** Oxford Journals.org
- **Web address:** <http://ecam.oxfordjournals.org/cgi/content/full/7/1/107>

Background Information: The use of dietary supplements is a health issue because ingredients used in the supplements are not regulated by the Food and Drug Administration (FDA). Therefore, the amount of a specific ingredient may not be accurate, resulting in illness or death. The use of these supplements may cause adverse drug effects and deadly interactions with other drugs. The definition of dietary supplements, created by the Health and Education Act of 1994, is a “product that is taken orally and intended to supplement the diet” (Nisley 1). Vitamins, minerals, and herbs are three of the most popular dietary supplements on the market today. Unfortunately, dietary supplements are regulated much differently than drugs prescribed by a doctor or over the counter medicine. Those who produce dietary supplements do not have to ensure that their product is safe or prove that it even works.

The Dietary Supplement and Nonprescription Drug Consumer Protection Act was signed into law in December of 2006, which forced the FDA to more closely regulate dietary supplements that happened to have serious negative effects on those taking them.

National surveys allow us to get a general idea of how many people in the United States are taking dietary supplements. According to a U.S. national survey, 19% to 65% of the population is using dietary supplements. Unfortunately, these numbers cannot be considered completely accurate because those being surveyed may lie. Additionally, the surveys do not allow us to get a very detailed idea of the use of dietary supplements because the surveys do not take into consideration how many supplements are being taken, what other medications the consumer is mixing them with, and if the consumer is appropriately using the supplement.

Currently, there is no database where one can research each individual ingredient listed on a dietary supplement. However, “The Office of Dietary Supplements (ODS),^{National} Institutes of Health has recently announced that it is seeking to partner with industry and academic institutions to develop such a database” (Nisley 1).

Also, I used this source because Healthy People 2010 Database did not have any useful information for me.

- **Web site #2 Name: MissouriFamilies.org**
- **Web address: <http://missourifamilies.org/features/nutritionarticles/nut9.htm>**

Background Information:

Many individuals take a dietary supplement when they do not need to. This unnecessary use can lead to many health risks. Those who should use dietary supplements include:

elderly people who do not consume enough calories, vegans, pregnant women, or those who do not receive enough vitamins through their diet. Although all ingredients must be listed on the label, the FDA still does not monitor how these ingredients will affect your body, especially when mixed with other medications. It is important to try to get all of one's nutrients through food so that these risks can be avoided.

- **Web site #3 Name:** National Center for Complementary and Alternative Medicine
- **Web address:** <http://nccam.nih.gov/health/supplements/wiseuse.htm>

Background Information: Some dietary supplements such as folic acid and calcium and Vitamin D can actually prevent specific diseases. Research has showed that folic acid has the ability to prevent birth defects, when taken during pregnancy. Additionally, calcium and vitamin D dietary supplements may help prevent osteoporosis. Although these supplements seem helpful, the U.S. Government has taken legal action against a number of dietary supplement promoters that have sold dietary supplements because they have made untrue statements regarding their products or because their products were proven unsafe.

Section 2: Research

- **Web site #1 Name:** PubMed.gov
- **Web address:** <http://www.ncbi.nlm.nih.gov/pubmed/20388141>
- **Summary of the research:**
 - 6 in 10 Americans use a dietary supplement regularly, and 1 in 6 Americans regularly use herbal remedies. There is huge controversy over herbal remedies because the chemical mixed with the herb may not be safe. Also, the way the herb is harvested and stored can determine how dangerous the herbal supplement is. Contamination of the herb can also be likely. Because the FDA does not

approve these supplements, the individual does not know if their pharmaceuticals will negatively interact with the herb. The FDA has only recently begun to investigate these dietary supplements.

- **Web site #2 Name:** HHS.gov
- **Web address:** <http://www.hhs.gov/news/press/2003pres/20031230.html>
- **Summary of the research:**
- Ephedra is a substance that naturally comes from botanicals. The main ingredient in ephedra is ephedrine. Products that contain ephedrine claim to help one lose weight and increase energy level. Although ephedra products can aid in weight loss, they do have dangerous side effects. Ephedra can raise blood pressure, put stress on the circulatory system, and even cause a stroke. The FDA has been actively trying to get ephedra products off of the market. Many ephedra products have been removed from the market, and the increasing information concerning this dietary supplement with horrible side effects has caused the sale of ephedra to decrease.

- **Web site #3 Name:** LSUagCenter.edu
- **Web address:** http://www.agctr.lsu.edu/en/food_health/nutrition/nutrients/dietary_supplements/Herbs+Supplements+Easy+to+Find+Accurate+Information+on+Benefits+Not.htm
- **Summary of the research:**

Many people assume that just because a dietary supplement is “natural” that it is safe. However, this is absolutely not true. Herbs containing ingredients such as “chaparral, coltsfoot, comfrey, ephedrine, germander, jin bu huan, lobelia, sassafras and yohimbe” are harmful. However, manufacturers do not have to state on the label that these herbs can interact with other drugs or that they have harmful side effects. "Tests of supplements have revealed they sometimes lack active ingredients, contain the wrong plant or are contaminated by pesticides, heavy metals or prescription drugs." Doctor Beth Reames states that consumers should look for expiration dates on dietary supplement labels, see a

doctor before taking a supplement and follow the dosage instructions. Taking a dietary supplement is risky; however there are actions one can take to prevent themselves from getting hurt.

Section 3: Statistics

- **Web site #1 Name:** Consumer Healthcare Products Association
- **Web address:** http://www.chpa-info.org/pressroom/ds_factsfigures.aspx
- **Summary of the statistics:**

The United States leads the world in dietary supplement usage with 100.4 million

Americans using vitamin and minerals every day and 37.2 million using herbal remedies

regularly. (Prevention Magazine, 2000) This statistic tells us that Americans believe self-medicating is the way to go. Perhaps Americans are not educated on how dangerous these drugs can be to one's health. The labels on these dietary supplements are misleading and very informative.

By sales, the two leading categories of supplements are "general health" and

"sports/energy/ weight-loss" with \$4.4 billion and \$4.7 billion respectively. (The Nutrition

Business Journal, 2001) This statistic shows us that Americans often ignore how harmful dietary supplements can be and would rather be thin and have energy than focus on their wellbeing.

- **Web site #2 Name:** Archives of Pediatric and adolescent medicine
- **Web address:** <http://archpedi.ama-assn.org/cgi/content/full/161/10/978>
- **Summary of the statistics:**

In the 1999-2000 National Health and Nutrition Examination Survey

(NHANES), 57% of women and 47% of men reported using a supplement in the past 30 days. This statistic shows that women use dietary supplements more than

men do. One reason for this may be that women are using dietary supplements for weight loss.

Adult dietary supplement users in the United States typically have higher incomes and education levels, are more physically active, and have diets that more closely follow dietary guidelines than non-users. This statistic basically shows that those who use dietary supplements generally care more for their bodies and they want to improve it the best they can. Unfortunately, they may not realize that dietary supplements may actually be doing more harm than good. Also, it seems as though the use of dietary supplements is increasing.

- **Web site #3: National Center for Complementary and Alternative Medicine**
- **Web address:** <http://nccam.nih.gov/health/supplements/wiseuse.htm>
- **Summary of the statistics:**

In another, earlier national survey covering all types of dietary supplements, approximately 52 percent of adult respondents said they had used some type of supplement in the last 30 days; the most commonly reported were multivitamins/multi-minerals (35 percent), vitamins E and C (12–13 percent), calcium (10 percent), and B-complex vitamins (5 percent). This survey shows that more than half of adults admitted to using dietary supplements, vitamin E being a very popular supplement used. However, adults should take into consideration that when vitamin E is used in conjunction with other blood thinners such as aspirin, the effects can be harmful. Such effects are internal bleeding.

Section 4: Consumer Information

- **Web site #1 Name: Mayo Clinic**
- **Web address:** <http://www.mayoclinic.com/health/supplements/NU00198>
- **Summary of the information:**
- Vitamins are no replacement for nutrients received through food such as vegetables and fruit. The body needs specific vitamins in order to grow and stay healthy. If a person is having difficulty absorbing a specific nutrient in their diet, a dietary supplement may be beneficial. However, these pills are not a substitute for food and should not be used as

so. The best way to receive nutrients is through a well balanced diet.

- **Web site #2 Name:** FDA.gov
- **Web address:**
<http://www.fda.gov/Food/DietarySupplements/ConsumerInformation/ucm110417.htm#getinfo>
- **Summary of the information:**

A consumer should research the dietary supplement extensively before they decide to take it. A consumer should also contact the manufacturer before purchasing the product so that they can get the facts on the supplement and not have to worry about all of the unreliable information out there. If a person believes that he/she has been harmed by a dietary supplement, they should contact their doctor immediately and should also report this problem to the FDA. FDA's MedWatch hotline is 1-800-FDA-1088. Or one can submit a report by fax to 1-800-FDA-0178. By doing so, dietary supplements on the market that are harmful can be investigated and taken off of the market so that the harmful affects do not happen to anyone else.

- **Web site #3 Name:** FDA.gov
- **Web address:**
<http://www.fda.gov/Food/DietarySupplements/ConsumerInformation/ucm110493.htm>
- **Summary of the information:**

Dietary supplements may not be as safe for elder people as they are for younger people. Many older people are on prescription medication, and mixing dietary supplements with prescription drugs can have life-threatening affects. For example, Coumadin, which is a prescription medicine, aspirin, vitamin E, and ginkgo biloba, which is an herbal supplement, each thin the blood. When taken in conjunction, these drugs mix together and can increase the risk of stroke or internal bleeding. Additionally, St. John's Wort is a dietary supplement that may reduce the effectiveness of prescription drugs for heart disease, depression, seizures, cancers, or HIV.

Section 5: Solutions to the Problem (or Issue)

- **Web site #1 Name:** United States National Library of Medicine
- **Web address:** <http://dietarysupplements.nlm.nih.gov/dietary/help.jsp>
- **Summary of the information:**

This Web site is a government-agency that works to expose the ingredients in dietary supplements. One can browse manufacturers, ingredients, and product names. This Web site would be a great way for an individual to look up individual ingredients to see if they would interact with any of the prescription drugs they are taking right now.
- **Web site #2 Name:** <http://www.usp.org/USPVerified/>
- **Web address:** U.S. Pharmacopeia
- **Summary of the information:**

This Web site is a non-profit organization that with the manufacturer's permission, tests the dietary supplement to make sure that the product is safe. USP has over 1,000 volunteers that work together to ensure that dietary supplements are not harming the public. USP has five different labs where they study these supplements.
- **Web site #3 Name:** Dietary Supplement Information Bureau
- **Web address:**
<http://www.supplementinfo.org/index.php?submenu=About&src=gendocs&ref=AboutDSIB&category=About>
- **Summary of the information:**

This is a non-profit organization to inform the public about all of the facts about dietary supplements. This organization was formed in 2001 to ensure that the Dietary Supplement Health and Education Act (DSHEA) is strictly followed and is not neglected in any way.

Conclusions:

After doing all of my research, I learned that I should have probably better research the dietary supplements I take now to make sure they are safe and do not interact with any other medications I am taking. I am glad that I was given the opportunity to do this project because if I did not do it, I would not know the potentially harmful effects that dietary supplements may be having on

my body. I hope that by reading this, others will learn that they too should research a supplement before ever taking it.

Back to Betty C. Jung's Web site	<u>http://www.bettycjung.net</u>
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