



Nutrition for Family Living

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May, 2001 Topics

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The Story about Soy

The health benefits of soy foods have been a topic in the news off and on for the past several years. Many Extension educators have had questions about soy from consumers and this month we wanted to provide some background information for county staff to use.

About Soy

Soybeans are used in thousands of products from margarine and baby food to printing ink and particle board. They have high nutritional value and are being studied as a functional food that could offer specific health benefits in addition to their known nutritional benefits. Soybeans are rich in protein and can be the foundation of a plant-based diet. Soy products such as tofu, soy nuts, textured soy products, and soybeans are considered a meat alternate in the meat group of the Food Guide Pyramid. Soybeans, soy flour, and textured soy products are also rich in fiber, folate and iron. Since soy milk is lactose-free, it is often used by people who are lactose intolerant. It is important to look for soy milk that is fortified with calcium and vitamin D. Fortified soy milk is a part of the milk group of the pyramid. Other common soy foods include soy flour, soy oil, soy nuts (roasted soybeans), canned soy beans, miso, tempeh, and soy sauce.

Health Claims about Soy

Soybeans are a rich source of isoflavones, plant chemicals that are somewhat similar to estrogen. Researchers are investigating the role of isoflavones in cancer prevention, osteoporosis and menopausal symptoms, but no conclusions have been reached so far.

The only FDA approved health claim for soy foods is about soy protein and heart disease. The FDA allows foods containing at least 6.25 grams of soy protein per serving to state on the label that a diet containing 25 grams of soy protein per day, that is also low in saturated fat and cholesterol, may reduce the risk of heart disease. Foods rich in soy protein can have a beneficial effect on heart health by lowering cholesterol, but the benefit comes from foods that contain not just the soy protein but also the isoflavones that naturally occur in soy. The benefits don't occur when people take just the isoflavones in supplement form.



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Soy Controversies

Can soy prevent breast cancer? Researchers say this is the question they'll be least likely to answer in the near future. Soy contains genistein, an isoflavone that acts as a weak estrogen. The problem is, in test tubes, genistein either stops cancer cells from growing or makes them grow, depending on the conditions. Researchers can't say whether soy prevents or promotes cancer but they do say that the amount of soy a person is likely to consume through foods in their diet is not likely to have a significant effect, good or bad, on their cancer risk.

Isoflavone supplements are available at health food stores and some consumers may think they are an easy way to get the benefits of soy without having to eat new foods. Remember that it is the soy protein and isoflavones together that may reduce the risk of heart disease. Scientists caution that there just isn't enough information yet to say whether isoflavones alone can provide any benefit or harm, and they caution anyone with a history or risk of cancer to avoid getting more than 100 mg/day of isoflavones from any combination of sources. This caution extends to soy protein powders, which may have extra isoflavones added.

Can soy relieve the symptoms of menopause? Some studies have shown a slight effect, but the placebo effect may have been an important factor in these reports. Women should consult their health professional who may recommend they include soy foods in their diet rather than taking isoflavone supplements.

What about soy-based infant formula? This is another area where the research is far too incomplete to draw conclusions. Parents should choose a formula on the advice of their health professional. Breast milk remains the best food for babies.

The Bottom Line

Researchers agree that people who enjoy soy foods – tofu, soy milk, soy nuts – as part of an overall healthy diet are not likely to do themselves harm and might in fact be doing themselves some good. Soy foods are a good source of protein and have no cholesterol and are low in saturated fat. Twenty-five grams of soy protein per day, as part of a low-fat diet, may help reduce blood cholesterol levels and reduce the risk of heart disease. One cup of soybeans, 1/3 cup of soy nuts, 3-1/2 cups of soy milk, or two soy burgers or soy dogs provide about this amount.

What does this mean for WNEP? Given that soybeans are a nutritious food, it is appropriate to include soy products as options when teaching about the Food Guide Pyramid. You can point out that tofu is a part of the meat group, fortified soy milk is part of the milk group, and soy flour is part of the grain group. Remember, however, that WNEP clients are on a limited income and our purpose is to help people get more food for their dollar. Tofu and black beans provide similar amounts of protein per ounce but black beans are more affordable.

For more information

"Soy Foods – Discover the Goodness" consumer pamphlet from Iowa State University Extension. #PM 1796 available on the web at www.extension.iastate.edu/Pages/pubs/fo1.htm

United Soybean Board, PO Box 419200, St. Louis, MO 63141-9200 www.talksoy.com

and www.unitedsoybean.org



Why Nutrition Advice Flip-Flops – Or Does It?

Many Americans complain they don't know who to listen to when it comes to nutrition advice because the advice keeps changing. First eggs are bad, then they're ok. Margarine used to be better than butter. An article in the March issue of *Environmental Nutrition* helps us keep changing advice in perspective.

People want a black-and-white answer to their questions about nutrition and health, but science is by definition a very gray area. Nutrition science unfolds slowly and often in several different directions. Dietary advice is based on what we know today, which is different from what we knew ten years ago and will be different from what we know ten years from now. That's the nature of science.

The media makes things more confusing for consumers because headline writers want to highlight unusual findings that grab people's attention. Researchers view each study as one piece of a huge puzzle, and until the puzzle is complete, they are reluctant to tell people to make drastic changes to their diets. Sometimes the media will make it seem like a new study solves the puzzle, while researchers are still looking for missing pieces. Other times, new information changes an old message, making it more complex or requiring some refinement – making us realize that the puzzle wasn't yet complete after all.

Environmental Nutrition recommends the following:

- Be cautious of overzealous reporting that flies in the face of conventional wisdom.
- Read beyond the headlines. Look for more in-depth information to see how the new information fits with the old.
- Don't change based on a single study. Wait for additional evidence before making significant changes to your diet. Listen to what the majority of experts are saying.
- Realize there are no simple answers to preventing disease.

Forman, Adrienne. Why Nutrition Advice Flip-Flops All The Time... or Does It?

Environmental Nutrition 2001:24(3);1,6.

Is there a consumer backlash against the diet and health message?

Researchers at Washington State University investigated whether consumers are becoming skeptical about nutrition messages and whether that skepticism is associated with less healthful diets. They conducted a telephone survey of 1,751 adults and found that:

- 70% of respondents felt that Americans are obsessed with the fat in their diet and felt that the government should not tell people what to eat.
- 25% said that eating low-fat foods takes the pleasure out of eating.
- 43% stated that they were tired of hearing about what foods they should or should not eat; however,
- 91% thought research on nutrition would help them live longer.



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Nutrition backlash was higher in men than in women, and higher in younger and older respondents than in middle-aged respondents. Higher backlash was also associated with lower socioeconomic status but not with body mass index. People with higher backlash scores ate more dietary fat and fewer fruits and vegetables.

The authors remind nutrition professionals that since the public perceives the diet and health message to be constantly changing or conflicting, professionals need to be as consistent as possible in their information. They should be careful not to overinterpret any single study and to make sure any written materials acknowledge the reliability of their sources. Nutrition messages should be presented in a clear and positive way to avoid the possibility that consumers will tune them out entirely.

Patterson RE et al. Is there a consumer backlash against the diet and health message? *JADA* 2001;101:37-41.



Maternal Nutrition and Adult Disease

From the desk of Sherry T.:

A summary of a review article entitled “The nutritional basis of the fetal origins of adult disease” published in the *International Journal of Epidemiology* (2001; 30:145-23) authored by J.E. Harding.

An intriguing review of fetal nutrition and adult disease was recently published in the *International Journal of Epidemiology*. Basically the article argues that the roots of adult disease include nutrition during pregnancy. Could it be that “nutritional programming” during fetal development may cause non-insulin dependent diabetes mellitus, hypertension and coronary heart disease?

Long term studies have shown that low birth weight, birth length, body proportion and placental weight are strongly related to disease incidences. Does an event in fetal life lead to changes in birth weight and altered balance, like blood pressure regulation or sensitivity to insulin, resulting in increased disease risk later in life?

Basically, there are three sets of evidence to support this argument. First, controlled animal studies where nutrition is manipulated during pregnancy support the long-term observation seen in human populations. For example, drastically reducing the proportion of protein in the diet of pregnant rats results in offspring that have reduced size at birth, elevated blood pressure during adulthood and glucose intolerance. Second, natural “experiments” that occur in humans support this observation. For example, during the Dutch Hunger Winter when pregnant women involuntarily were exposed to famine, children were born with reduced birth weight. This is believed to have led to an increased risk of glucose intolerance and obesity in adult life. The third line of evidence is based upon current knowledge of how the fetus grows. Fetal growth is limited by maternal size and the ability of the mother to supply nutrients to her unborn baby.

The fetal nutrient supply line begins with the diet of the mother. The placenta transports these nutrients to the fetus. The placenta is also a very metabolically active organ and when the maternal nutrient supply to the placenta drops, it may actually draw needed nutrients away from the fetus! Knowing this, we can see the importance of a steady flow of nutrients during pregnancy.

Implications for our work:

We do not always appreciate the implications of a poor diet throughout the life cycle. Long-term studies suggest that maternal nutrition may affect the child through adulthood by “programming” adult disease. Therefore, encouraging our clients to eat a well balanced diet during pregnancy may have lasting effects on their babies through adulthood.



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To Answer Your Question...

Starting this month, we'll share the answer to a question posed by a county staff member.

Q: Do you know anything about stevia? It is supposed to be used as a sugar alternative in a diet to help reduce pain in people with arthritis. Are you aware of any specific dietary recommendations that are out there for people with arthritis, other than just good nutrition?

Thanks

Wilma Johnson

A: Stevia is derived from a South American shrub. Though it can give a sweet taste to foods, it cannot be sold as a sweetener in the US. FDA considers it an unapproved food additive because it has not received enough proof that it is safe. It can be sold as a dietary supplement, however. There are a number of internet sites and books promoting its use as a sweetener but the bottom line is, it is not approved by the FDA for this purpose.

You also asked about dietary recommendations for arthritis. A quick search of the American Dietetic Assn. website, the various government sites and the Arthritis Foundation site turned up no specific dietary recommendations for people with arthritis. Again, there are other websites and books in print recommending all kinds of different arthritis cures but nothing passing scientific scrutiny at this time.

If you're interested in looking up more information on stevia, one quick summary can be found at:

www.cspinet.org/new/stevia.html

A good article from FDA Consumer with all kinds of information on arthritis can be found at:

www.fda.gov/fdac/features/2000/300_arth.html

The Arthritis Foundation website is www.arthritis.org



Top Ten Consumer Food Trends

The latest issue of Food Technology lists the top ten food trends that influence what consumers find in the supermarket and on restaurant menus. This third biennial report used information from survey data supplied by the USDA, AC Nielsen Groups, Census Bureau, universities and other studies. Food Technology is a publication of the Institute of Food Technologists. The trends they describe are ways of looking at the criteria people use to make food purchasing decisions.

Top Ten Trends:

1. **Do-it-for-me foods.** Take-out and take-home meals are a way of life for many families. While two-thirds of dinners are still made at home, people are less interested in cooking and want simple meals that are quick to prepare. Fewer dishes are being served at a meal and one dish, center of the table foods like pizza continue to be popular. “Creative convenience” also includes quick and easy clean up.
2. **Super Savory and Sophisticated.** Marketers will be targeting “empty nesters,” Baby Boomers whose children have left home. The gap between gourmet and everyday will close and new products will be more sophisticated, flavorful, and healthier.
3. **Balance.** Consumers are moving away from obsessing over dietary fat and fiber. Larger portions, more meat, and fried foods are popular, while at the same time meatless meals sell well and consumers say they really are trying to eat more fruits and vegetables.
4. **Form Follows Function: Bits, Bites and Bags.** Appetizers are a growing trend. People continue to eat many of their take-out meals in the car.
5. **A New Kind of Home-spun.** Home is still the preferred place to eat, but fewer people know how to cook and even fewer want to clean up afterward. Family sized portions and one dish meals are popular. Home is the number one location for breakfast and lunch.
6. **Kid-influenced.** Kids influence not only what is purchased for the family’s meals, but also have their own money to spend. Kids do more of their own meal and snack preparation today and are increasingly responsible for making food for other family members. The interest in youth-targeted health foods is expected to grow as youth obesity becomes more prevalent.
7. **Light and Lively.** There’s a growing demand for foods that are fresh and have a more natural image. Far Eastern cooking and Asian vegetables are expected to become more popular.
8. **Crossover Meal Patterns.** Mealtime is anytime. The distinction between snacks and meals is blurring. The “top 10” items most commonly served for dinner haven’t changed much over the last ten years, but the order has been rearranged. Sandwiches and soup are becoming more popular at dinner and side dishes, coffee, bread and dessert are becoming less common.
9. **Do-it-Yourself Health.** Sales of fortified, functional, and performance-enhancing food is soaring. Shoppers are looking for foods to help reduce their risk of chronic disease. Fat, energy and weight control will continue to influence purchases.
10. **Clean, Pure, Natural and Safe.** Media attention is making organic, all-natural, free-range, and kosher foods more attractive. Health is clearly the driving factor for organic purchases.



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So what do these trends mean for Extension? The food industry designs and markets new products and services to meet these trends in the marketplace. Whether or not low-income consumers have the money to purchase these products, they will be exposed to the same advertising and media influences as middle- and higher-income consumers. New products and services may or may not make positive contributions to the quality and safety of their food and may or may not fit with a family's budget. Extension's important role is to help consumers understand the pros and cons of the many choices available and help them make healthful decisions.

For the full text of the article, go to

http://www.ift.org/products/docshop/ft/04-01/04_01_pdfs/04-01-toptrends.pdf