



INFORMATION BRIEF

***Soy in your meat entrées?
Lycopene in your tomato sauce?
Beta-carotene in your soup?***

All foods are functional in some respect as they provide taste, aroma or nutritional values. However, as more and more research is being conducted on the link between nutrition and health, the term “functional” as it applies to food has adopted a different connotation—a link that certain foods provide additional physiological benefits beyond that of meeting basic nutritional needs.

Functional Foods for Thought

“Functional Foods” may be defined as any modified food or food ingredient that may provide a health benefit beyond basic nutrition. Functional foods or ingredients contain components (among them are phytochemicals) associated with the prevention and/or treatment of at least four of the leading causes of death in this country: cancer, diabetes, cardiovascular disease and hypertension. Health benefits of these foods or ingredients are best obtained through the consumption of a varied diet using a number of frequently consumed foods.

“Functional Foods” Can Include

- ▶ All-Natural Foods
- ▶ Fortified Foods
- ▶ Enriched Foods
- ▶ Foods or Ingredients Enhanced Through Biotechnology

Examples of Functional Components

- Isoflavones soybeans, soy foods
- Lycopene tomato products
- Omega-3 fatty acids tuna, fish and marine oils
- Beta-carotene fruits, vegetables
- Catechins tea(s)

Functional attributes of many traditional foods continue to be discovered, while new food products are being developed to provide these beneficial components. Grocery stores are filled with numerous foods that would meet the definition of functional foods. Many cereal grains, fruits and vegetables are touted for their potential benefits for disease prevention.

Lycopene is associated with a lower risk of several types of cancer, including prostate cancer. Researchers examined the effects of tomato based (lycopene rich) foods on cancer and reported that men who ate 10 or more servings of these lycopene-rich foods per week had a 45% reduced risk of prostate cancer development.¹ Lycopene, a carotenoid, is abundantly present in tomatoes giving them a red blush. Research shows that lycopene can be absorbed more efficiently by the body when processed into ketchup, paste, sauce and juice.

Beta carotene is found in carrots, dark-green leafy vegetables, broccoli and cantaloupe. Upon consumption beta carotene is converted in the body to Vitamin A which is necessary for healthy eyes and skin.

Other nutrient-related correlations link dietary fat and fiber to prevention of colon cancer², folate to the prevention of neural tube defects³, calcium to the prevention of osteoporosis⁴, to name a few.

The Beneficial Soybean

Soy protein is one of the world's most common forms of high-quality protein that is plant-based and derived from the soybean. Soybeans and soyfoods are unique in that they are the only significant dietary source of the naturally occurring phytochemicals, isoflavones. Protein Technologies International's ProPlus[®] Brand Isolated Soy Proteins contain approximately 90 percent protein on a dry weight basis. ProPlus[®] Proteins are highly digestible, and comparable to other high-quality proteins such as meat, egg and milk. Soy protein's most well-documented physiological result is its blood cholesterol-lowering effect. Based on nearly 35 years of research, Protein Technologies International petitioned to the U.S. Food and Drug Administration that led to the industry having a heart health claim related to soy protein.

FDA Approves Health Claim Label for Soy Protein

On October 20, 1999, the Food and Drug Administration (FDA) approved the use of this statement: "25 grams of soy protein a day, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease. A serving of (name food) supplies ___ grams of soy protein."

Consumer Acceptance

Consumer interest in the relationship between diet and health has increased the demand for information on functional foods. According to the International Food Information Council (IFIC) Foundation, 1998 consumer research found 95 percent of Americans believe that certain foods have benefits that go beyond basic nutrition and may reduce the risk of disease.

Rapid advances in science and technology, increasing healthcare costs, an aging population, and changing government regulations on food marketing and labeling are among the factors driving demand for functional foods. Functional foods are not "magic bullets" but an important part of wellness that includes a balanced diet and physical activity.

Isolated Soy Protein – A Key Ingredient

Increasing the availability of great-tasting, healthful foods, including functional foods, in the American diet is critical to ensuring healthier inmate populations. ProPlus[®] Soy Proteins deliver potential health benefits and feature new technological processing advancements. If you would like to learn more about how to incorporate ProPlus[®] Proteins into your daily menu plan through customized solutions, contact **Sue Eastwood at (800) 325-7108, ext. 3162.**

References

1. Giovanucci E, et al. Intake of carotenoids and retinol in relation to risk of prostate cancer. J Natl. Cancer Inst. 87:1767, 1995.
2. Giovanucci E, Rimm E, Stampfer MJ, Colditz GA, Ascherio A, Willett WC. Intake of fat, meat and fiber in relation to risk of colon cancer in men. Cancer Res. 1994;54: 2390-2397.
3. Czeizel AE, Dudas I. Prevention of the first occurrence of neural-tube defects by periconceptional vitamin supplementation. N Engl J. Med. 1992;327: 1832-1835.
4. Cumming RG. Calcium intake and bone mass: a quantitative review of the evidence. Calcif Tissue Int. 1990;47(4):194-201.

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