

September 2012 Health Notes by Evelyn Ames

Discussion of Various Food Additives

Regulation of food additives has come a long way since the early 1900's when copper sulfate was added to make pickles green. As long term epidemiological population studies continue on additives and colors used in food/meat/poultry/drugs/cosmetics, safety and risk issues are resolved or heightened.

Comparing BHA and BHT: Butylated hydroxyanisole (BHA) and the related compound butylated hydroxytoluene (BHT) are phenolic compounds and are often added to foods to preserve fats. BHA acts as antioxidant and is used to keep fats from becoming rancid. It is found in butter, meats, cereals, chewing gum, baked goods, snack foods, dehydrated potatoes, and beer. BHT prevents oxidative rancidity of fats and is used to preserve food odor, color, and flavor. Many packaging materials (e.g., ice cream cartons and potato chip bags) use BHT. It is directly added to shortening, cereals, and other foods containing fats and oils. (<http://chemistry.about.com/od/foodcookingchemistry/a/bha-bht-preservatives.htm>) The Center for Science in the Public Interest suggests caution in the use of BHT and avoidance in use of BHA. (<http://www.cspinet.org/reports/chemcuisine.htm>) The *Berkeley Wellness Newsletter* reports that there is "ongoing controversy, however, about the safety of BHA and BHT. Most research has been in animals and test tubes, not in people. The FDA categorizes these food additives as GRAS (generally recognized as safe), which means they are widely considered safe for their intended use in specified amounts, but did not have to undergo pre-market review. A subsequent review by an independent committee supported their general safety, but concluded that "uncertainties exist, requiring that additional studies be conducted" (http://www.berkeleywellnessalerts.com/alerts/healthy_eating/BHA-BHT-preservatives384-1.html).

Cellulose: According to the Mayo Clinic more food manufacturers have "added fiber, such as cellulose, because most people aren't eating enough foods that are naturally high in fiber — namely vegetables, fruits and whole grains. Manufacturers are also adding cellulose because it means they can use less fat and sugar without losing the desired mouthfeel or moistness. The rising cost of flour, sugar and oil may be another reason for this trend" <http://www.mayoclinic.com/health/cellulose/MY01762>. Various forms of cellulose are on the GRAS list.

Monosodium Glutamate: MSG is a flavor enhancer commonly added to Chinese food, canned vegetables, soups and processed meats. The Food and Drug Administration classifies MSG as a food ingredient that's "generally recognized as safe," but the use of MSG remains controversial. "For this reason, when MSG is added to food, the FDA requires that it be listed on the label." Anecdotal reports include such symptoms as headache, flushing, heart attack type symptoms (chest pain, rapid/fluttering heartbeats, sweating), numbness, tingling, nausea and weakness but there is "no definitive evidence of a link" to MSG. <http://www.mayoclinic.com/health/monosodium-glutamate/AN01251>. Flavor enhancers include MSG, Ribonucleotides, Disodium Inosinate, and Disodium Guanylate; they add a salty, savory taste to foods. Some people may be allergic to these or want to cut down on salt intake.

High Fructose Corn Syrup: According to information at the Mayo Clinic's health information site, "High-fructose corn syrup, sometimes called corn sugar, has become a popular ingredient in sodas and fruit-flavored drinks. ... Research studies have yielded mixed results about the possible adverse effects of consuming high-fructose corn syrup. Although high-fructose corn syrup is chemically similar to table sugar (sucrose), concerns have been raised because of how high-fructose corn syrup is processed. ... Some research studies have linked consumption of large amounts of any type of added sugar — not just high-fructose corn syrup — to such health problems as weight gain, dental cavities, poor nutrition, and increased triglyceride levels, which can boost your heart attack risk. But there is insufficient evidence to say that high-fructose corn syrup is less healthy than are other types of added sweeteners. ... Recommendations from the American Heart Association — not a part of official U.S. dietary guidelines — say that most American women should consume no more than 100 calories a day from added sugar from any source, and that most American men should consume no more than 150 calories a day from added sugar. ... That's about 6 teaspoons of added sugar for women and 9 for men" (<http://www.mayoclinic.com/health/high-fructose-corn-syrup/AN01588>).

Sodium Nitrate and Sodium Nitrite: S. Nitrate has antimicrobial properties when used as a food preservative. It is found naturally in leafy green vegetables. Whereas, S. Nitrite prevents growth of bacteria (e.g., Clostridium botulinum which causes botulism) and it is used to alter the color of preserved fish and meats. A major concern that has been researched for many years is that sodium nitrite reacts with amino acids in the presence of heat (e.g., high heat in cooking bacon) and forms N-nitrosamines, which are carcinogenic. For some people, migraine headaches may be triggered by eating foods processed with sodium nitrite. On the other hand, S. Nitrite has been used as a vasodilator (increasing blood flow).

Carrageenan: This is a seaweed derivative that is used as a thickener and stabilizer in ice cream to prevent ice crystals from forming. Questions currently are being asked about safety of carrageenan, gum guar and other similar compounds. For members wanting information about carrageenan, check <http://www.webmd.com/vitamins-supplements/ingredientmono-710-CARRAGEENAN.aspx?activeIngredientId=710&activeIngredientName=CARRAGEENAN>

When Were Color Additives Addressed? “The 1960 Color Additives Amendment brought all colors, natural and synthetic, under the Food, Drug, and Cosmetic Act. Color additives may not be used to deceive consumers or to conceal blemishes or inferiorities in food products. Colors used in foods, drugs, and cosmetics must be approved by the FDA before they can be marketed. The Food Additives Amendment and the Color Additives Amendments include the Delaney Clause, which prohibits the approval of an additive "if it is found to induce cancer when ingested by" people or animals, or "if it is found, after tests which are appropriate for the evaluation of the safety of food additives, to induce cancer in" people or animals. Any substance found to cause cancer is regulated under the general safety provisions of these laws, as well as by the Delaney Clause.”

http://www.fsis.usda.gov/Factsheets/Additives_in_Meat_&_Poultry_Products/index.asp “Color additives must be declared by their common or usual names on labels, e.g., FD&C Yellow 5, or annatto extract, not collectively as colorings. These labeling requirements help consumers make choices about the foods they eat.” With pressure by manufacturers and other groups to lessen controls over food additives, it is imperative that wise consumers read labels and look for foods with few or no additives. But the caveat is that some foods need added preservatives to keep them from spoilage or to prevent bacterial growth which causes illness.

A summary of types of food ingredients (why they are used and examples of names) can be found at: <http://www.fda.gov/Food/FoodIngredientsPackaging/ucm094211.htm>. The FDA's Food additive status list: <http://www.fda.gov/Food/FoodIngredientsPackaging/FoodAdditives/FoodAdditiveListings/ucm091048.htm>
Greater detail about the GRAS list: <http://www.fda.gov/Food/FoodIngredientsPackaging/GenerallyRecognizedasSafeGRAS/GRASSubstancesSCOGSDatabase/ucm261264.htm>

Chart of common food additives: http://chemistry.about.com/gi/o.htm?zi=1/XJ&zTi=1&sdn=chemistry&cdn=education&tm=1545&gps=227_186_1221_748&f=00&su=p284.13.342.jp_&tt=2&bt=1&bts=1&st=25&zu=http%3A//www.cnn.com/HEALTH/indepth.food/additives/table.html

Members who want clarification about health insurance, may wish to consider checking with the Senior Activity Center on Halleck Street to ask when a volunteer for SHEBA (Statewide Health Insurance Benefits Advisors) is at the Center. (Currently it is Thursday 12-2)