

ADDITIVES

Americans spend about ninety percent of their food budget on processed foods, which, unlike whole foods, have been treated in some way after being harvested or butchered. Almost all of these processed foods contain additives, substances intended to change the food in some way before it is sold to consumers.

Additives include flavorings that change a food's taste, preservatives that extend its shelf life, colorings that change the way it looks, and dietary additives, such as vitamins, minerals, fatty acids and other supplements. Packaging is considered an indirect food additive and in fact, many kinds of packaging actually add substances to the food they enclose.

The Food and Drug Administration (FDA) currently has approved more than 3,000 food additives for use in the United States. However, while approved for human consumption, food additives may still threaten our health.

REGULATION AND CATEGORIES OF FOOD ADDITIVES

The FDA regulates all food additives, breaking them into three categories. "Indirect Food Additives" include packaging materials such as paper, plastic, cardboard and glue that come into contact with food. "Direct Food Additives" include preservatives, nutritional supplements, flavors and texturizers that are added to food. "Color Additives" are used to alter color.

PRESERVATIVES

Preservatives generally fall into one of three categories: those used to prevent bacterial or fungal growth, those that prevent oxidation (which can lead to discoloration or rancidity), and those that inhibit natural ripening of fruits and vegetables.

FLAVORINGS

Flavorings are chemical formulations that mimic the flavors and smells of foods. Smell is just as important as taste to food processors, because most of a food's flavor appeal

to the human brain—up to ninety percent—actually comes from its smell. Common flavor additives such as sweeteners, fruit flavors, and butter or cheese flavors are found in both natural and artificial forms. The difference between the two depends on the source of the flavor and way it was derived. Natural flavors are often produced using just as much chemical ma-

nipulation as that used to create artificial flavors.

ARE FOOD ADDITIVES SAFE?

Once approved by the FDA, food additives are considered fit for human consumption—but they may not be entirely safe. Some food and color additives have induced allergic reactions, while others have been linked to cancer, asthma, and birth defects. The FDA requires that all ingredients be listed on a food's label, but additives are often listed without specificity, as "spices" or "flavorings," making it impossible for consumers to determine what, exactly, they are eating.

SOME FOOD AND COLOR ADDITIVES HAVE INDUCED ALLERGIC REACTIONS, WHILE OTHERS HAVE BEEN LINKED TO CANCER, ASTHMA, AND BIRTH DEFECTS.

On the other hand, there are numerous additives that must be listed explicitly on packaging because they are known to cause health problems. These include sulfites, which are used to prevent discoloration. The FDA estimates that sulfites cause allergic reactions in one percent of the general population, and five percent of people who suffer from asthma. Recent research also points to health risks from eating nitrites, common preservatives used in cured meats such as sausages, bacon and hot dogs. Furthermore, there are many cases in which approved additives once thought to be safe were later restricted or banned after being proven harmful to human health.

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ADDITIVES (cont'd)

Fruit juices, marketed heavily to parents of young children, nearly always contain additives, including preservatives, artificial sweeteners and colors. A study published in *The Lancet* in November of 2008 looked at the effects of fruit juice additives on children's behavior, finding that, "Artificial colors or a sodium benzoate preservative (or both) in the diet result in increased hyperactivity in 3-year-old and 8/9-year-old children in the general population." In most cases, the increase was nearly 50 percent greater than that observed in children who consumed fruit juice without additives.

ANIMAL FEED AND OTHER CONCERNS

Many substances used in food production are not officially "additives," and are not regulated with human consumption in mind, but may nevertheless wind up in our food. These include pesticides, antibiotics, and heavy metals added to industrial animal feed. It has become increasingly common

to package foods—especially meat—using "modified atmosphere packaging," which replaces oxygen in the food package with carbon dioxide or carbon monoxide. While these gases may not be used in amounts sufficient to cause health problems, critics point out that because the practice preserves color but does not prevent spoilage, it may result in spoiled meat being sold to unsuspecting consumers. Many packaged meats are also injected with solutions of water, salt and chemicals to enhance flavor.

DID YOU KNOW?

- Ⓞ In August of 2006 the FDA approved the process of preventing the food-borne disease listeriosis by spraying bacteria-eating viruses on processed meats and cold cuts.
- Ⓞ To create new flavor additives chemists sometimes use fungal and tissue cultures—both of which can produce flavorings classified as "natural."

What You Can Do...

- Ⓞ You can avoid food additives and health problems they may cause by eating fresh, unprocessed foods grown by local farmers. Since these foods are not transported thousands of miles, they don't need to be packaged or pumped full of preservatives before reaching you. And since they are whole and unprocessed, they won't contain colorings or artificial flavors.
- Ⓞ When shopping in your grocery store, check labels for additives. Buy more whole foods and fewer "convenience foods," such as ready-made meals. The time you spend preparing an additive-free meal will pay off in fresh flavor and increased food safety for you and your family.



To find sustainably raised food near you
visit www.eatwellguide.org.

Find more detailed information about additives on our website
at www.sustainabletable.org/issues/additives.

