

Top 15 chemical additives in your food

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We don't just want our food to taste good these days: It also has to look good. As a result, food producers use any of 14,000 laboratory-made additives to make our food appear fresher, more attractive or last longer on the shelf.

The longer manufacturers use these additives, the more we learn about their impacts. While some additives are harmless, others cause everything from hives and asthma to nausea and headaches in some people. Some experts recommend avoiding foods listing more than five or six ingredients or ingredients of longer than three syllables and purchasing foods that contain such natural additives as fruits and [vegetables](#).

Our list of the top 15 chemical additives and their possible side effects will help decipher ingredient lists at your supermarket.

1-METHYLCYCLOPROPENE

This gas is pumped into crates of apples to stop them from producing [ethylene](#), the natural hormone that ripens [fruit](#). Commonly known as SmartFresh, this chemical preserves apples for up to a year and bananas up to a month. Sulphur dioxide serves the same purpose when sprayed on grapes.

ARTIFICIAL COLORS

Researchers in the early 1900s developed many artificial colors from coal-tar dyes and petrochemicals. Over the years, the FDA banned many of these chemicals as proven carcinogens (cancer-exacerbating agents). Today, the FDA only allows 10 colors in foods, four of which are restricted to specific uses. This restriction suggests some risks remain. Check out the color additives section of the FDA (www.fda.gov/ForIndustry/ColorAdditives/default.htm) Web site for more information.

ARTIFICIAL FLAVORING

This blanket term refers to hundreds of laboratory chemicals designed to mimic natural flavors. For example, some imitation vanilla flavorings are made from petroleum or paper-mill waste. In fact, a single artificial flavoring can be created from hundreds of individual chemicals. New studies suggest artificial-flavoring additives can cause changes in behavior.

ASPARTAME

This sugar substitute is sold commercially as Equal and NutraSweet and was hailed as a savior for dieters unhappy with saccharine's unpleasant after-taste. Unfortunately, one out of 20,000 babies is born without the ability to metabolize phenylalanine, one of the two amino acids in Aspartame. As a result, it's not recommended for pregnant women or infants.

ASTAXANTHIN

Almost 90-percent of salmon sold in supermarkets today come from farms. The diet of farmed salmon doesn't include crustaceans, which contains a natural astaxanthin that causes pink flesh in wild salmon. As a result, producers add astaxanthin to farm-salmon diets for that fresh-from-the-water appearance. Astaxanthin is manufactured from coal tar.

BENZOIC ACID/SODIUM BENZOATE

Often added to milk and meat products, these preservatives are used in many foods, including drinks, low-sugar products, cereals and meats. Both temporarily inhibit the proper functioning of digestive enzymes and cause headaches, stomach upset, asthma attacks and hyperactivity in children.

BHA (BUTYLATED HYDROXYANISOLE) AND BHT (BUTYLATED HYDROXYTOLUENE)

These antioxidants are similar but non-identical petroleum-derived chemicals added to oil-containing foods as a preservative and to delay

rancidity. They are most commonly found in crackers, cereals, sausages, dried meats and other foods with added fats. The World Health Organization's International Agency for Research on Cancer considers BHA a possible human carcinogen.

CANTHAXANTHIN

Egg yolks don't always come out golden yellow, so producers use this pigment to make them more palatable. Although the amounts used are very small, tests have shown greater quantities of canthaxanthin can cause retinal damage.

EMULSIFIERS

Emulsifiers, made from vegetable fats, glycerol and organic acids, extend the shelf life of bread products and allow liquids that wouldn't normally mix, such as oil and water, to combine smoothly. Many reduced-fat or low-calorie products use emulsifiers. Commercial emulsifiers also are used in low-calorie butter, margarine, salad dressings, mayonnaise and ice cream. Emulsifying agents used in foods include agar, albumin, alginates, casein, egg yolk, glycerol monostearate, xanthan gums, Irish moss, lecithin and soaps.

HIGH-FRUCTOSE CORN SYRUP

This ubiquitous sweetener helps maintain moisture while preserving freshness. A little fructose isn't a problem but the sheer quantity of "hidden" fructose in processed foods is startling. The consumption of large quantities has been fingered as a causative factor in heart disease. It raises blood levels of cholesterol and triglyceride fats, while making blood cells more prone to clotting and accelerating the aging process.

MONOSODIUM GLUTAMATE (MSG)

There was much hue and cry years ago when the public learned Chinese restaurants commonly added MSG to Chinese foods as a flavor enhancer. We then learned MSG could be found in many other processed products, such as salad dressings, condiments, seasonings, bouillons and snack chips. Some reports indicate MSG causes

tightening in the chest, headaches and a burning sensation in the neck and forearms. While MSG is made of components found in our bodies _ water, sodium and glutamate (a common amino acid) _ ingesting it is an entirely different matter.

OLESTRA

The FDA approved this fake fat for use in snack foods several years ago, over objections from dozens of researchers. Their concern was that Olestra inhibits our ability to absorb the healthy vitamins in fruits and vegetables thought to reduce the risk of cancer and heart disease. Even at low doses, Olestra is commonly known to cause "anal leakage" and other gastrointestinal problems. Perhaps this is why the FDA requires foods containing Olestra carry a warning label.

PARTIALLY-HYDROGENATED OILS

Hydrogenation is the process of heating an oil and passing hydrogen bubbles through it. The fatty acids in the oil then acquire some of the hydrogen, which makes it more dense. If you fully hydrogenate, you create a solid (a fat) out of the oil. But if you stop part way, you create a semi-solid, partially hydrogenated oil with the consistency of butter. Because this process is so much cheaper than using butter, partially-hydrogenated oils are found in many, many foods. Their addictive properties have linked partially-hydrogenated oils to weight problems caused by a slowed metabolism and the development of diabetes, cancer and heart disease.

POTASSIUM BROMATE

Potassium bromate increases volume in white flour, breads and rolls. Most bromate rapidly breaks down to an innocuous form, but it's known to cause cancer in animals _ and even small amounts in bread can create a risk for humans. California requires a cancer warning on the product label if potassium bromate is an ingredient.

SODIUM NITRITE AND NITRATE

These closely related chemicals have been used for centuries to preserve meat. While nitrate itself is

harmless, it easily converts to nitrite which, when combined with secondary-amines compounds form nitrosamines, a powerful cancer-exacerbating chemical. This chemical reaction occurs easily during the frying process.

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