

Thompson 1988 – BHT produces an increase in mouse lung weight by the necrosis (*death*) of cells in the lung walls. BHA alone has no effect on lung weight up to a dose of 500 mg/kg. However, when added to small amounts of BHT, the BHA significantly increased the lung weight in a dose-dependent manner.

Thompson 1988 – In rat liver mitochondria, BHA and BHT inhibited respiratory control of cells by stimulating state 4 respiration. They also affected the mitochondrial membrane, causing calcium release and mitochondrial swelling. There was a rapid decrease in ATP (*energy source*) levels and then cell death.

Thompson 1989 – Like BHA, phenolic compounds in medicine and foods stimulate BHT to become the more toxic BHT-quinone methide. **Note:** *Salicylates, food dyes – even neurotransmitters – are phenolic.*

Thompson 1989 – BHA enhanced the covalent binding of BHT by 400%, increased the formation of the polar and aqueous metabolites of BHT, and created two additional metabolites of BHT.

Tryphonas 1999 – 0.5% BHT treatment resulted in a significant reduction in natural killer (NK) cell activity of splenocytes (*cells in spleen that kill invaders*). **Note:** *This means BHT affects the immune system.*

Yu 2000 – The proposed use of BHA as a cancer prevention is challenged by the observation that BHA has a toxic effect in animals, causing apoptosis (*cell death*) in freshly isolated rat hepatocytes (*liver cells*).

Zoccarato 1987 – In guinea pig cerebral cortex neurons, it was seen that BHA and BHT strongly inhibit certain processes important to calcium ion depolarization of GABA and glutamate neuron transmission.

Sweeteners

CORN SYRUP

Corn syrup and high fructose corn syrup are not eliminated on the Feingold Program. However, products containing them are marked in the Feingold Foodlist and Shopping Guide for those who wish to avoid them. Our experience has been that about 20% of our members are intolerant of corn syrup, although most of them can tolerate cane sugar with no problem.

Gaby 2005 – Consumption of high-fructose corn syrup (HFCS) may now exceed that of sucrose. Although it does not hurt blood-sugar regulation in the short-term, HFCS has other effects on metabolism. It promotes the formation of toxic chemicals involved in aging, in diabetes complications, and in hardening of the arteries. In some patients, it causes chronic diarrhea or other bowel problems. It may be partly responsible for the increase in obesity, diabetes mellitus, and non-alcoholic fatty liver disease. The authors say that the evidence suggests it is more harmful than generally recognized.

Children who eat a lot of “sugar” are probably eating a lot of corn syrup. 20% of Feingold members report a sensitivity to corn syrup.

Some other names for corn syrup are: Dextrose, Glucose, Corn Sweetener, High Fructose Corn Syrup, Maltodextrin, and Corn Syrup Solids.

Hallfrisch 1990 – When HFCS was introduced in 1967, it was recommended as a replacement for “regular” sugar for diabetic and obese people. Although HFCS causes a smaller increase in blood glucose and insulin than sugar does, there are a number of undesirable changes that don’t show up immediately. It is absorbed from the small intestine and metabolized in the liver. When eating more fructose than glucose, it may be malabsorbed. It turns into fat more easily, and raises triglycerides and cholesterol more than ordinary sugar or other carbohydrates. It increases blood pressure, uric acid, and lactic acid.