

Supplementary Information on  
High Fructose Corn Syrup, Hydrogenated Oils and  
Artificial Colorings and Flavorings

**High fructose corn syrup (HFCS)**

***History***

- During the 1970's researchers discovered a chemical process that converts cornstarch (corn) into HFCS. Sugar comes from sugar cane or sugar beets (both natural products).
- HFCS is cheaper than sugar and has a longer shelf life – so it is now the sweetener of choice for hundreds of foods in the grocery store. Just read the labels.
- HFCS is often found in “low-fat” foods.

***Problems it causes***

- Unlike natural sugars, HFCS does not trigger the release of the hormone leptin, part of the body's natural system that creates the feeling of fullness and satisfaction. Those who have HFCS regularly in their diet are more likely to overeat.
- HFCS is believed to increase blood fats more than the same amount of table sugar, causing a rise in bad cholesterol which has been linked to heart disease.

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## **Hydrogenated oils**

### ***History***

- Trans-fats are so-called because a chemical process called hydrogenation transports hydrogen atoms from one side of the fat molecule to the other.
- Trans-fats are artificially formed when food factories bubble hydrogen gas into vegetable oil, a process called partial hydrogenation. This chemically changes the fats.
- Economical advantages for food processors
- Helps the oil withstand higher heat, a plus for deep-frying (like in fast food restaurants)
- Longer shelf life because trans-fats don't spoil as fast as the non-hydrogenated oils.

### ***Problems it causes***

- Healthy cells, especially brain cells, need to have a flexible membrane in order to grow and function properly. Each cell has millions of “parking spots” called receptor sites. When trans-fats fill up the parking spots reserved for the healthy fats (omega-3) it causes the cell membrane to become more rigid (due to the trans-fat's molecular structure), they interfere with the cell membrane's growth and function.
- Raises cholesterol
- Decreases immunity
- Increases abdominal fat – which increases the risk of many other diseases.
- Interferes with nerve-cell function
- Increases heart disease
- Increases many cancers, especially colon cancer
- Increases chance of Type 2 diabetes
- Is believed to cause pre-existing heart disease in children as young as 10 years old.

# Supplementary Information on High Fructose Corn Syrup, Hydrogenated Oils and Artificial Colorings and Flavorings

## **Food additives / colors**

### ***History***

- Chemically created substances that are added to foods to enhance flavor or appearance
- Known as “excitotoxins” because they alter the chemistry of the brain.
- Include aspartame, MSG (a hydrolyzed vegetable protein), food colorings and preservatives

### ***Problems it causes***

- Have no nutritional value
- Linked to neurological diseases including Parkinson's disease, seizures, and Alzheimer's disease.
- A child's growing brain is four times more sensitive to excitotoxins.
- Can cause severe headaches and mood swings in both children and adults.