



TRANS-FATTY ACIDS

Found in hydrogenated and partially-hydrogenated fats

Research is being reported on adverse effects of trans-fatty acids related to heart disease, diabetes, cancer, low birth weight, obesity and immune dysfunction.

THE FOLLOWING ARE SOME OF THE ADVERSE AFFECTS REPORTED IN HUMANS AND ANIMALS:*

1. Damage to the functions of cell membranes, when trans-fats become part of membrane structure. (Cell membranes are responsible for transporting nutrients, hormones, etc. in, and waste products out. Cell membranes become “stupid” when made of trans-fats).
2. Negatively affects fat-based steroid hormone balance and levels (female and male hormones, and adrenal hormones).
3. Increases insulin levels in the blood and contributes to Insulin Resistance.
4. Decreases the response of the red blood cells to insulin and contributes to Insulin Resistance even more.
5. Escalates the adverse effects of essential fatty acid (EFA) deficiency.
6. Blocks the conversion of Omega 6 and Omega 3 EFAs into their elongated fatty acids and eicosanoids (cellular hormones).
7. Increases total cholesterol.
8. Decreases HDLs and increases LDLs in a dose-dependent manner (The more trans-fats you eat, the more it disrupts your cholesterol balance).
9. Raises the atherosclerosis-forming repair protein (lipoprotein), whereas saturated fats lower this repair protein. (That means that trans-fats irritate the inner artery walls, and saturated fats protect them. This is just the opposite of the food industry propaganda).
10. Lowers the volume of cream and the quality of breast milk
11. Correlates with low infant birth weight
12. Decrease visual acuity in infants in a dose-dependent manner when they are fed breast milk containing trans-fats
13. Precipitates childhood asthma
14. Weakens immunity
15. Causes adverse alterations in enzymes that metabolize carcinogens
16. Cause alterations (enlargement) of adipose cell size, cell number, lipid class and fatty acid composition.

As early as 1958 researchers were claiming trans-fats were culprits in heart disease. The edible oil industry successfully squelched that information, and at the same time, shifted the blame to saturated fats where it has since erroneously remained.

* Enig, Mary G., Ph.D., *Know Your Fats: The Complete Primer for Understanding the Nutrition of Fats, Oils and Cholesterol*, Bethesda Press, (2000) pp 85-86



Essential Fatty Acids (EFAs)

General Considerations

- EFAs are not made by the body, and must be included in our daily diet.
- EFAs are of two kinds: Omega 6 (Linoleic Acid), and Omega 3 (Alpha-Linoleic Acid).
- Food and oil processing destroys virtually all EFAs.
- EFA deficiency, especially Omega 3's, is by far the most severe of the many nutritional deficiencies in the American diet.
- EFAs are the most biologically active nutrients in the body, and are especially needed in the most biologically active areas such as the brain and all cell membranes.
- The health consequences of EFA deficiency are enormous, and are only just beginning to be documented. Deficiencies in other good fats, and consumptions of trans-fats, compound the problem.

SOME MAJOR FUNCTIONS OF EFAs

1. EFAs do not make you fat
2. EFAs help boost your metabolism (which assist in normalizing weight).
3. EFAs make important body structures and participate in important functions, such as:
 - ✓ Formation of all cell and organelle membranes
 - ✓ Hormone precursors, and are necessary for the proper function of all endocrine glands
 - ✓ Eicosanoid / Prostaglandin precursors (cellular hormones controlling most cell functions)
 - ✓ Anti-mutagenic (protect DNA from mutation)
 - ✓ Anti-bacterial, anti-viral and anti-fungal
 - ✓ Protect the inner lining of blood vessels
 - ✓ Keep blood fats dispersed
 - ✓ Normalize cholesterol and triglyceride levels
 - ✓ Crucial to normal nerve and brain structure and function
 - ✓ Bring oxygen into cells
 - ✓ Play a part in calcium and other mineral metabolism
 - ✓ Skin and organ health
 - ✓ Proper immune system function (and probably protection against autoimmune diseases)
 - ✓ Enhance memory and learning
 - ✓ Increase energy
 - ✓ Normalize appetite (reestablish natural appetite control)
 - ✓ Stop sweet and food cravings
 - ✓ Decrease cellulite deposits
 - ✓ Natural antidepressant and mood enhancement
 - ✓ Increase vitality and stamina
 - ✓ Prevent hyperactivity, anxiety
 - ✓ Increase ability to handle stress
 - ✓ And Much MORE!!!



Partially Hydrogenated Oils Lead to Prostaglandin II (PG2) Excess

III effects of excessive PG2 production:

- Heart attack and strokes
- Cancer
- Any inflammatory condition
- Autoimmune diseases
- Headaches, joint and back pain
- Arthritis, asthma, skin problems
- Hot flashes, PMS, and menstrual cramps

Ask about how whole food supplements can support your body's natural digestion process.

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