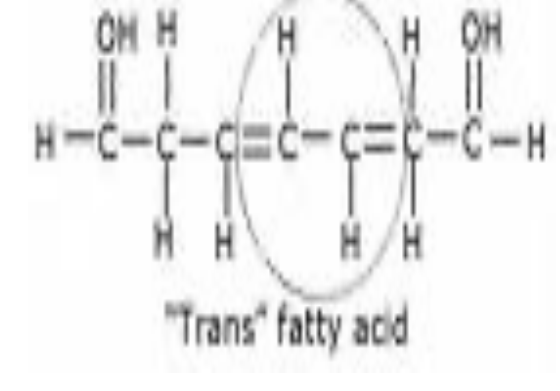
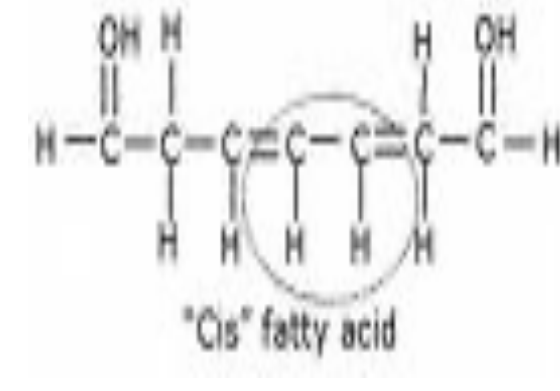


Table 1 - Types of Fatty Acids

FATTY ACID	CHEMICAL STRUCTURE	COMMON SOURCES
Trans Fat		*Margarine *French Fries *Processed Peanut Butter
Cis Fat		*Nuts *Legumes *Olive Oil *Fish

# Trans Fats: Content Not Clearly Labeled On Many Packaged Foods

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## METHODS

I sought evidence in support of my hypothesis in the peer-reviewed, scientific literature and government websites that I examined. Likewise, I encountered documentation of multiple research studies that demonstrate the extent to which industrial trans fat consumption has an adverse effect on

human health.

## RESULTS - Labeling

The American Heart Association states that we should take in a maximum of 2 g of trans fat per day. Assuming that one consumes roughly 2000 calories/day, that is equivalent to about 1% of his/her total daily caloric intake (9). However, it should be emphasized that some meats (beef, sheep, and goat) and dairy items (milk, butter, etc.) contain the kind of trans fats that occur in nature (vaccenic acid). Thus, most of us already consume our maximum 2 g of trans fat per day before indulging in foods that contain unnatural, particularly harmful trans fats (9). Until 2006, food companies were not required to list information about trans fat content on nutrition labels (5). Although the media has recently brought attention to the negative effects of trans fats, they are still present in many American foods. Instead of eliminating industrial trans fats, the American food industry packages many popular snack and fast food items in a way that does not clearly indicate the presence of trans fats. Food companies are now allowed to label foods with less than 0.5 g of trans fat per serving "Trans Fat free," rationalizing that since we can "acceptably" consume up to 2 g of trans fat per day, < 0.5 g is not substantial enough to have a notable effect on consumers' health (6). Thus, if one serving of processed peanut butter is equal to two tablespoons, and those two tablespoons contain not zero, but 0.4 g of trans fat, then that peanut butter can and will be labeled trans fat free. Furthermore, if one eats not two, but three tablespoons of peanut butter within a given sitting, then s/he will consume roughly 0.6 g of trans fat -- over a quarter of his/her daily maximum! When I examined the nutrition facts labels of various, popular brands of peanut butter labeled, "0g of Trans Fat Per Serving" (including Peter Pan, Jif, and Skippy) all contained hydrogenated vegetable oil -- an ingredient synonymous with trans fat.

Table 3 - Examples of other packaged foods whose nutrition facts labels boast 0g of Trans Fat/Serving, yet contain ingredients such as hydrogenated and/or partially hydrogenated vegetable oils:

- \*Pillsbury brownie batter (1 serving = 1/20 of a given package)
- \*Ritz crackers (5 crackers/serving)
- Dale and Thomas Popcorn Cinnamon Crème Drizzlecorn (1/2 cup/serving)
- Hostess Cupcakes (1 cupcake/serving)
- Lays Salt & Vinegar Potato Chips (1 oz/serving)
- Post Fruity Pebbles Cereal (3/4 cup/serving)

## RESULTS - Health Effects

In a recent study, researchers fed 51 male monkeys a "calorie controlled" diet consisting of 35% total fat. Half the monkeys involved in this study consumed foods containing trans fats amounting to roughly 8% of their total daily caloric intake, while the other half consumed mostly unsaturated fats. The monkeys who consumed trans fats gained weight while the monkeys who consumed unsaturated fats did not. (4)

Results of the Nurse's Health Study demonstrate that for every 2% elevation in the number of trans fat calories (as opposed to. carbohydrate calories) a woman consumes, her risk of infertility shoots up by about 73%. (2)

In a 2004 study, four pigs were divided into groups. Over the course of two 14-day periods, the pigs in one group ingested foods containing hydrogenated soybean oil (trans fat) while the pigs in the other group ingested foods containing coconut oil (saturated fat). The results of this research study confirmed that trans fat consumption raises LDL ("bad") cholesterol levels while lowering HDL ("good") cholesterol levels -- even more so than saturated fat. (3)

In another recent study, 486 Tehrani women in apparently good basic physical condition filled out a survey based on the frequency of their ingestion of partially hydrogenated vegetable oils (trans fats) vs. non-hydrogenated vegetable oils (cis fats). Research conductors took blood samples, and found that there is, indeed, a detectable link between higher levels of trans fat consumption and higher concentrations of inflammatory biomarkers within the female body. (1)

## DISCUSSION

These results demonstrate that trans fats are hazardous, but difficult to detect in American food and drink products. Although they are banned in many places, we can still easily find trans fats in many snack and fast food items in the U.S.. It is important for us to examine the ingredient labels of those food items we consume in order to be certain that they do not contain shortening, hydrogenated vegetable oil, or partially hydrogenated vegetable oil, even if their labels claim that they are "Trans Fat Free," or "Contain No/0g of Trans Fat Per Serving."

## CONCLUSION

It is possible to remain more conscious of the presence of industrial trans fats in foods by reading not only nutrition facts, but also ingredient labels.

Table 2 - Beware of these Ingredients:

- \*Shortening
- \*Hydrogenated vegetable oils
- \*Partially hydrogenated vegetable oils

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