

The Skinny on Trans Fats



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Why are Trans Fats a Problem?

1. Doubles risk of cardio-vascular disease compared to saturated fats
 - Increases LDL-cholesterol
 - Decreases HDL-cholesterol

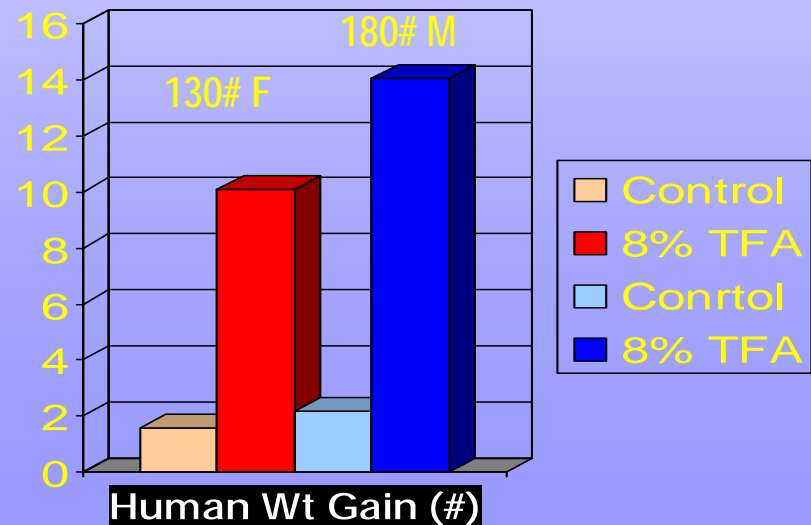
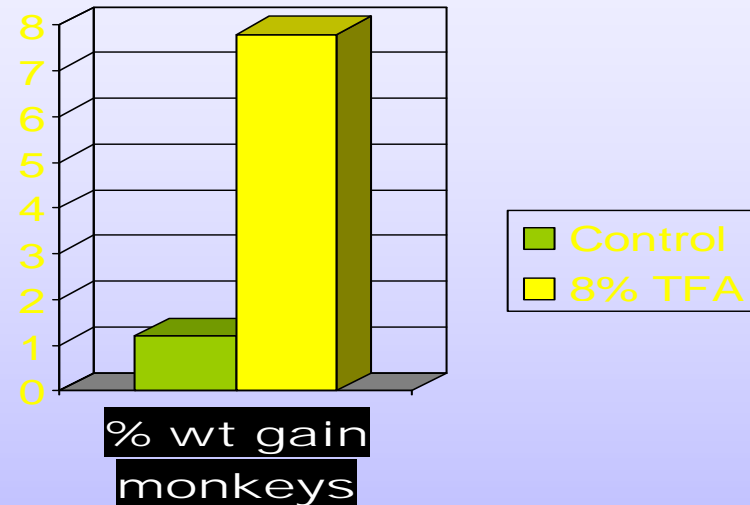
Lipids & CVD Risk	High Risk (mg/dl)	Optimum (mg/dl)
T. Chol	240	<180
LDL-C	>160	<100
HDL-C	< 40 (M) < 50 (F)	
TRIG	>400	<150

JAMA 2001;285:2486-2497

Why are Trans Fats a Problem?

2. Causes weight gain *even when consuming the same number and type of calories*

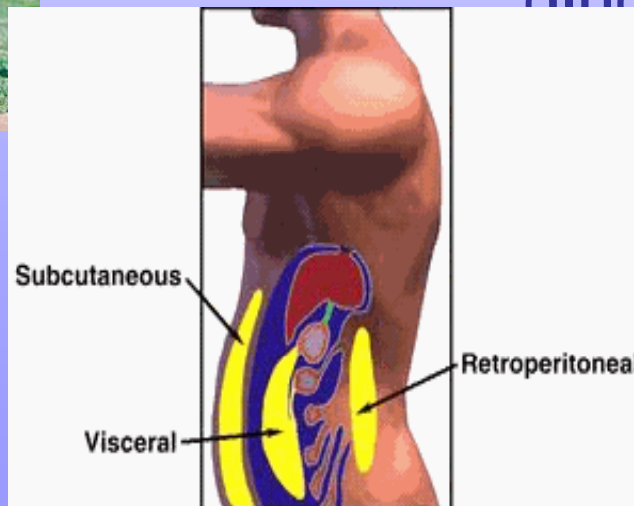
- Fat weight vs. lean body mass
- Mostly found in the belly (visceral fat)





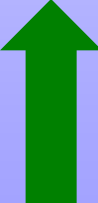

Why are Trans Fats a Problem?



3. Increases risk of type II diabetes
4. Decreases insulin sensitivity, increases blood glucose levels



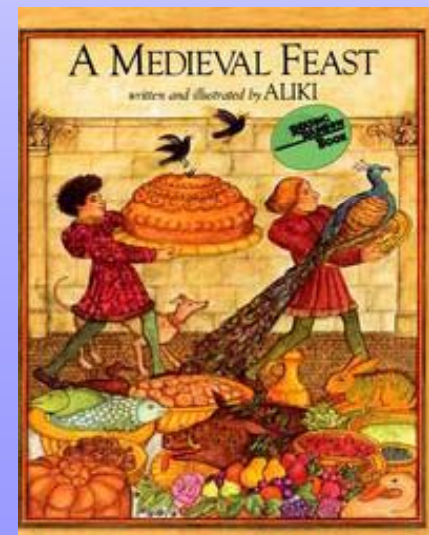
Trans Fat Is a Greater Health Risk than Saturated Fat

	Good (HDL) Cholesterol	Bad (LDL) Cholesterol
<i>Trans fat</i>		
<i>Saturated fat</i>		

Where are Trans Fats?

Naturally occurring:

- Less than 20% consumed in this formed
- 2-5% of animal fat is trans fat
- Not considered harmful
- Included in FDA definition



Where are Trans Fats?

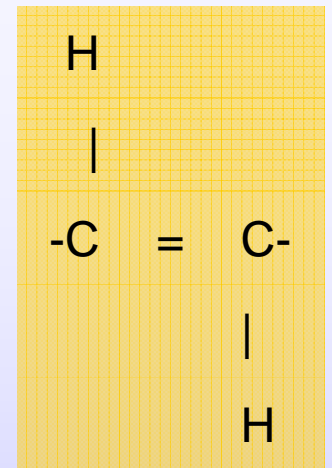
Manufactured:

- Hydrogenated fats including liquid shortenings, margarine
- Pastries, cookies, crackers, snack foods
- Fried foods (due primarily to liquid shortening)
- Most convenience/packaged foods with added fat
- Bouillon, soups, gravy mix, salad dressing
- Candy

•Values derived from 2002 USDA National Nutrient Database for Standard Reference, Release 15.

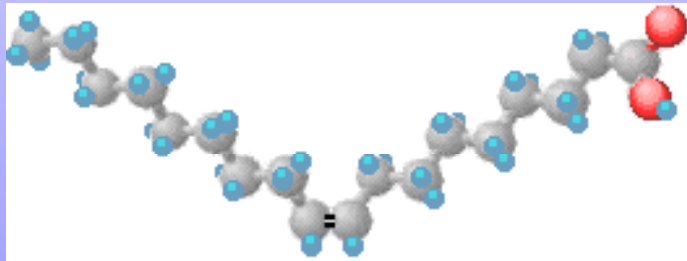
‡ Prerelease values derived from 2003 USDA National Nutrient Database for Standard Reference, Release 16.

Hydrogenation



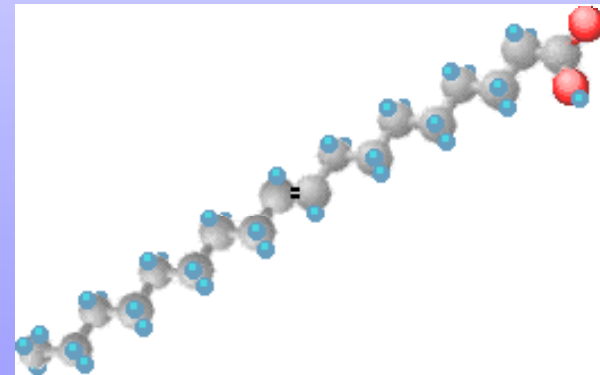
Hydrogen + Vegetable Oil = Hydrogenated
Vegetable Oil

Partially hydrogenated oils contain trans fat



Cis

vs.



Trans

A Comparison

Per tablespoon

	Total fat (g)	Sat fat (g)	Trans fat (g)	Chol (mg)
Butter	10.8	7.2	0.3*	31.1
Marg (stick)	11	2.1	3.04	0
Liq marg	0.4	0.1	0	0.2
Liq Short	13	2	2.58	0

•Values derived from 2002 USDA National Nutrient Database for Standard Reference, Release 15.

‡ Prerelease values derived from 2003 USDA National Nutrient Database for Standard Reference, Release 16.

Why are We Using Partially Hydrogenated Fats?

- Used in food industry since 1911
- 1956 - "grandfathered" onto GRAS list
- Enhances shelf life
- Makes liquid oils into solids
 - Viable replacement for butter during shortages
- Decreases browning during cooking, frying
- Cheaper than butter

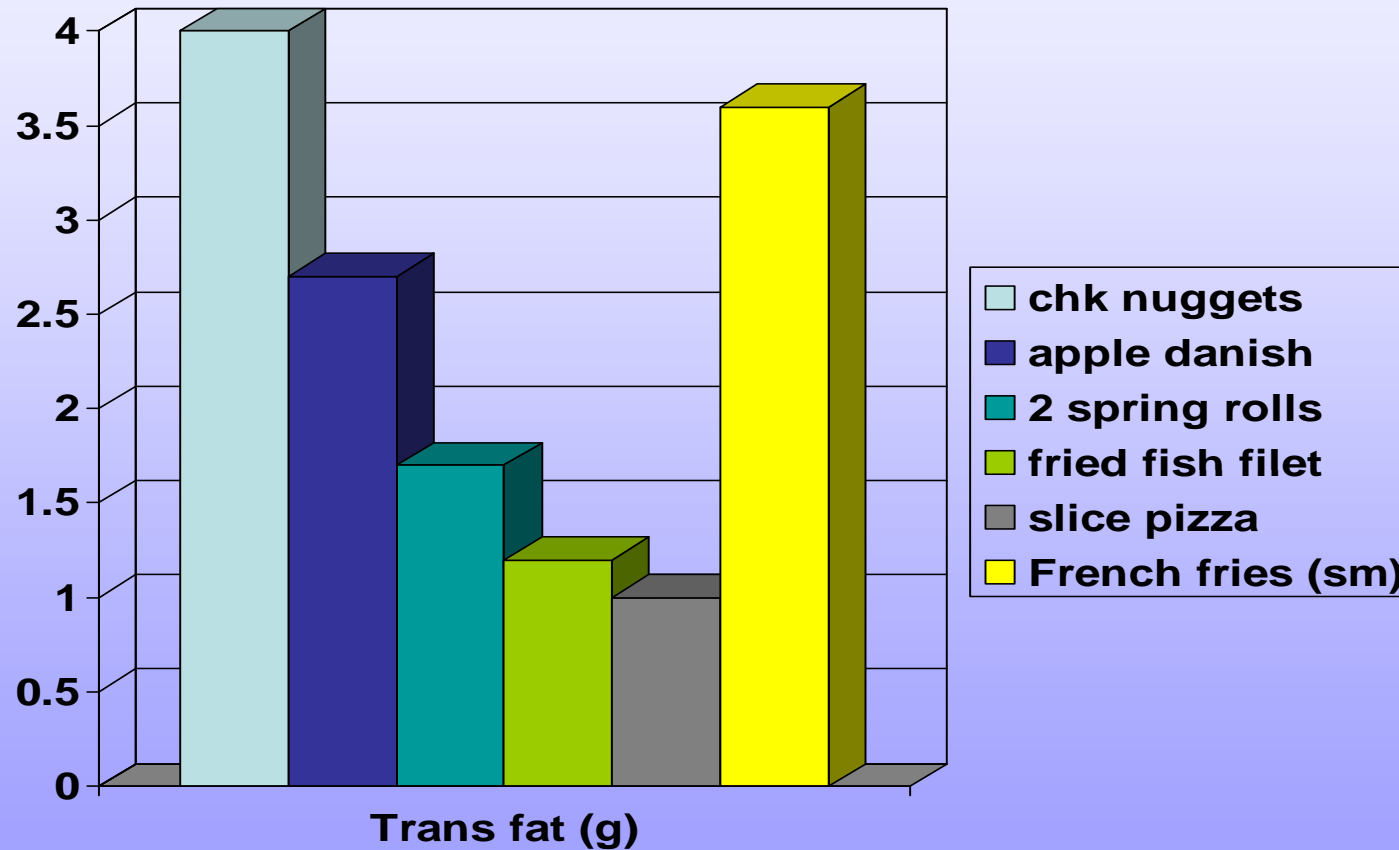


How Much Trans Fat is OK?

- Institute of Medicine (IOM) recommends eating “as little as possible” trans fat
- American Heart Association rec'd less than 2.5 gm/day
- 2.5-5% of kcal consumed



Where are Trans Fats in Restaurant Food?



How is Trans Fat Disclosed?

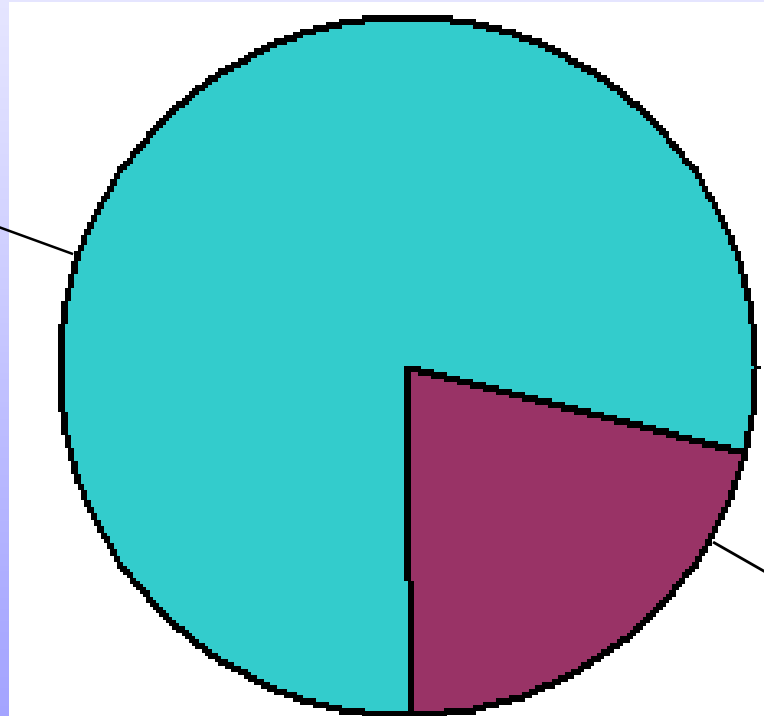
- Trans fat data required on food labels as of Jan, 2006
 - Food manufacturers actively switching to low trans fat alternatives
 - Tropical oils
 - Non-hydrogenated vegetable oil
 - Food labels don't tell the whole story
 - < 500 mg trans fat is reported as "0"
 - Look for "partially hydrogenated fat" in the ingredient list

Nutrition Facts	
Serving Size 1 cup (228g)	
Servings Per Container 2	
Amount Per Serving	
Calories 260	Calories from Fat 120
% Daily Value*	
Total Fat 13g	20%
Saturated Fat 5g	25%
Trans Fat 2g	
Cholesterol 30mg	10%
Sodium 660mg	28%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A 4%	• Vitamin C 2%
Calcium 15%	• Iron 4%
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9	* Carbohydrate 4 * Protein 4

Most Trans Fat We Eat Is Manufactured

**79%
Artificial**

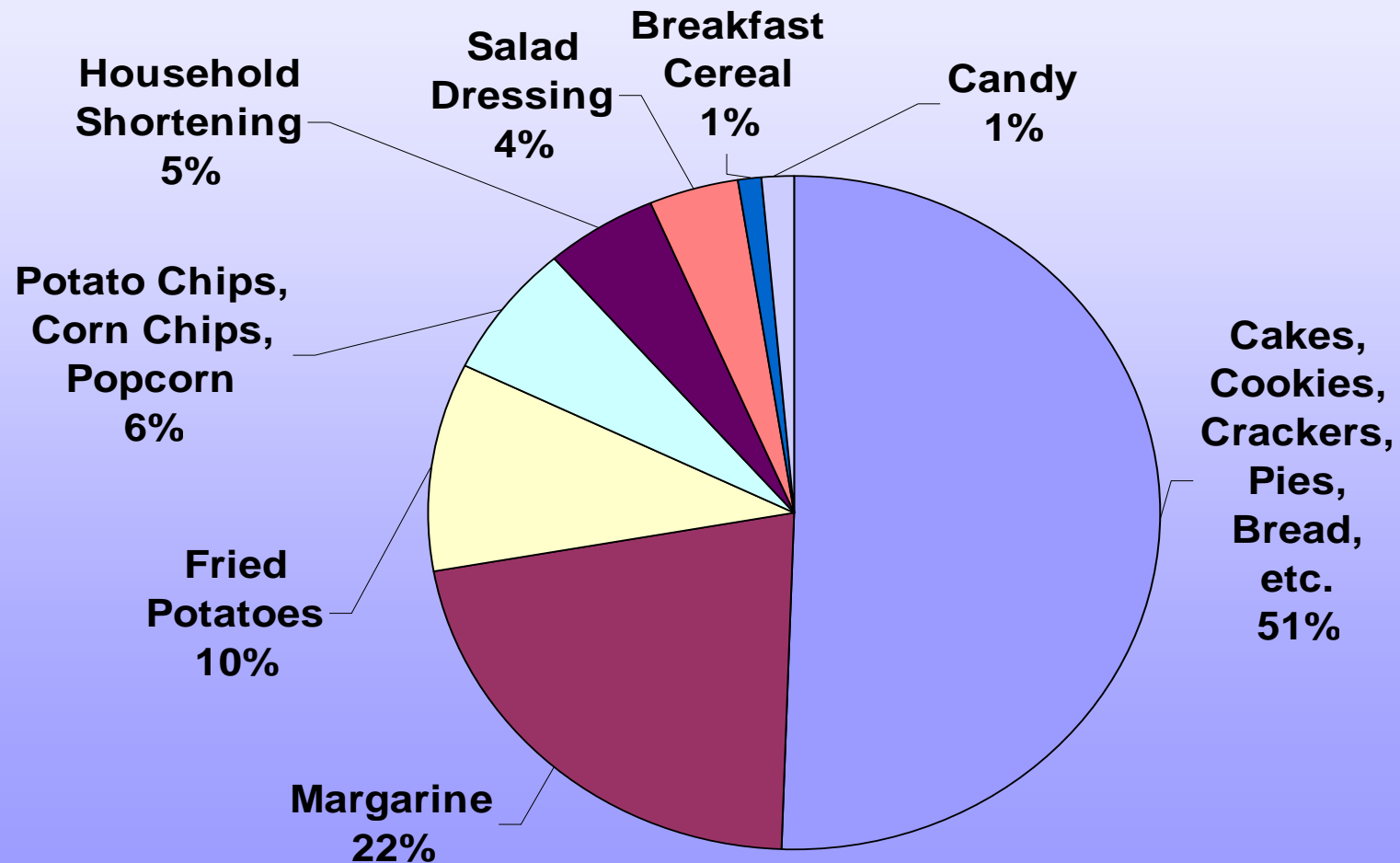
**Source:
Partially
Hydrogenated
Vegetable
Oil**



**21% Naturally
Occurring**

**Source:
Meat and Dairy
Products**

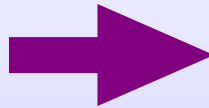
Major Food Sources of Artificial Trans Fat for U.S. Adults



Data Source: http://www.fda.gov/fdac/features/2003/503_fats.html

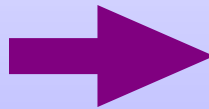
Replacing Trans Fat Is Feasible

Partially hydrogenated vegetable oil



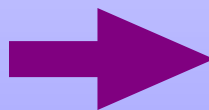
Regular vegetable oils (canola, soy, corn) that have not been hydrogenated, or newly developed trans fat-free fry oils with similar 'fry life'

Vegetable shortening and margarine



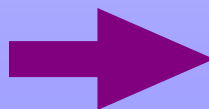
Reformulated shortening and margarine with little or no trans fat. Read the label

Cakes, crackers, pastries, cookies, pies and hamburger buns



Many food brands are now free of trans fat

Fry oils for French fries, chicken nuggets, fish fillets, and doughnuts



Regular oils or newly developed trans fat-free fry oils with longer 'fry life'

Availability of Alternatives

- 9 billion pounds utilized in N. America
- 3.27 billion pounds of alternatives now ready
- Fats available at equivalent costs
 - http://www.frytest.com/oil_economics.php
- “...Adequate supplies of trans fat alternatives currently that could be used in schools.”
 - Email: R.Reeves, President, Institute of Shortening & Edible Oils, Inc.



Communities Taking Action

Action to reduce trans fat in schools & communities

- North Carolina bans trans fats in all public school facilities
- 12 school districts noted by SNA
- 18 states with proposed legislation



Other communities, countries are ahead of the curve

- Action to reduce trans fat in communities
 - Tiburon is known as a trans-fat free city
 - Chicago City Council Alderman Burke proposed a mandate for Chicago restaurants to take "artificial trans fats" off their menu of ingredients. Proposed fines range from \$200 to \$1,000 a day.
 - New York City Dept of Health and Mental Hygiene sent letters to 20,000 restaurateurs and 14,000 food markets and suppliers to voluntarily eliminate partially hydrogenated oils in August 2006

Other Countries

- Actions to decrease use of partially hydrogenated fats
 - Denmark
 - mandates that all oils and fats used in locally made or imported food must contain less than 2% industrially produced trans fats
 - Netherlands, Norway, Finland
 - Established a cooperative effort between government and food industries to substantially reduce use and consumption of trans fats
 - Canada
 - Nov, 2004 - Health Canada formed a task force to develop recommendations and strategies to reduce trans fat as much as possible; An interim report issued August, 2005; legislation will follow



The Transition from Processed Food



Hope is a fat free &
powerful fuel...

thank you!



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