

Improving Human Health with Beef Products

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Excellent Source of 5 Essential Nutrients

- Protein
- Selenium
- Vitamin B-12
- Zinc
- Phosphorus

Good Source of 4 Essential Nutrients

- Niacin
- Iron
- Riboflavin
- Vitamin B-6

Protein

- Building block for all body tissues
- A complete protein, 9 essential amino acids
- Essential for regulating metabolism and energy
- A 3-oz serving provides 50% of recommended daily protein

Phosphorus

- Formation of bones and teeth
- Body's use of carbohydrates and fats
- Synthesis of protein for growth
- Maintenance and repair of cells, tissues

Selenium

- A well known antioxidant
- May reduce the risk of certain cancers and heart disease
- Enhances the body's ability to fight infections

Zinc

Growth and development
Immune system maintenance
Wound healing
Taste acuity
Appetite control

Iron

- Critical to cognitive development, healthy pregnancy, immune defense and performance
- Heme: type of iron found in meat, 2-3 times better absorbed than non-heme iron in plant foods
- Increases the absorption of plant iron

B-Vitamins

- Help the body use energy
- Regulate many chemical reactions for growth and health maintenance

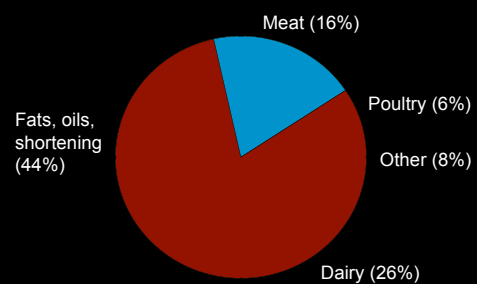
Points to Remember

- Beef is not the major source of saturated fat in the U.S. food supply
- Beef fat is rich in cholesterol-lowering fatty acids
- Beef fat used for cholesterol-lowering food ingredients

“The AHA advocates a population-wide saturated fat intake of less than 10% of energy. This goal can be achieved by limiting intake of full-fat dairy products, fatty meats, and tropical oils.”

- American Heart Association Dietary Guidelines (2000) Circulation 102: 2296-2311.

Saturated fat sources in U.S. food supply, 2004



Source: USDA

Edible fats/oils used in U.S., 2003

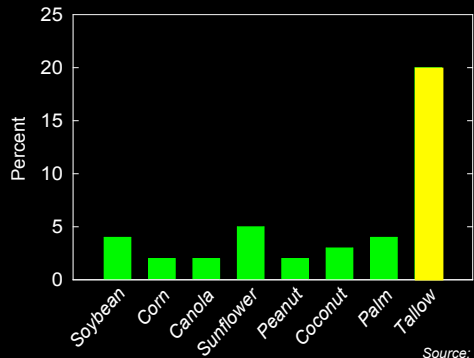
	Million pounds	Percent
Soybean	17,540	81.2
Corn	1,558	7.2
Canola	883	4.1
Cottonseed	426	1.9
Sunflower	177	0.8
Peanut	169	0.8
Coconut	306	1.4
Palm	99	0.5
Tallow	234	1.1
Lard	216	1.0

Source: USDA

Cholesterol-Lowering Fatty Acids

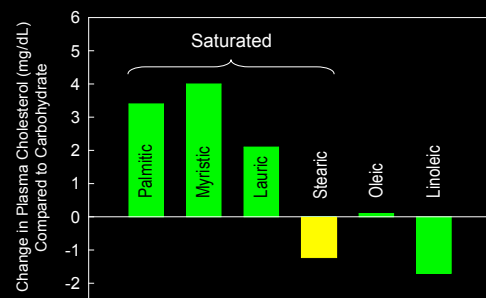
- Stearic acid
- Conjugated linoleic acid (CLA)

Stearic acid content of fats and oils (%)



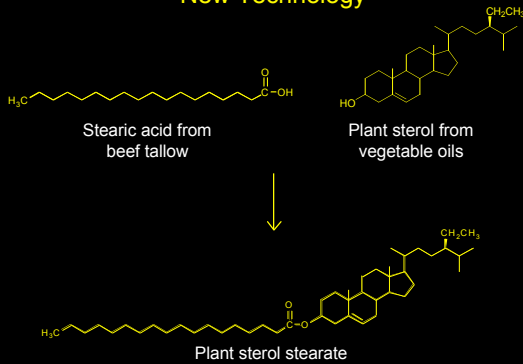
Source: USDA

Fatty Acid Effects on Plasma Cholesterol

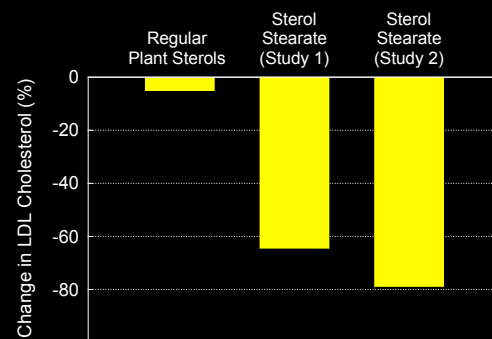


Source: Hegsted (1965) American Journal of Clinical Nutrition 17: 281-295
Keys (1965) Metabolism 14: 776-787

New Technology



Plant Sterol Stearate in Hamsters



Conjugated Linoleic Acid

- Shown to reduce body fat when fed to laboratory animals
- Fed at higher levels than feasible
- More research is needed

Summary

- Beef is an excellent and good source of many essential nutrients
- Fat found in beef has been shown to have some unique properties

Take Home Message

Key to good health is still the same advice that your mother gave.

- Eat a variety of foods in moderation
- Balance calories consumed with calories expended