Fats – the Good, the Bad, the Healthy

Fats and oils (also called lipids) are an essential part of a healthful diet, but the type and amount of fat makes a difference to your health. High intakes of saturated fats, *trans* fats and cholesterol can increase the risk for coronary heart disease and other chronic diseases.

The fats your body gets from food gives your body essential fatty acids called linoleic and linolenic acid. They are called "essential" because your body cannot make them itself, or work without them. Your body needs them for brain development, controlling inflammation, and blood clotting. Fats serve as carriers for the absorption of the fat soluble vitamins A, D, E and K and carotenoids.

Fat is one of the key energy nutrients, supplying nine calories per gram. Some fats are structural parts of cell membranes which makes them essential for protecting our cells. They serve as the foundation for important hormones. Fat provides insulation to help maintain body temperature and it protects vital organs and nerve cells. Dietary fat is found in foods from both plants and animals. Last, but not least, dietary fat makes food taste good and helps us feel full when we eat it.

The recommended total fat intake for adults is between 20 and 35 percent of total calories. That would be a maximum of 62 grams of fat a day for a 1600 calorie diet (which is about right for sedentary or older adult women) and 85 grams a day for a 2200 calorie diet (which is about right for sedentary or older adult men). Most dietary fats should come from sources of polyunsaturated and monounsaturated fatty acids such as those found in fish, nuts and vegetable oils. Less than 10 percent of calories should be from saturated fatty acids which are found mainly in foods from animals. That is 18 grams or less saturated fat for a 1600 calorie diet and 24 grams or less for a 2200 calorie diet. *Trans* fatty acid intake should be as low as possible.

Triglycerides are the form of fat found in the body and in food. They are carried to the cells through the blood. When triglycerides are high in the blood, risk for coronary heart disease goes up. Blood triglyceride levels above 150 milligrams per deciliter (mg/dl) are considered high. High triglyceride levels may play a role in forming plaque on artery walls.

Triglycerides are also the human body's storage form of fat. Excess calories - whether from fat, carbohydrate or protein - are converted to triglycerides and stored in fat cells for later use. Being overweight, drinking alcohol in excess, eating too much sugar and refined carbohydrates, having diabetes and hyperglycemia can cause triglycerides to be high.

Saturated Fats

Foods high in saturated fat raise blood cholesterol more than those high in dietary cholesterol, so it is important to know about them. Saturated fats are usually “rigid” or solid at room temperature like butter or the fat on bacon.

The main sources of saturated fat in the American diet are cheese, pizza, grain based desserts, dairy desserts, chicken dishes, sausages/franks, bacon and ribs, burgers, beef and beef dishes, reduced fat and whole milk. Some plant oils also contain saturated fat: coconut oil, palm oil, palm kernel oil, and cocoa butter. Limit saturated fat to no more than 10 percent of total calories. Reducing saturated fat intake to 7 percent of total calories will lower your risk cardiovascular disease even more.

Tips for reducing saturated fat:

- Choose fat-free or 1% milk, fat free or lowfat yogurt and reduced-fat cheeses.
- Try low fat frozen yogurt or sherbet instead of ice cream.
- Choose leaner cuts of meat such as loin, sirloin, round or flank steak; buy select or choice instead of prime.
- Try skinless chicken, fish and 90%-95% lean ground beef.
- Choose whole cuts of meat rather than ground meat.
- Trim away visible fat from meat before cooking and drain fat from meat once it is cooked.
- Use oils in cooking and baking instead of butter, lard, margarine or shortening.
- Use olive oil or canola oil as much as possible.

Unsaturated Fats

Polyunsaturated fats tend to be liquid at room temperature and at refrigerator temperatures. Liquid fats are called oils. Polyunsaturated fats lower both LDL-cholesterol (the bad kind) and HDL-cholesterol (the good kind) when substituted for saturated fats in the diet. Good sources of polyunsaturated fats are safflower, sesame, sunflower and other seeds, corn, soybeans, many nuts and oils made from these foods.

Monounsaturated fats are liquid at room temperature but start to thicken or solidify at refrigerator temperatures. Monounsaturated fats lower LDL-cholesterol without lowering HDL-cholesterol. Good sources of monounsaturated fats are olive, canola, and peanut oils and avocados. Choose monounsaturated oils like olive and canola most of the time.

All fats and oils contain a mixture of saturated and unsaturated fatty acids. However, the fatty acid in the greatest proportion determines how they are named.

Unsaturated oils are often converted to more saturated fat by a process known as hydrogenation. This is done to stabilize the oil and prevent oxidation and to make it more solid like margarine and shortening. Hydrogenated fat affects blood cholesterol just like naturally occurring saturated fats.

If the oil is partially hydrogenated, some *trans* fatty acids are produced. *Trans* fatty acids are unsaturated, but are in a different chemical form than naturally occurring unsaturated fats. High intake of *trans* fatty acids can raise LDL cholesterol. It is recommended that we keep *trans* fat intake as low as possible.

Foods that can be high in *trans* fats include:

- Commercially prepared baked goods like cakes, cookies, crackers, pies, breads
- Processed animal products
- Some margarine
- Deep fried foods like French fries
- Fried snack foods such as potato chips, corn chips and other chips
- Shortening

To lower *trans* fat intake:

- Choose liquid vegetable oils or soft tub margarine that contains little or no *trans* fats.
- Reduce intake of commercially prepared baked goods, snack foods and processed foods including fast foods.
- When foods containing partially hydrogenated oils can’t be avoided, choose those that list the hydrogenated oils near the end of the ingredient list.
- Avoid deep-fried foods in restaurants.

You may have heard about omega-3 fatty acids. Omega-3 fatty acids have been shown to play a part in keeping cholesterol levels low, stabilizing irregular heartbeat, and reducing blood pressure. Researchers now believe that alpha-linolenic acid (ALA), one of the omega-3s, is particularly beneficial for protecting against heart and blood vessel disease, and for lowering cholesterol and triglyceride levels. An excellent source of ALA is flaxseed oil, sold as both liquid oil and a semisolid margarine-like spread.

Omega-3 fatty acids are also natural blood thinners, reducing the "stickiness" of blood cells, which can decrease risk for blood clots and stroke. Omega-3s are also found in oily cold-water fish such as tuna, salmon, and mackerel.

Cholesterol

Cholesterol is essential for life and is found in all of our cells. Our bodies can make cholesterol and we get cholesterol through our diets when we eat animal foods like meat, fish and seafood, eggs and dairy foods. The average person makes about 75 percent of blood cholesterol while only around 25 percent comes from food. Our bodies use both kinds of cholesterol to form cell membranes, and to manufacture hormones, bile acids and vitamin D.

Cholesterol and other fats do not dissolve in the blood. They have to be transported to and from the cells by special carriers called lipoproteins. The two lipoproteins we know the most about are low density lipoproteins, often called LDLs, and high density lipoproteins or HDLs. Having high total cholesterol, high LDL-cholesterol or low HDL cholesterol increases the risk for heart disease.

Dietary cholesterol is not considered “good” or “bad”. Fat intake, especially saturated fat intake, has a greater effect on blood cholesterol than dietary cholesterol intake. Eating a lower saturated-fat diet tends to lower blood cholesterol levels and helps keep blood cholesterol levels within a normal range.

It is recommended that we limit dietary cholesterol intake to less than 300 milligrams a day. Limiting certain foods can help reduce dietary cholesterol intake. Foods high in cholesterol include:

- egg yolk
- liver and other organ meats
- red meat
- whole milk dairy products

When a person has too much LDL-cholesterol in the blood, it can slowly build up on the inner walls of the arteries that supply blood to the heart, the brain and other parts of the body.

Together with other substances it can form a thick, hard coating called plaque that can eventually block the flow of blood through the artery. If there is total blockage of blood to the heart, a heart attack can occur. Lowering your blood LDL cholesterol level can slow, stop or even reverse the build-up of plaque which can reduce your risk of having a heart attack.

Some things you can do to lower your LDL-cholesterol levels include:

- Eat less saturated fat, *trans* fat and cholesterol – these fats tend to raise LDL cholesterol.
- Eat more high-fiber foods – fiber helps move cholesterol out of the body.
- Substitute unsaturated fats for saturated fats – since saturated fat raises LDLs.
- Lose excess weight if you are overweight –dietary changes that help you lose weight also help lower LDL cholesterol.

Research indicates that HDL-cholesterol carries cholesterol away from cells and back to the liver where it is processed and passed out of the body. A high level of HDL-cholesterol protects against cardiovascular disease and a low level increases the risk for CVD. HDL-cholesterol levels greater than 40 mg/dL in men and greater than 50 mg/dL in women are desirable.

To achieve healthful HDL levels:

- participate in regular aerobic exercise such as walking, biking, swimming, or jogging
- don't smoke
- lose excess weight

Read Food Labels

The Nutrition Facts panel on packaged foods is a valuable tool that can help you make healthy food choices. The Nutrition Facts panel lists amounts of Total Fat, Saturated Fat, *Trans* Fat and Cholesterol in a serving of food. If a food contains less than 0.5 grams of *trans* fat, the label can indicate 0 grams of *trans* fat.

A food is low in a nutrient if the % Daily Value in the right-hand column is less than 5%. It is high in the nutrient if the % Daily value is more than 20%. Try to choose foods with fat and cholesterol in the 5% or less range most of the time.

Nutrition Facts

Serving Size 2/3 cup (55g)
Servings Per Container About 8

Amount Per Serving

Calories 230 Calories from Fat 40

	% Daily Value*
Total Fat 8g	**12**%
Saturated Fat 1g	**5**%
Trans Fat 0g	
Cholesterol 0mg	**0**%
Sodium 160mg	**7**%
Total Carbohydrate 37g	**12**%
Dietary Fiber 4g	**16**%
Sugars 1g	
Protein 3g	
Vitamin A	10%
Vitamin C	8%
Calcium	20%
Iron	45%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily value 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