

# Stroke and Heart Disease

In this resource packet you will find:

- [Protect Your Heart](#)
- [Cholesterol Talk](#)
- [CDC Heart Disease Fact Sheet](#)
- [CDC Stroke Fact Sheet](#)



## ***For More Information***

For more information on heart disease, visit the following Web sites.

- The Center for Disease Control and Prevention's Division for Heart Disease and Stroke Prevention: <http://www.cdc.gov/dhdsp>
- American Heart Association: <http://www.americanheart.org>
- National Heart, Lung, and Blood Institute: <http://www.nhlbi.nih.gov>

# Protect Your Heart: Make Wise Food Choices

## You can protect your heart and blood vessels by:

- Eating less of the foods that raise your blood cholesterol and your chances of heart disease.
- Eating more of the foods that lower your cholesterol and your chances of heart disease.

## Why should I choose fats wisely?

Some kinds of fat, such as butter and shortening, can increase your cholesterol and your chances of heart disease. Other kinds, such as olive oil and canola oil, protect your heart by lowering your cholesterol levels. However, all fats are high in calories. If you're trying to lose weight, you'll still want to limit the amount of fat you eat.

## Fats that increase your chances of heart disease and stroke:

Saturated fat, *trans* fat, and cholesterol increase your blood cholesterol and can cause a buildup of materials that can clog your blood vessels. The blood supply to your heart can be blocked, leading to a heart attack. A blockage in the blood vessels going to your brain can result in a stroke.

## Fats that can protect your heart:

Monounsaturated fats, polyunsaturated fats, and special cholesterol-lowering margarines can actually protect your heart by lowering your blood cholesterol. That's why it's better to use them instead of saturated fat. Another kind of protective fat, called omega-3-fatty acids, is found in some types of fish.

## How can I make wise food choices?

Try these steps to help protect your heart and blood vessels:

### 1. Eat less fat, especially saturated fat and *trans* fat, and fewer high-cholesterol foods.

Saturated fat is found in meat, poultry skin, butter, 2% or whole milk, ice cream, cheese, lard, and shortening. You'll also want to cut back on foods that contain palm or coconut oil. *Trans* fats are produced when liquid oils are turned into solids. This process is called hydrogenation. Cut back on foods that list *hydrogenated* or *partially hydrogenated* oils on the labels. This type of fat is found in crackers and snack foods, baked goods like cookies and donuts, French fries, and stick margarine. Use a soft margarine in place of butter or stick margarine. Egg yolks and organ meats such as liver are high in cholesterol. Check the Nutrition Facts and the list of ingredients on food labels.

### 2. Cook with less fat.

You can cut down on total fat by broiling, microwaving, baking, roasting, steaming, or grilling foods. Using nonstick pans and cooking sprays instead of cooking with fat also helps.

### 3. Eat more foods that are high in fiber.

Foods high in fiber may help lower blood cholesterol. Also, fiber can prevent problems with the digestive system such as constipation. Oatmeal, oat bran, dried beans and peas (such as kidney beans, pinto beans, and black-eyed peas), fruits, and vegetables are good sources of fiber.

## Substitute lower-fat ingredients in your favorite recipes

Try extra-lean ground beef or ground turkey instead of ground beef. Use low-fat mayonnaise and salad dressings instead of the regular types. Try plain yogurt in place of sour cream or mayonnaise. You can substitute up to half the margarine or butter in some recipes with applesauce.

Wise food choices: What to try and why		
Instead of...	Try this...	Why?
whole milk or 2% milk	1% milk or skim milk	less total fat, less saturated fat, and less cholesterol
regular cheese	low-fat cheese	
snack foods with hydrogenated oil, palm oil, or coconut oil	fat-free or low-fat snack foods	less total fat, less saturated fat
regular mayonnaise	non-fat plain yogurt or low-fat mayonnaise in dips and recipes or mustard on sandwiches	less total fat
sour cream	non-fat sour cream	less total fat, less saturated fat
regular stick margarine	special cholesterol-lowering margarine or soft tub margarine	lowers cholesterol, fewer <i>trans</i> fats
fried chicken	baked chicken	less total fat, less saturated fat
bologna, salami, or pastrami	sliced turkey, lean ham, or low-fat cold cuts	less total fat, less saturated fat
cookies with hydrogenated oil, palm oil, or coconut oil	an orange, an apple, a pear, or some prunes	more fiber, no fat
pork chop	pork loin	less total fat, less saturated fat
short ribs	grilled or baked salmon or tuna, grilled T-bone steak	less total fat, less saturated fat; fish is a source of omega-3 fatty acids

## Nutrient Content Claims

A quick way to find heart-healthy foods is to check the nutrient content claims on the label. For example, you might see the claim “less sodium” on a brand of food. This means the product has at least 25% less sodium than the regular version. You can rely on claims such as “low fat” because the government has defined those terms, as shown here. It’s against the law for food manufacturers to make false claims.

Claims for fat
<b>Fat free:</b> less than 0.5 g of fat or saturated fat per serving
<b>Saturated fat free:</b> less than 0.5 g of saturated fat and less than 0.5 g of <i>trans</i> fatty acids
<b>Low fat:</b> 3 g or less of total fat
<b>Low saturated fat:</b> 1 g or less
<b>Reduced fat or less fat:</b> at least 25% less fat than the regular version

Claims for cholesterol
<b>Cholesterol free:</b> less than 2 mg per serving
<b>Low cholesterol:</b> 20 mg or less
<b>Reduced cholesterol or less cholesterol:</b> at least 25% less cholesterol than the regular version

Source: Adapted from American Diabetes Association; Make the Link: Diabetes & Heart Disease/Stroke (2004) Available at: [www.diabetes.org](http://www.diabetes.org)

# Diet and Heart Disease

## Heart Disease Prevention Tips:

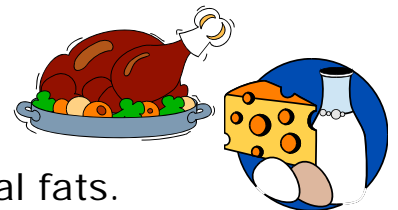
- Reach or maintain a desirable body weight
- Decrease your intake of dietary fat and cholesterol
- Increase your high-density lipids (HDL) cholesterol level
- Decrease your low-density lipids (LDL) cholesterol level
- Increase your level of physical activity

## The Basic Heart Healthy Diet:

- Less than 30% of total calories comes from fat
- Less than 10% of total fat comes from saturated fat
- Less than 300 mg of cholesterol (200 mg. for heart patients)
- High in complex carbohydrates (whole grains, rice, potatoes, and cereal)

## What is Cholesterol?

Dietary cholesterol comes directly from foods of animal origin such as eggs, meat, milk, and animal fats. Foods from plant origin contain **no** cholesterol.



Eating too many cholesterol-rich foods can raise the level of cholesterol in blood and increase the risk of clogged arteries.

There are two main types of blood cholesterol:

- 1) HDL - "good cholesterol" HDL takes cholesterol out of the blood and sends it to the liver where it is repackaged and sent to the kidneys for excretion.
- 2) LDL – "bad cholesterol" LDL takes cholesterol out of the liver and carries it around in the body where it can clog arteries.

## What Should Our Cholesterol Numbers Be?

\***HDL** - it should be greater than 40 mg/dl for women and 50 mg/dl for men. The best way to increase HDL's is through exercise.

\***LDL** - strive for a level below 130mg/dL by losing excess weight and reducing intake of fat, especially saturated fat.

\***Total Cholesterol** – it should be less than 200 mg/dL – the best way to decrease total cholesterol is to lose weight and decrease fat intake.

## Dietary Fats at a Glance

1. Saturated Fats – These fats are *solid* at room temperature. Examples are butter, lard, meat drippings, and fat back. A diet high in saturated fat and cholesterol can contribute to clogged arteries.
2. Trans Fats - Trans fatty acids are found in foods containing partially hydrogenated vegetable oils such as packaged cookies, and crackers. Trans fatty acids can raise LDL levels.
3. Unsaturated Fats – These fats are *liquid* at room temperature. Examples are olive oil, corn oil, and peanut oil. There are two kinds of unsaturated fats:
  - a) Polyunsaturated Fats – Most regular cooking oils are polyunsaturated fats. Polyunsaturated fats decrease LDL's, but also decrease HDL's.
  - b) Monounsaturated Fats – Olive and canola oil are monounsaturated fats. These fats decrease LDL's and increase HDL's.

## Other Facts About Cholesterol:

- A person who has a high percentage of fat in the abdomen area can tend to have high LDL levels.
- Our body makes its own cholesterol in our liver.
- A diet high in folic acid has been shown to reduce the incidence of heart disease.
- A diet high in fiber can also reduce our total cholesterol.



# Low Cholesterol Recipes



## *CRISPY BAKED CHICKEN*

Vegetable oil spray  
1 2½ to 3-pound frying chicken,  
cut into serving pieces, skinned,  
all visible fat removed  
1 cup skim milk  
1 cup Cornflake crumbs  
1 teaspoon rosemary  
½ teaspoon ground black pepper

Preheat oven to 400 degrees F.

Line a baking pan with foil and  
spray foil with vegetable oil.

Rinse chicken and pat dry.

Pour milk into a shallow bowl.  
Combine Cornflake crumbs,  
rosemary, and pepper in another  
shallow bowl. Dip chicken pieces  
first into milk and then into crumb  
mixture. Allow to stand briefly so  
crumb coating will stick.

Arrange chicken in prepared pan so  
pieces do not touch. Bake 45  
minutes, or until done. Crumbs  
will form a "crisp skin".

Makes 4 servings.

250 calories, 7 grams total fat,  
2 grams saturated fat, and 92 mg.  
of cholesterol

## *STUFFED GREEN PEPPERS*

3 Tablespoons canola oil  
2 onions, sliced  
2 cloves garlic, minced  
1 medium zucchini, diced  
4 medium tomatoes, chopped  
2 cups cooked brown rice  
½ cup low-fat cheddar cheese  
4 large green bell peppers  
2 cups low-salt tomato juice

Preheat oven to 375 degrees F.

Rinse bell peppers, cut off tops and  
remove seeds. Reserve hollow  
peppers and tops.

Heat oil in large skillet over medium  
heat. Add onions, garlic, zucchini,  
and tomatoes. Sauté until zucchini  
is tender-crisp. Do not overcook.  
Set aside.

Pour tomato juice into bottom of a  
casserole dish. Set aside.

Stuff peppers with vegetable  
mixture and replace the pepper top.  
Place peppers in casserole dish.  
Bake ½ hour.

Makes 4 servings.

325 calories, 12 grams total fat, 2  
grams saturated fat, and 3 mg. of  
cholesterol

# RESOURCES



National Cholesterol Education Program  
National Heart, Lung & Blood Institute  
PO Box 30105  
Bethesda, MD 20892-0105  
(301) 496-0554 or (301) 251-1222

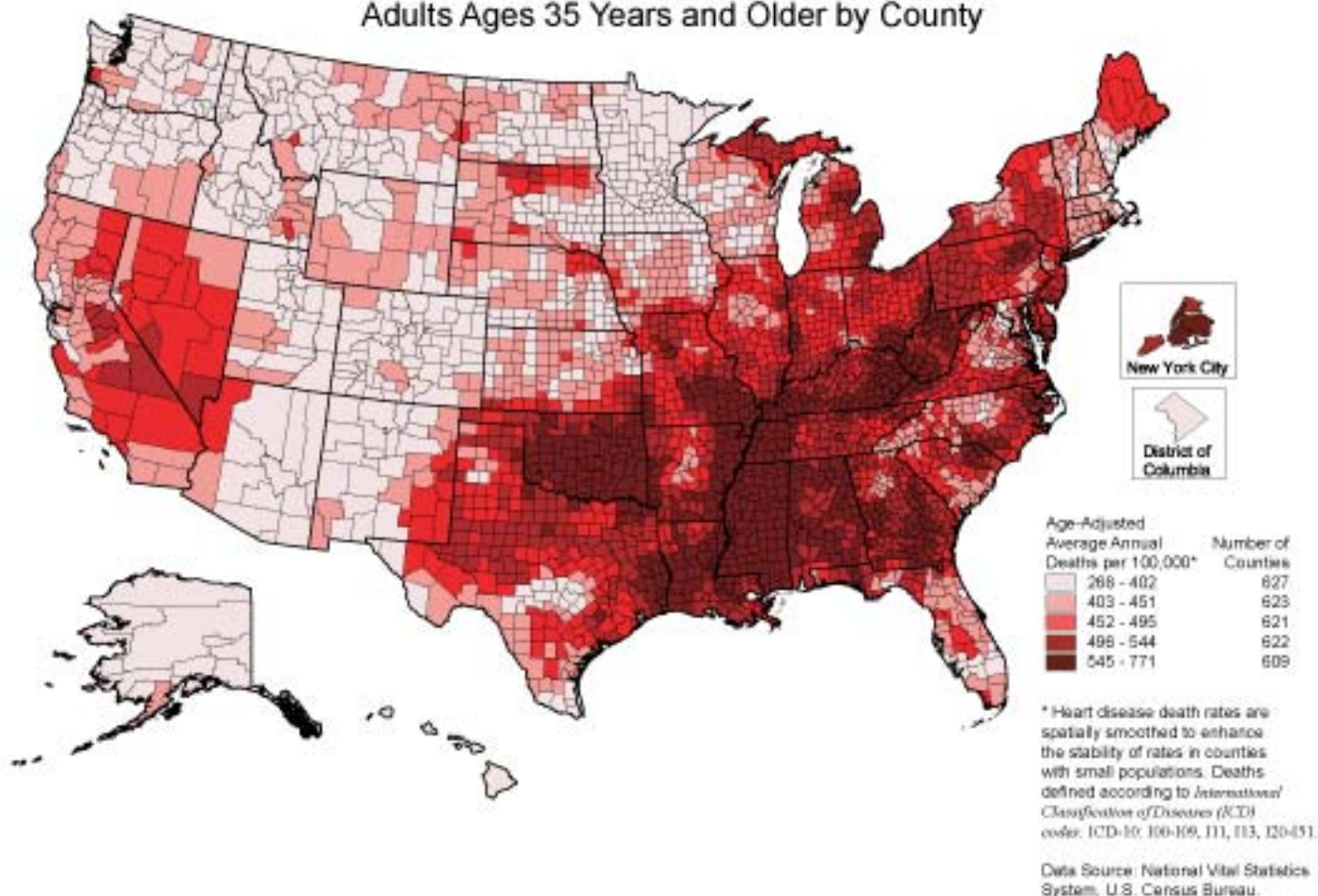
American Heart Association  
7272 Greenville Ave.  
Dallas, TX 75231-4596  
1-800-733-3000

American Dietetic Association  
216 West Jackson Blvd.  
Chicago, IL 60606  
1-800-366-1655  
[www.eatright.org](http://www.eatright.org)

Quaker Oats Company  
1-800-476-2252



Heart Disease Death Rates, 2000-2004  
Adults Ages 35 Years and Older by County



\*Heart disease death rates are spatially smoothed to enhance the stability of rates in counties with small populations. Deaths are defined according to the following *International Classification of Diseases (ICD)* codes: ICD-9: 390-398, 402, 404-429; ICD-10: 100-109, I11, I13, 120-151. Data Sources: National Vital Statistics System, CDC, and the U.S. Census Bureau.





## ***Heart Disease Facts***

- Heart disease is the leading cause of death for women and men in the United States.\*<sup>1,2</sup>
- In 2003, a total of 685,089 people died of heart disease (51% of them women), accounting for 28% of all U.S. deaths. The age-adjusted death rate was 232 per 100,000 population.<sup>2</sup>
- In the United States, the highest death rates from heart disease are located primarily in Appalachia, along the southeastern coastal plains, inland through the southern regions of Georgia and Alabama, and along the lower Mississippi River Valley.<sup>3</sup>
- Heart disease death rates per 100,000 population for the five largest U.S. racial/ethnic groups are as follows: blacks, 300; whites, 228; Hispanics, 173; American Indian/Alaskan Natives, 160 and Asian and Pacific Islanders, 128.<sup>4</sup>
- In 2006, heart disease is projected to cost \$142.5 billion, including health care services, medications, and lost productivity.<sup>2</sup>
- Studies among coronary heart disease patients have shown that 90% have prior exposure to at least 1 of these heart disease risk factors: high blood cholesterol or taking cholesterol-lowering drugs, high blood pressure or taking blood pressure-lowering drugs, current cigarette use, or clinical report of diabetes.<sup>5</sup>

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\* For this fact sheet, the term “heart disease” refers to the broadest category of “disease of the heart” as defined by the International Classification of Diseases and used by CDC’s National Center for Health Statistics. This category includes acute rheumatic fever, chronic rheumatic heart disease, hypertensive heart disease, coronary heart disease, pulmonary heart disease, congestive heart failure, and any other heart condition or disease.



# Heart Disease Signs and Symptoms

## Heart Attack Signs

If the blood supply to the heart muscle is cut off, a heart attack can result. Cells in the heart muscle do not receive enough oxygen and begin to die. The more time that passes without treatment to restore blood flow, the greater the damage to the heart. Having high blood pressure or high blood cholesterol, smoking, and having had a previous heart attack, stroke, or diabetes can increase a person's chances of having a heart attack.

According to the American Heart Association, about 700,000 Americans have an initial heart attack and another 500,000 have a recurrent heart attack each year. According to a CDC report, almost half of the cardiac deaths in 1999 occurred before emergency services and hospital treatment could be administered.

It is important to recognize the signs of a heart attack and to act immediately by calling 9–1–1. A person's chances of surviving a heart attack are increased if emergency treatment is given to the victim as soon as possible.

## Symptoms of a Heart Attack

The five major symptoms of a heart attack are—

- Pain or discomfort in the jaw, neck, or back.
- Feeling weak, light-headed, or faint.
- Chest pain or discomfort.
- Pain or discomfort in arms or shoulder.
- Shortness of breath.

**If you think that you or someone you know is having a heart attack, you should call 9–1–1 immediately.**



## **Heart Disease Prevention: What You Can Do**

In principle, all people can take steps to lower their risk for heart disease and heart attack.

### **Prevent and control high blood cholesterol**

High blood cholesterol is a major risk factor for heart disease. Preventing and treating high blood cholesterol includes eating a diet low in saturated fat and cholesterol and high in fiber, keeping a healthy weight, and getting regular exercise. All adults should have their cholesterol levels checked once every five years. If yours is high, your doctor may prescribe medicines to help lower it.

### **Prevent and control high blood pressure**

Lifestyle actions such as healthy diet, regular physical activity, not smoking, and healthy weight will help you to keep normal blood pressure levels and all adults should have their blood pressure checked on a regular basis. Blood pressure is easily checked. If your blood pressure is high, you can work with your doctor to treat it and bring it down to the normal range. A high blood pressure can usually be controlled with lifestyle changes and with medicines when needed.

### **Prevent and control diabetes**

People with diabetes have an increased risk of heart disease but can reduce their risk. Also, people can take steps to reduce their risk for diabetes in the first place, through weight loss and regular physical activity.

### **No tobacco**

Smoking increases the risk of high blood pressure, heart disease, and stroke. Never smoking is one of the best things a person can do to lower their risk. And, quitting smoking will also help lower a person's risk of heart disease. A person's risk of heart attack decreases soon after quitting. If you smoke, your doctor can suggest programs to help you quit smoking.

### **Moderate alcohol use**

Excessive alcohol use increases the risk of high blood pressure, heart attack, and stroke. People who drink should do so only in moderation and always responsibly.

### **Maintain a healthy weight**

Healthy weight status in adults is usually assessed by using weight and height to compute a number called the "body mass index" (BMI). BMI usually indicates the amount of body fat. An adult who has a BMI of 30 or higher is considered obese. Overweight is a BMI between 25 and 29.9. Normal weight is a BMI of 18 to 24.9. Proper diet and regular physical activity can help to maintain a healthy weight.

### **Regular physical activity**

Adults should engage in moderate level physical activities for at least 30 minutes on most days of the week.

### **Diet and nutrition**

Along with healthy weight and regular physical activity, an overall healthy diet can help to lower blood pressure and cholesterol levels and prevent obesity, diabetes, heart disease, and stroke. This includes eating lots of fresh fruits and vegetables, lowering or cutting out added salt or sodium, and eating less saturated fat and cholesterol to lower these risks.

**Page Located on the Web at <http://www.cdc.gov/heartdisease/prevention.htm>**



# Stroke Facts and Statistics

## Stroke Facts

- Stroke is the third leading cause of death in the United States. Over 160,000 people die each year from stroke in the United States.
- Stroke is a leading cause of serious long-term disability.
- About 700,000 strokes occur in the United States each year. About 500,000 of these are first or new strokes. About 200,000 occur in people who have already had a stroke before.
- Nearly three-quarters of all strokes occur in people over the age of 65. The risk of having a stroke more than doubles each decade after the age of 55.
- Strokes can—and do—occur at ANY age. Nearly one quarter of strokes occur in people under the age of 65.
- Stroke death rates are higher for African Americans than for whites, even at younger ages.
- According to the American Heart Association, stroke cost almost \$57 billion in both direct and indirect costs in 2005 (American Heart Association. Heart Disease and Stroke Statistics—2005 Update. American Heart Association; 2004.)

It has been noted for several decades that the southeastern United States has the highest stroke mortality rates in the country. It is not completely clear what factors might contribute to the higher incidence of and mortality from stroke in this region.

Page Located on the Web at [http://www.cdc.gov/Stroke/stroke\\_facts.htm](http://www.cdc.gov/Stroke/stroke_facts.htm)

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