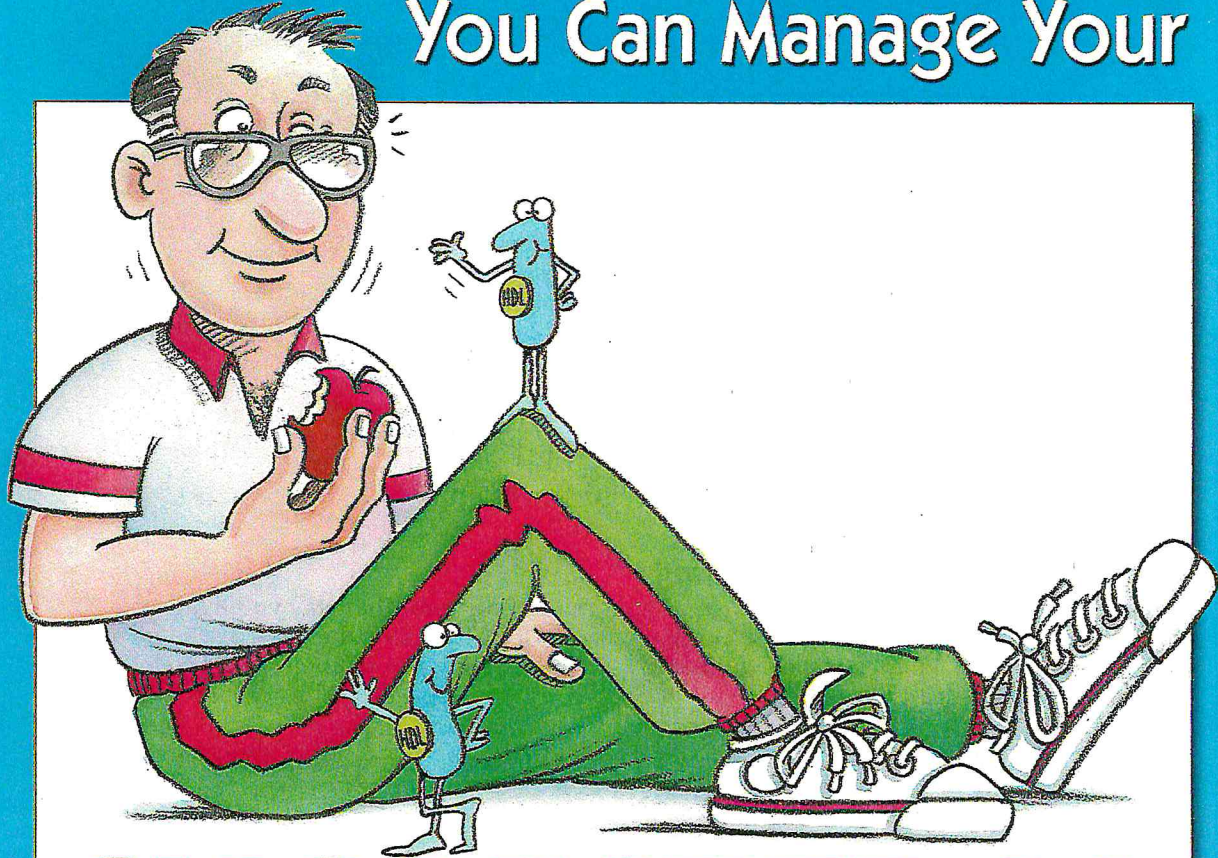


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You Can Manage Your

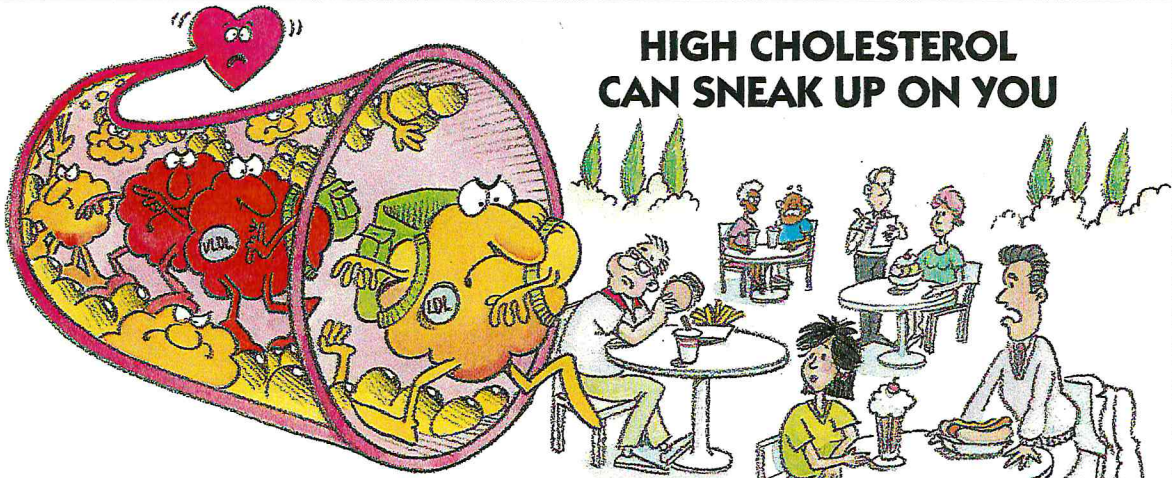


CHOLESTEROL

A Guide to
Low-Cholesterol Living





HIGH CHOLESTEROL CAN SNEAK UP ON YOU



High cholesterol. You can't see it or hear it. You may feel just fine. But when your cholesterol sneaks up above a desirable level, it puts you at increased risk of heart attack. Your risks of heart disease, stroke, and other cardiovascular diseases go up as well. Combine high cholesterol with other heart risks (such as having a family history of heart disease) and you could be in for even more trouble. What can you do? You can take steps to keep this soft, fatlike substance under control. Start by following this guide.



A Guide for Low-Cholesterol Living

Have your cholesterol level tested as often as your doctor suggests. That way you'll know if it's at a healthy level. You can help control your cholesterol by taking the steps discussed in this booklet. The sooner you start, the better, because improving your cholesterol level lowers your risk of heart disease.



Testing Your Cholesterol Level

A simple blood test shows your cholesterol level and indicates whether you are at increased risk for heart disease.



Changing Your Diet

Reduce your weight and cholesterol level by making wise food choices.



Exercise and Other Steps

You can help control your cholesterol by getting regular aerobic exercise and reducing other heart risks, such as smoking.

This information is not intended as a substitute for professional healthcare. Check with your doctor before beginning any major lifestyle changes.

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DO YOU HAVE A HIGH-CHOLESTEROL LIFESTYLE?

If you're living a high-cholesterol lifestyle, your cholesterol level may be abnormal or it may become so in the future. Read the statements below to find out how you may be contributing to unhealthy cholesterol levels and increasing your risk for heart disease. Check the box next to each statement that applies to you.

The Food You Buy

- You buy a lot of prepared, convenience, and fast food.
- You buy butter and other whole-fat dairy products such as whole milk and cheese.
- You buy a lot of high-fat ground beef, ribs, and other fatty meats.



The Food You Eat

- You eat a lot of fried or breaded food.
- You like food with gravy and sauces.
- You often eat high-fat desserts.

Facts About You

- You've been putting off losing any extra pounds.
- You don't make time to exercise regularly.
- You smoke.
- You have high blood pressure or are taking medicine to control high blood pressure.
- You have diabetes.
- You're a man over age 45 or a woman over age 55.



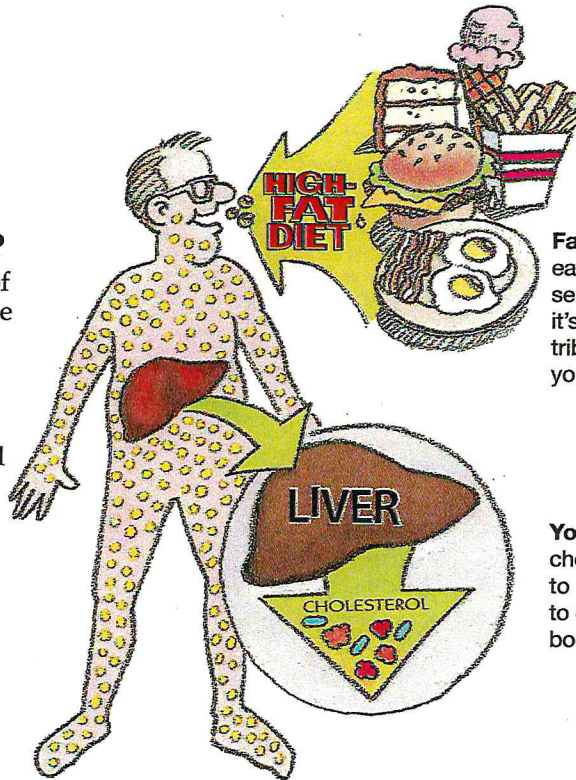
The more boxes you've checked, the greater your risk of heart disease, and the greater your benefits if you follow this guide for low-cholesterol living.

UNDERSTANDING CHOLESTEROL

Cholesterol is a fatlike substance. It helps your body use fats, insulates your nerve and brain tissues, and helps make hormones. Cholesterol and fat are carried together through your blood vessels in packages called lipoproteins. Usually this transport system works well. But when you eat too much fat, too much cholesterol may accumulate in your blood vessels. Serious problems—even a heart attack—can occur.

Where Does Cholesterol Come From?

The liver actually makes most of the cholesterol in your body. The more saturated fat you eat, the more cholesterol your liver makes. After fat is digested, the liver makes substances called **lipoproteins**. These “cholesterol packages” move the digested fat through the bloodstream to other parts of the body.



Fat from the food you eat is digested and sent to the liver, where it's processed for distribution throughout your body.

Your liver makes cholesterol packages to help move the fat to other parts of your body.

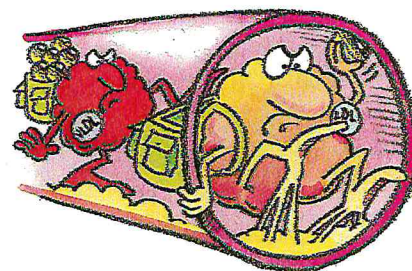
Types of Cholesterol

Lipoprotein packages all have different jobs in the body. The main lipoprotein packages are:

- **VLDL** (very-low-density lipoprotein)
- **LDL** (low-density lipoprotein)
- **HDL** (high-density lipoprotein)

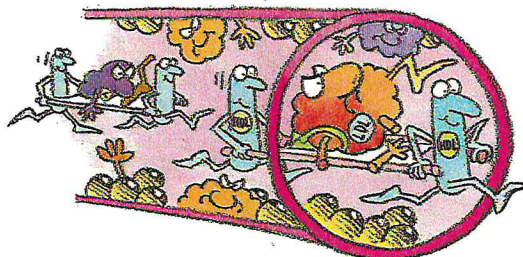
All of the packages carry some **triglycerides** (an energy source for the body). When the body makes too many triglycerides, the blood vessels get blocked more easily. VLDLs carry the most triglycerides.

VLDL carries fat and triglycerides from the liver to other parts of your body. VLDL turns into LDL after it unloads much of its fat.



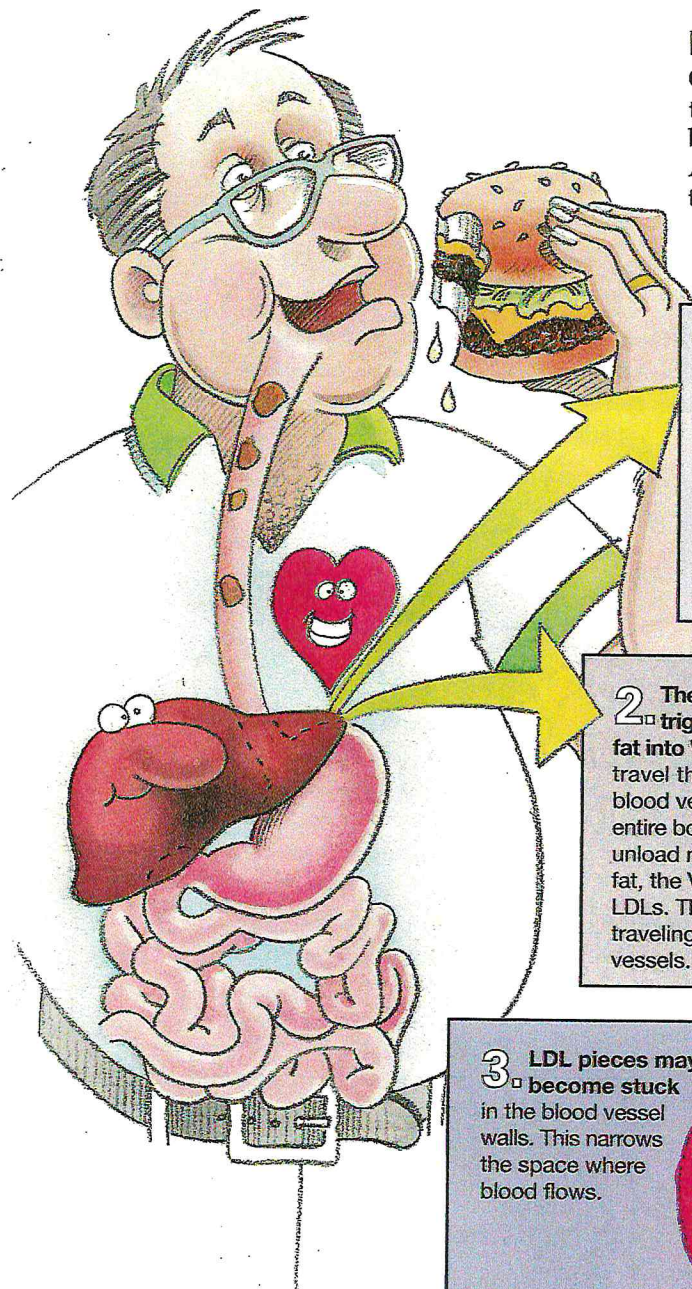
LDL is called “bad” cholesterol because pieces of it easily become stuck in the blood vessel walls.

HDL is called “good” cholesterol. It finds stuck LDL pieces and returns them to the liver.



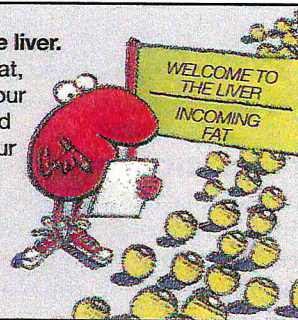
How Cholesterol Works

Cholesterol packages carry digested fat from the liver to destinations throughout your body, using the blood vessels as a highway. After making its delivery, cholesterol returns to the liver and repeats its job over again.



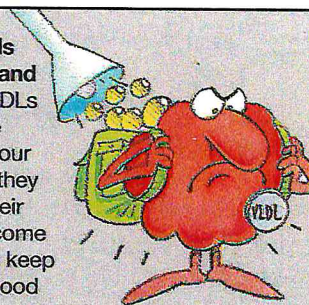
1 Fat goes to the liver.

After you eat fat, it passes through your stomach, is digested and absorbed in your small intestine, and is sent to the liver for processing and shipping throughout your body.



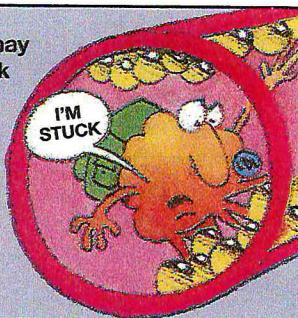
2 The liver loads triglycerides and fat into VLDLs.

VLDLs travel through the blood vessels of your entire body. Once they unload much of their fat, the VLDLs become LDLs. These LDLs keep traveling in your blood vessels.

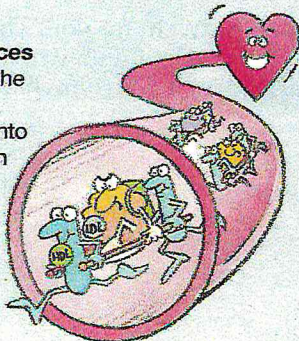


3 LDL pieces may become stuck

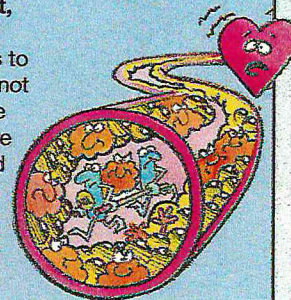
in the blood vessel walls. This narrows the space where blood flows.



4 HDLs rescue stuck LDL pieces and return them to the liver. There the LDL pieces are recycled into new VLDLs or broken down and excreted.



If you eat too much fat, your liver makes extra triglycerides and VLDLs to carry the fat. If there are not enough HDLs to rescue all the LDL pieces, more become stuck. If a blood vessel in your heart gets narrowed, heart disease develops. This increases your risk of heart attack.



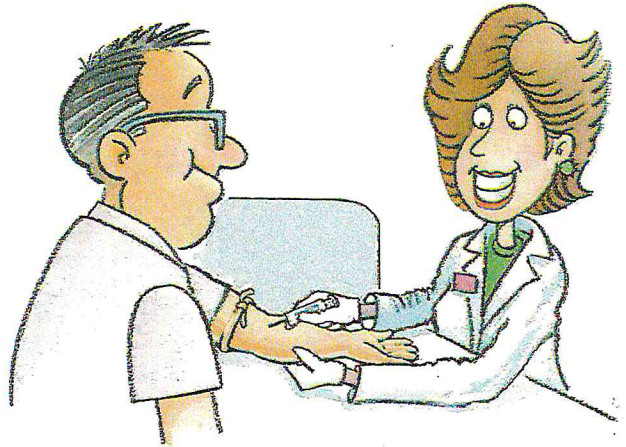


TESTING YOUR CHOLESTEROL LEVEL

The first step in low-cholesterol living is to have your cholesterol level checked. Cholesterol tests may be done at your doctor's office, at a testing center, or a clinic. The test often costs very little or may even be free. Once you know what your cholesterol level is, you can see if you're at increased risk of heart disease. And you can begin to control your cholesterol, if needed.

Cholesterol Testing

Cholesterol can be checked with a simple blood test. A blood sample is taken from your finger or arm. You may need to fast (not eat) for a set amount of time before the test.



Cholesterol Test Results

All cholesterol tests will give you a number for your total cholesterol. You may also be given numbers for HDL and LDL cholesterol, as well as triglycerides and VLDL. Fill in your numbers in the spaces below.

**Total
Cholesterol**

**HDL
Cholesterol**

**LDL
Cholesterol**

Triglycerides

Your Cholesterol Numbers

You and your doctor will decide what cholesterol levels are right for you. This will depend on your age and your family history. This will also depend on whether you have other risk factors (health or lifestyle issues) that increase your chances of having heart disease.



IMPROVING YOUR DIET

Improving your diet is often the most effective lifestyle change you can make to keep cholesterol at a desirable level. Toward this goal, the most helpful action you can take is to reduce the amount of fat you eat, especially saturated and trans fats. Doing this may help you lower your cholesterol *and* lose weight. To learn more about improving your diet, ask your doctor to refer you to a registered dietitian.

From This ...



Eat Less Fat

Many people get too many of their daily calories from fat. Your goals:

- Limit fats to between 20% and 35% of your total daily calories.
- Limit saturated fat to less than 10% of your daily calories.
- Avoid trans fats.

Start by limiting obvious sources of fat, such as butter, lard, and whole-milk cheese and ice cream. Also, try to avoid any processed foods that contain hydrogenated or partially hydrogenated oils.

Eat More Fiber

Soluble fiber is a type of fiber that lowers cholesterol levels. It does so by keeping the cholesterol you eat from being absorbed by your body. Oats, beans, and some fruits and vegetables are rich in soluble fiber.

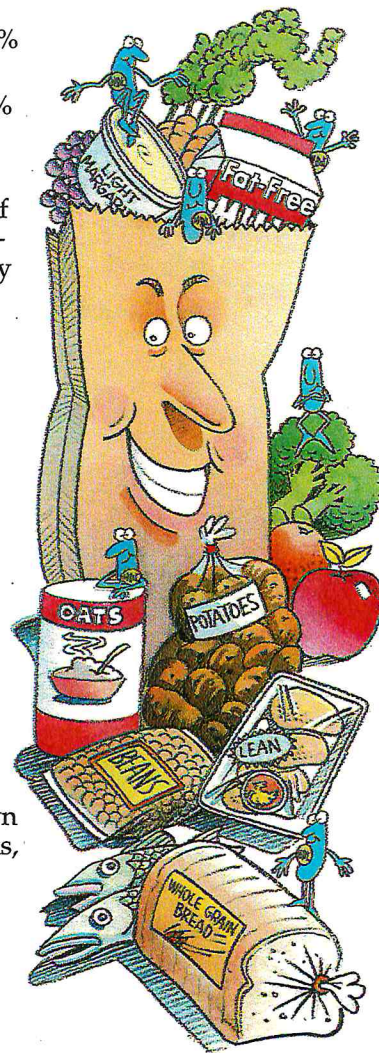
Eat More Complex Carbohydrates

Complex carbohydrates are low in fat, and they're often high in fiber. Build meals around complex carbohydrates. Beans and other legumes, root vegetables, whole-grain breads and cereals, and brown rice are good choices. Also, at meals, make sure to fill half your plate with vegetables and fruit.

Drink Less Alcohol

Drinking too much alcohol can add unneeded calories. Women should have no more than 1 alcoholic drink a day. Men should have no more than 2 alcoholic drinks a day.

... to This





CHOOSING TH

Improving your diet and losing ex
maintain a healthy cholesterol leve
food you buy. Shopping for the righ
or overwhelming. With a little pra
reducing fats, reading labels, and m

Pick Your Fats Wisely

The fat you eat can be divided into three types: monounsaturated, polyunsaturated, and saturated. Your goals are to eat less fat overall and to choose less saturated fat. Use small amounts of monounsaturated and polyunsaturated fats instead of saturated fat.



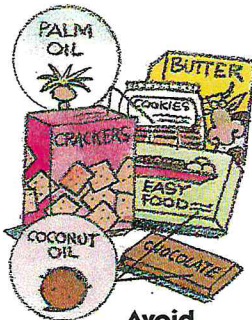
First Choice

Choose monounsaturated fat from vegetable sources such as olive and canola oil. Monounsaturated fats lower LDL (bad) cholesterol without lowering HDL (good) cholesterol. Monounsaturated fats are the best kind.



Second Choice

Choose polyunsaturated fat from vegetable sources such as safflower, sunflower, or corn oil. It may lower both LDL (bad) and HDL (good) cholesterol. Many margarines are high in polyunsaturated fat. Choose liquid or tub margarines instead of stick margarines. And choose one that lists "vegetable oil" as the first ingredient.

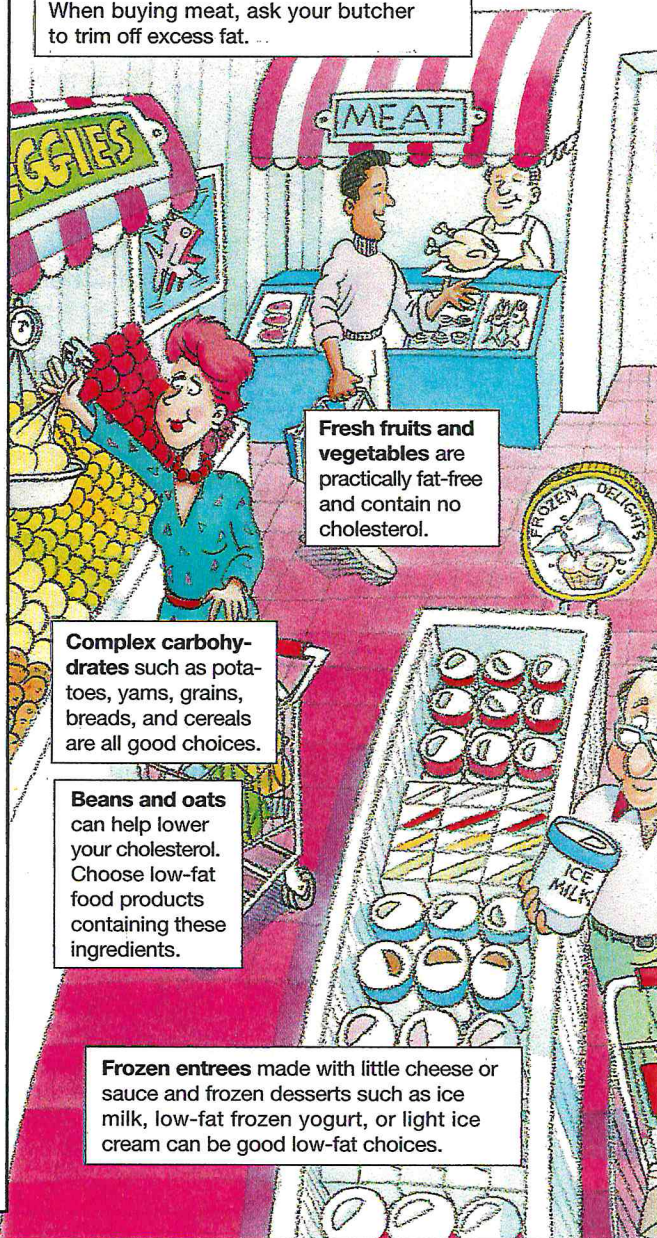


Avoid

Avoid saturated fat. Most of it comes from animal sources: fatty meats, lard, butter, and whole milk. But some comes from vegetable oils that are partially hydrogenated (**trans fats**). These are found in many processed foods. Eating too much saturated fat can raise your cholesterol.

Shop for th

Poultry, fish, seafood, and lean cuts of meat (such as round steak, pork tenderloin, or leg of lamb) are good low-fat choices. When buying meat, ask your butcher to trim off excess fat.



Fresh fruits and vegetables are practically fat-free and contain no cholesterol.

Complex carbohydrates such as potatoes, yams, grains, breads, and cereals are all good choices.

Beans and oats can help lower your cholesterol. Choose low-fat food products containing these ingredients.

Frozen entrees made with little cheese or sauce and frozen desserts such as ice milk, low-fat frozen yogurt, or light ice cream can be good low-fat choices.



THE BEST FOODS

Excess weight can help you reach or... Begin by making changes in the... that food doesn't have to be confusing... practice, you can develop skills for... making good selections at the market.

Best Foods



Fat-free milk, cheeses made with part-skim milk (such as part-skim mozzarella), and nonfat yogurt are good dairy choices.

Spreads made with liquid oil include tub margarine and light mayonnaise. Also look for types made with plant stanol and sterol esters.

Read the Labels to Find the Fat

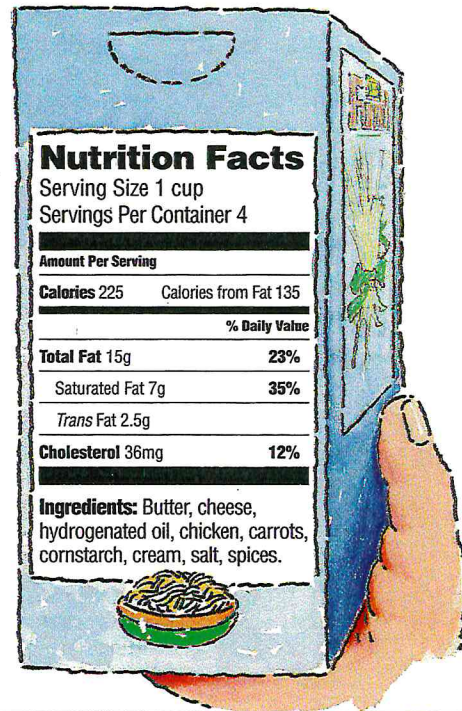
The best way to find the fat in processed foods is to read the labels. You can ask yourself these four questions to help you choose products that are low in fat—especially products low in saturated fat.

Do too many calories come from fat? Total fat intake should be less than 35% of your daily calories. Look for foods with a Daily Value of 5% or less for saturated fat. Limit foods with a Daily Value of 20% or higher.

Is the serving size close to what you eat? The serving size is the basis for all values on the label. When tracking fat, use a serving size that is close to what you will really eat. If you will eat 2 servings, double all the numbers on the food label.

Is saturated fat a major ingredient? The label lists all ingredients by weight. In this product, the heaviest ingredient is butter. Cheese and hydrogenated oil are next, so this product is likely to be high in saturated fat. Check the daily value.

Are there several fats in the product? When you see several high-fat ingredients listed on the label (such as butter, cheese, hydrogenated oil, and cream), then the product probably contains too much fat.





Low-Fat Cooking

These cooking techniques can lower fat while preserving taste:

- Microwave, broil, grill, bake, or steam food without adding fat.
- Use nonstick sprays or cookware.
- Remove extra fat from meat and skin from poultry before cooking.

Great Seasoning

Use seasonings creatively—and you'll probably forget about the missing fat:

- Sprinkle low-salt herbal blends on meats.
- Try butter-flavored (fat-free) powders on potatoes, vegetables, and noodles.
- Use low-fat dressings and "light" or "diet" mayonnaise on salads and sandwiches.

What's for breakfast?

Rather than skip breakfast, plan to eat it and reduce the amount you eat at dinner. Try these easy-to-prepare ideas:

Oatmeal or oat bran cereal
Fat-free milk
1 piece of fruit
Whole-wheat toast with no-sugar-added jam

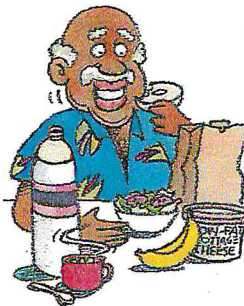
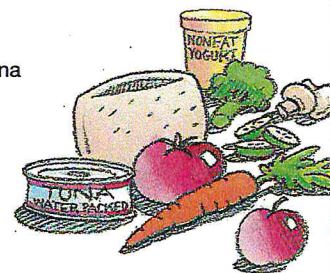


Egg whites or egg substitute
Whole-wheat toast
No-sugar-added jam
Juice

What's for lunch?

When lunchtime is rushed, you can be tempted to grab anything that's fast. Try one of these meals instead:

1 pita bread
1 small can of water-packed tuna (plain or with 1 tablespoon light mayonnaise)
Raw vegetables
Nonfat yogurt
1 piece of fruit

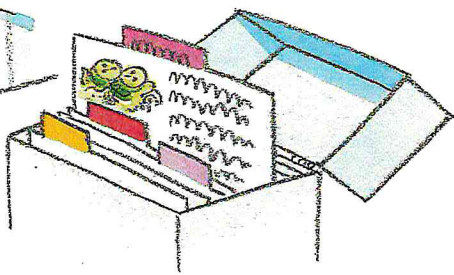
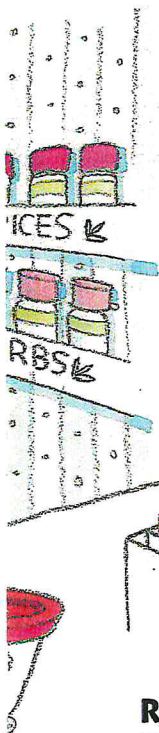


Broth-based vegetable soup
Tossed salad with 1 tablespoon light or diet dressing
Bagel
Low-fat cottage cheese
1 piece of fruit



COOKING UP HEALTHY MEALS

Making changes to lower cholesterol in your diet goes beyond shopping. You'll also want to learn cooking techniques that can remove excess fat, cholesterol, and calories from your meals. So experiment a little. Put all of your healthy food choices and cooking skills together. That way, you'll have meals that taste great, lower your cholesterol, and maybe even help you lose weight.



Recipe Adjusting

Rather than give up favorite recipes, try some low-fat, low-cholesterol substitutes:

- Use vegetable oil in place of lard or shortening, and try using less of it.
- Substitute margarine for butter, and use less.
- Try replacing each egg with two egg whites.

Smaller Portions

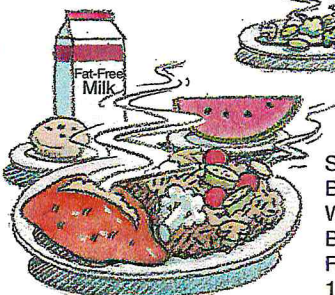
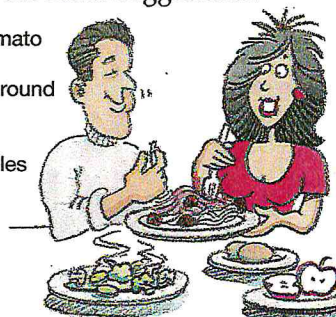
Reduce your calories by making several small changes:

- Serve food on the plates and immediately put leftovers away.
- Use a smaller plate—it looks fuller.
- Eat at the table—not in front of the TV—so you'll pay attention to how much you're eating.

What's for dinner?

Lighten up on dinner by serving less meat and more vegetables, fruits, and starches. Here are some suggestions:

- Spaghetti with tomato sauce
- Lean meatballs (ground turkey breast or lean beef)
- Steamed vegetables
- French roll
- 1 piece of fruit

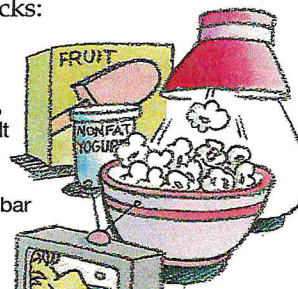


- Steamed vegetables
- Brown rice
- Whole-wheat roll
- Baked yam
- Fat-free milk
- 1 piece of fruit

What's to snack on?

What should you eat when you want to munch? Try some of these low-fat, low-cholesterol snacks:

- Air-popped popcorn, plain or with low-salt seasoning
- Nonfat yogurt
- All-juice frozen fruit bar



- Low-salt pretzels
- Fresh, frozen, canned, or dried fruit
- Raw vegetables
- Bowl of high-fiber, low-fat cereal
- Low-fat crackers



EATING WELL WHILE EATING OUT

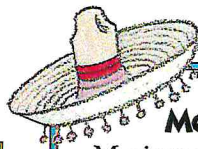
It's easy to feel that you can't manage your cholesterol or your weight when you eat out. But you can! Start by choosing foods that are lower in cholesterol and fat. The lists below offer good options. Also, ask for food to be prepared in healthy ways—most restaurants will meet such special requests. And remember, you don't always have to eat everything on the plate. You can share an order or take some home.



American

Many American restaurants now offer low-fat, low-cholesterol alternatives to high-fat fast food. Here are some good choices:

- Salad bar (avoid bacon and too much high-fat dressing)
- Broiled, grilled, or baked chicken, fish, seafood, lean beef, or lean pork (not breaded)
- Turkey sandwich without cheese or mayonnaise
- Small hamburger with lettuce and tomato (no cheese or mayonnaise)



Mexican

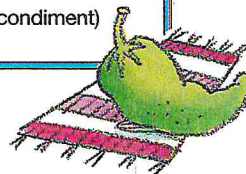
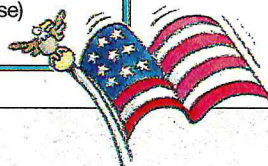
Mexican cooking can be healthy if you avoid fried or refried food, guacamole, sour cream, or cheese. Here are some good choices:

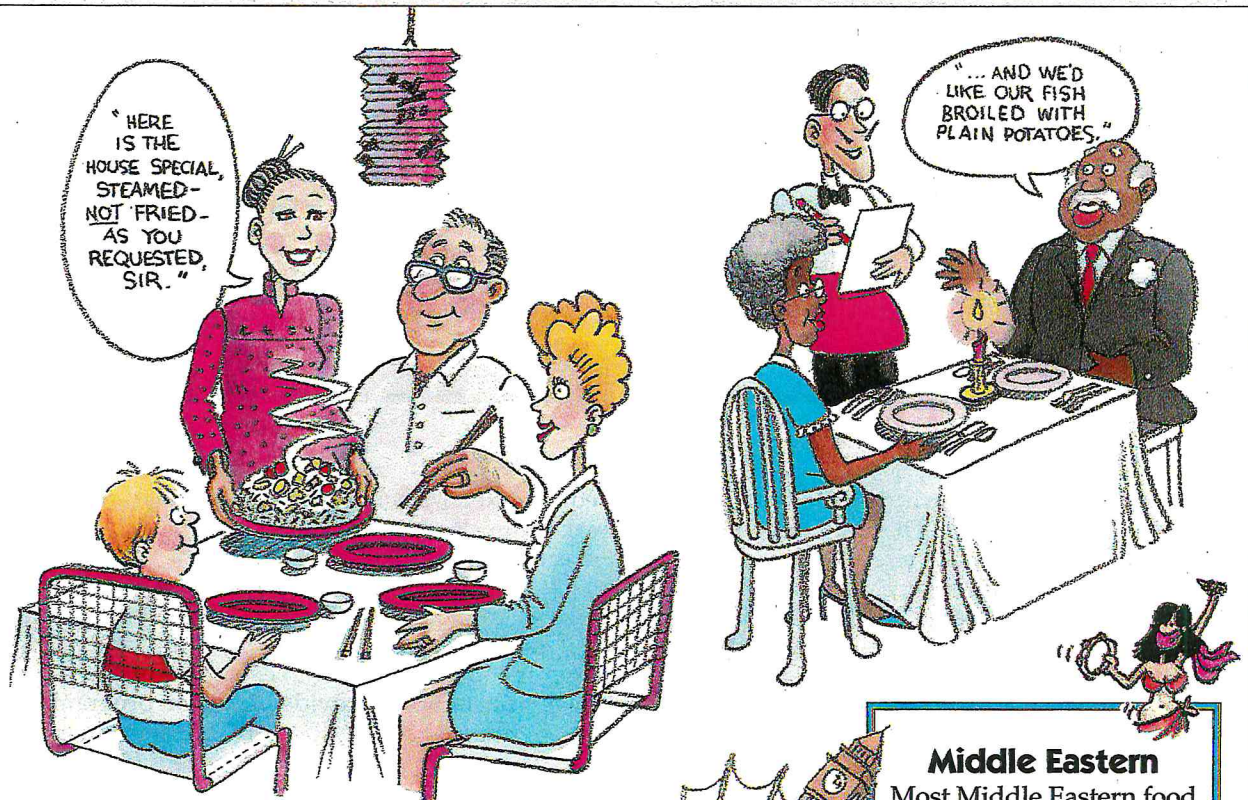
- Whole (not refried) beans and rice
- Burrito without cheese
- Chicken tostada with whole beans (don't eat the fried tortilla shell)
- Steamed corn tortillas
- Chicken or fish fajita
- Grilled fish
- Salsa (as a condiment)

Italian

Italian food cooked with just a little olive oil can be healthy if you avoid lots of meat, cheese, and cream sauces. Here are some good choices:

- Pasta with marinara or clam sauce (not cream sauce)
- Spaghetti with tomato sauce (no sausage)
- Pizza (less cheese, and add only vegetable toppings)
- Ravioli
- Tortellini
- Potato gnocchi
- Minestrone soup





Asian

Asian food can be low-fat and low-cholesterol, as long as you avoid stir-fried, breaded, and deep-fried food. Here are some good choices:

- Steamed vegetarian pot stickers or dumplings
- Steamed rice and entrees
- Noodle dishes (not fried)
- Sushi or sashimi
- Tofu items (not fried)
- Chicken or fish, broiled, cooked in broth, or steamed
- Hot-and-sour soup
- Fortune cookies

European

European cuisine — especially sauces — can be loaded with added fat, so always ask for sauces “on the side.” Here are some good choices:

- Fresh oysters and clams
- Broth-based soup
- Chicken stewed in tomatoes or wine sauce
- Poached, steamed, or broiled entrees
- Filet of sole (not fried)
- Steamed lobster or shrimp
- Ratatouille
- Poached pears or fresh fruit

Middle Eastern

Most Middle Eastern food is healthy, made from ingredients such as rice and yogurt. Here are some good choices:

- Stuffed grape leaves
- Tandoori (oven) cooked chicken breast
- Grilled lamb
- Curries (made without coconut milk)
- Legume (dal) dishes
- Pita bread
- Chapati (roti)
- Chutneys (made without coconut)



EXERCISE AND OTHER STEPS TOWARD CHOLESTEROL CONTROL

Along with choosing a better diet, there are other steps you can take to help improve your cholesterol level: Lose that extra weight, exercise regularly, and reduce your other heart risks. Also, get your cholesterol level rechecked periodically. That way, you can be sure you're maintaining a healthy cholesterol level.

Watch Your Weight

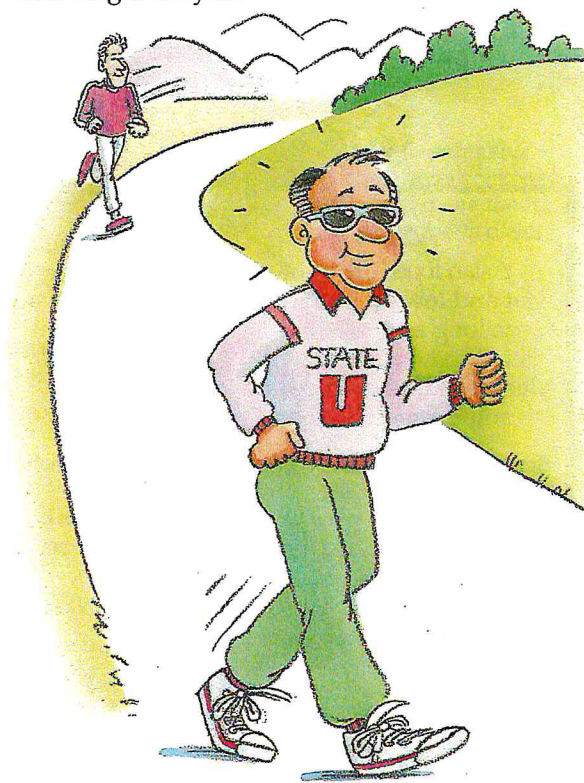
When you weigh too much, your body stores more fat and cholesterol. This may cause your blood cholesterol level to rise. Losing weight can help lower your triglyceride level. It may also raise your HDL level. Remember, the quickest way to lose weight is to decrease your calorie intake.



Ask your healthcare provider what your target weight range should be. If you need to lose weight, it's best to lose it slowly. Avoid diet fads! These may help you lose weight, but they're not good with helping you keep the weight off for good.

Why Exercise?

Frequent exercise helps lower your triglyceride level. It can also help you lose weight and can even help lower other risks to your heart health. Aim for at least 40 minutes of moderate to vigorous activity 3 to 4 times a week. Examples include walking, biking, and swimming. Before starting to exercise, work with your healthcare provider to plan a program that's right for you.



Warm up for 5 minutes or so. Mild stretching or slow walking helps warm up muscles and joints.

Exercise aerobically for at least 40 minutes 3 to 4 times a week.

Cool down by repeating your warm-up for 5 to 10 minutes.

Reduce Other Heart Risks

High cholesterol is only one of the many risk factors for heart disease. You have no control over factors such as your family's history of heart attacks or your age. But you can control other risks.



Stop smoking. Smoking lowers your HDL (good) cholesterol and increases your risk of heart attack, stroke, and cancer.

Control high blood pressure and diabetes through diet, weight loss, exercise, and medicine (if prescribed). Frequent monitoring can help you track your efforts.

Reduce the stress in your life. Ask your company health services or your healthcare provider for information about managing stress.



Get Regular Checkups

Visit your healthcare provider as often as directed to be sure that your cholesterol level—and your other risks for heart disease—are under control. Ask your healthcare provider how often you should have your cholesterol checked.

Take Medicine

In addition to lifestyle and diet changes, your doctor may prescribe medicine to lower your cholesterol. Even if you take medicine, stick with the changes you've made for low-cholesterol living. That way you'll be sure to get the best results.

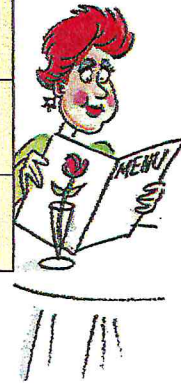


TAKING ACTION AND FEELING GOOD

You can feel great knowing that you're taking steps to manage your cholesterol. Lowering your cholesterol level will reduce your risk of heart attack, heart disease, stroke, and other serious cardiovascular diseases. And you have the satisfaction of knowing that your actions have helped put you back in charge of your own well-being.



Keeping Track of Your Cholesterol				
Date of Test	Total Cholesterol Level	HDL Level	LDL Level	Triglyceride Level



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