

Office of Prevention, Education, and Control



HEALTHY
HEART
HANDBOOK
FOR
WOMEN

NATIONAL INSTITUTES OF HEALTH
NATIONAL HEART, LUNG, AND BLOOD INSTITUTE



The National Heart, Lung, and Blood Institute would like to express its gratitude to the hundreds of women who completed a survey about the original *Healthy Heart Handbook for Women*, thereby contributing valuable ideas and suggestions to this revised edition.

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WOMEN





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Preface to the New Edition

What do you want and need to know about women's heart health? In a very real sense, this new edition of the *Healthy Heart Handbook for Women* tries to respond to that question. To help us prepare this updated version, we surveyed women across the country to find out their opinions and thoughts about it. One of the most important questions we asked was: What specific topics would you like to see added or discussed in more detail in the next edition?

We received lots of good ideas. Most readers liked the self-help emphasis in the book, and wanted even more information to help them make good decisions about such topics as hormone replacement therapy, treatment for high blood cholesterol, healthy eating, and physical activity. Many found the heart-healthy recipe section very useful—and wanted still more recipe ideas. As a result of this input, these topics are treated in more detail in this edition.

Other suggestions prompted us to include entirely new subjects for the handbook, including the warning signs of a heart attack, how to talk with your doctor about heart health, and whether vitamin supplements can prevent heart disease. These topics and other new subjects are discussed in this edition.

Because of the good feedback we received from women across the country, we believe that this edition of the *Healthy Heart Handbook for Women* will be even more useful to women as they make thoughtful, informed decisions about their heart health.

The Healthy Heart

You owe it to yourself to take this handbook to heart. For heart disease is a woman's concern. Every woman's concern. It is not a condition that affects only your husband, your father, your brother, or your son. This handbook tells you why you should be concerned about your own heart health, and what you can do to prevent heart disease. If you now have heart disease, this booklet also suggests lifestyle changes that can help you protect your health. For every woman, a little prevention can have a big payoff—a longer, healthier, more active life.

Each year, about 370,000 women die of heart disease, making it the number one killer of American women. Another 93,000 women die each year of stroke. Although death rates from heart disease and stroke have declined in recent years, these conditions still rank first and third, respectively, as causes of death for women.

Overall, about 9 million American women of all ages suffer from heart disease. One in ten women 45 to 64 years of age has some form of heart disease, and this increases to about one in four women over 65. Each year, a half million women suffer heart attacks. Cardiovascular diseases and their prevention, therefore, are pressing personal concerns for every woman.

What Are Cardiovascular Diseases?

Cardiovascular diseases are diseases of the heart and blood vessel system, such as coronary heart disease, heart attack, high blood pressure, stroke, angina (chest pain), and rheumatic heart disease. Coronary heart disease—the primary subject of this handbook—is a disease of the blood vessels of the heart that causes heart attacks. A heart attack happens when an artery becomes blocked, preventing oxygen and nutrients from getting to the heart. A stroke results from a lack of blood to the brain, or, in some cases, bleeding in the brain.

Who Gets Cardiovascular Diseases?

Some women have more “risk factors” for cardiovascular diseases than others. Risk factors are traits or habits that make a person more likely to develop a disease. Some risk factors for heart-related problems cannot be changed, but others can be. The major risk factors for cardiovascular diseases that you can control are cigarette smoking, high blood pressure, high blood cholesterol, overweight, and physical inactivity.

Other risk factors, such as diabetes, also are conditions you have some control over. Although growing older is a risk factor that cannot be changed, it is important to realize that other risks can be reduced at any age. This handbook identifies some key risk factors that you can do something about, and suggests changes in living habits to help prevent or control cardiovascular diseases.

Some groups of women are more likely to develop cardiovascular diseases than other groups. African-American women are 60 percent more likely to die of coronary heart disease than white women, and their death rate for stroke is 24 percent higher. Older women have a greater chance of developing cardiovascular diseases than younger women, partly because the tendency to have heart-related problems increases with age. Older women, for example, are more likely to develop high blood pressure and high blood cholesterol levels, to be diabetic, to be overweight, and to be less physically active than younger women.

Also, after menopause, women are more apt to get cardiovascular diseases, in part because their bodies produce less estrogen. Women who have had early menopause, either naturally or because their ovaries have been surgically removed, are twice as likely to develop coronary heart disease as women of the same age who have not begun menopause.

While any one risk factor will raise your chances of developing or worsening heart-related problems, the more risk factors you have, the more concerned you should be about prevention. If you smoke cigarettes and have high blood pressure, for example, your chance of developing coronary heart disease goes up dramatically. If you smoke, have high blood pressure, and also have high blood cholesterol, your risk is five times higher than that of women who have no risk factors.

We're Making Progress

Changing habits isn't easy—but experience shows that it works. As Americans have learned to control blood pressure and make healthy changes in their eating, smoking, and exercise habits, death rates from heart attack and stroke have dropped dramatically. Between 1984 and 1994, the death rate from coronary heart disease declined 27 percent for white women and 19 percent for African-American women. During the same period, the death rate for stroke went down 21 percent for white women and 23 percent for African-American women.

Cardiovascular diseases remain the leading cause of death for American women. But the message is clear: By taking an active role in your own heart health, you can make a difference. Beginning with the chapter on "Self-Help Strategies for a Healthy Heart," this handbook supplies a number of practical tips to help you get started. Also, for information about other organizations and materials available to help you, see "Resources for a Healthy Heart" on p. 99.



Major Risk Factors

Smoking

Cigarette smoking has been described as “the most important individual health risk in this country.” Approximately 23 million American women smoke. Although the smoking rate for women dropped 11 percent between 1965 and 1990, women who smoke today are apt to smoke more heavily than they did in the past.

Surprising as it may seem, smoking by women in the United States causes almost as many deaths from heart disease as from lung cancer. Women who smoke are two to six times as likely to suffer a heart attack as nonsmoking women, and the risk increases with the number of cigarettes smoked per day. Smoking also boosts the risk of stroke.

Cardiovascular diseases are not the only health risks for women who smoke. Cigarette smoking greatly increases the chances that a woman will develop lung cancer. In fact, the lung cancer death rate for women is now higher than the death rate for breast cancer, the chief cause of cancer deaths in women for many years. Cigarette smoking is also linked with cancers of the mouth, larynx, esophagus, urinary tract, kidney, pancreas, and cervix. Smoking also causes 80 percent of cases of chronic obstructive lung disease, which includes bronchitis and emphysema.

Smoking is also linked to a number of reproductive problems. Women who smoke are more apt to have problems getting pregnant and to begin menopause at a slightly younger age. Further, cigarette use during pregnancy poses serious risks for the unborn. Babies of women who smoked during pregnancy tend to weigh less at birth than babies of nonsmokers. Smoking while pregnant also increases risks of bleeding, miscarriage, premature

delivery, stillbirth, and sudden infant death syndrome, or “crib death.” Moreover, young children who are exposed to a parent’s cigarette smoke have more lung and ear infections.

There is simply no safe way to smoke. Although low-tar and low-nicotine cigarettes may reduce the lung cancer risk to some extent, they do not lessen the risks of heart disease or other smoking-related diseases. The only safe and healthful course is not to smoke at all.

High Blood Pressure

High blood pressure, also known as hypertension, is another major risk factor for coronary heart disease and the most important risk factor for stroke. Even slightly high levels double the risk. High blood pressure also increases the chances of developing congestive heart failure (see box, p. 14) and kidney disease.

Nearly 50 million Americans have high blood pressure, and about half of them are women. Older women have a higher risk, with more than half of all women over the age of 55 suffering from this condition. High blood pressure is more common and more severe in African-American women than it is in white women. Use of birth control pills can contribute to high blood pressure in some women.

Blood pressure is the amount of force exerted by the blood against the walls of the arteries. Everyone has to have some blood pressure, so that blood can get to the body’s organs and muscles. Usually, blood pressure is expressed as two numbers, such as 120/80, and is measured in millimeters of mercury (mmHg). The first number is the systolic blood pressure, the force used when the heart beats. The second number, or diastolic blood pressure, is the pressure that exists in the arteries between heartbeats. Depending on your activities, blood pressure may move up or down in the course of a day. Blood pressure is considered high when it stays above normal levels over a period of time.

High blood pressure is sometimes called the “silent killer” because most people who have it do not feel sick. Therefore, it is important to have it

Are Calcium Channel Blockers Safe?

A few people with high blood pressure or certain heart disorders take a medication known as short-acting nifedipine, which is a type of calcium channel blocker (CCB). Recent research, however, found that patients taking short-acting nifedipine—especially in high doses—were more likely to have another heart attack, and also more likely to die of a heart attack. As a result, physicians have been advised to prescribe this particular medication to patients with caution, if at all, or to change to another kind of medication.

It is important to understand, however, that short-acting nifedipine is one of several kinds of CCBs. It is unclear whether the other types, such as verapamil and diltiazem, are also risky. Also, some CCBs are available in two forms, short-acting (requiring several daily doses) and long-acting (requiring one daily dose). While short-acting nifedipine does increase heart attack risk, it is not yet known whether the long-acting form of nifedipine also increases risk.

If you are currently taking short-acting nifedipine, talk with your doctor as soon as possible to find out whether you should switch to another medication. If you are taking another kind of CCB, you might also want to ask your doctor about other medication choices.

This new information should not discourage you from taking medicine for high blood pressure or heart disorders. Drug treatment for high blood pressure helps prevent stroke, heart attack, congestive heart failure, and kidney disease. Other types of medication, such as diuretics and beta-blockers, are safe and effective treatments for most people with high blood pressure.

Congestive Heart Failure

ANOTHER REASON TO CONTROL YOUR BLOOD PRESSURE

High blood pressure is the number one risk factor for congestive heart failure (CHF). Heart failure is a serious condition in which the heart is unable to pump enough blood to supply the body's needs. As a result, blood gets backed up in the veins and begins to seep into surrounding tissues. CHF occurs when excess fluid starts to leak into the lungs, causing breathing difficulties, fatigue and weakness, and sleeping problems.

In recent years, rates of hospitalization and death for CHF have been increasing in older Americans, especially among women. One reason may be that many women do not adequately control their high blood pressure. Older women must be especially careful to continue taking blood pressure medication regularly—and also to take the right amount. To prevent CHF, and stroke as well, blood pressure must be controlled to 140/90 mmHg or lower. However, many women who are taking medication still have blood pressure that is dangerously high. If your blood pressure is higher than 140/90 mmHg, talk with your doctor about adjusting your medication and making lifestyle changes that will result in a blood pressure of 140/90 mmHg or lower.

checked whenever you see your doctor or other health professional. Blood pressure can be easily measured by means of the familiar stethoscope and inflatable cuff placed around one arm. However, since blood pressure changes so often and is affected by many factors, your health professional should check it on several different days before deciding whether your blood pressure is too high. If your blood pressure stays at 140/90 mmHg or above, you have high blood pressure.

Although high blood pressure can rarely be cured, it can be controlled with proper treatment. If your blood pressure is not too high, you may be able to control it entirely through weight loss if you are overweight, regular physical activity, and cutting down on alcohol, and salt and sodium. (Sodium is an ingredient in salt that is found in many packaged foods, carbonated beverages, baking soda, and some antacids.)

It may also help to include more fruits and vegetables that are good sources of potassium, and low and nonfat dairy products and some vegetables that are good sources of calcium.

However, if your blood pressure remains high, your doctor will probably prescribe medicine in addition to the above changes, especially if you already have heart disease. The lifestyle changes described above will help the medicine work more effectively. In fact, if you are successful with the changes you make in your living habits, the amount of medicine you take may be gradually reduced.

While few people like the idea of taking any medicine for a long time, the treatment benefits are real and will reduce the risk of stroke, heart attack, congestive heart failure, and kidney disease.

If you are prescribed a drug to control high blood pressure and have any uncomfortable side effects, ask your doctor about changing the dosage or possibly switching to another type of medicine.

A reminder: It is very important to take a blood pressure medication exactly as your doctor has prescribed it. If you are not sure about your doctor's instructions, call to ask about the amount of medicine you are supposed to take each day, and the specific times of day you should be taking it.

During pregnancy, some women develop high blood pressure for the first time. Between 10 and 20 percent of first-time mothers develop a high blood pressure problem during pregnancy called preeclampsia. Other women who already have high blood pressure may find that it worsens during pregnancy. If untreated, these conditions can be life-threatening to both mother and baby. Since a woman can feel perfectly normal and still have one of these conditions, it is important to get regular prenatal checkups so that your doctor can discover and treat a possible high blood pressure problem.

For women with a type of high blood pressure called isolated systolic hypertension (ISH), there is good news. By treating ISH with a blood pressure-lowering drug such as a diuretic, it is possible to reduce the risk of stroke and coronary heart disease. If you know you have ISH and are already doing well on another type of blood pressure-lowering drug, you should not necessarily switch medicines. But you may want to discuss with your doctor whether or not you have ISH and, if so, what is the best treatment for you.

High Blood Cholesterol

High blood cholesterol is another important risk factor for coronary heart disease that you can do something about. All women should keep their cholesterol levels down to lessen the chance of developing heart disease. For those who already have heart disease, it is particularly important to take action to treat elevated blood cholesterol to prevent a future heart attack.

Although young women tend to have lower cholesterol levels than young men, between the ages of 45 and 55, women's cholesterol levels begin to rise higher than men's. After age 55, the gap between women and men becomes still wider. The higher a woman's blood cholesterol level, the higher her heart disease risk. Today, about one-quarter of American women have blood cholesterol levels high enough to pose a serious risk for coronary heart disease.

CHOLESTEROL AND THE HEART

The body needs cholesterol to function normally. However, the body makes all of the cholesterol that it needs. Over a period of years, extra cholesterol and fat circulating in the blood are deposited in the walls of the arteries that supply blood to the heart. These deposits make the arteries narrower and narrower. As a result, less blood gets to the heart and the risk of coronary heart disease increases.

Cholesterol travels in the blood in packages called lipoproteins. Low density lipoprotein (LDL) carries most of the cholesterol in the blood. Cholesterol packaged in LDL is often called “bad” cholesterol, because too much LDL in blood can lead to cholesterol buildup and blockage in the arteries.

Another type of cholesterol, which is packaged in high density lipoprotein (HDL), is known as “good cholesterol.” That is because HDL helps remove cholesterol from the blood, preventing it from piling up in the arteries.

All women over the age of 20 should have their blood cholesterol checked. However, the testing process and the steps to improve cholesterol levels will depend on your current health status. The following sections describe the steps for managing cholesterol levels for two types of women: those who do not have heart disease, and those who do have heart disease.

IF YOU DO NOT HAVE HEART DISEASE

Getting Your Cholesterol Checked. Blood cholesterol levels are measured by means of a small blood sample. The blood should be tested for total cholesterol and, if an accurate measurement is available, for HDL-cholesterol as well. You do not have to fast or do anything special before having this blood test.

Understanding the Numbers. A desirable total cholesterol level for adults without heart disease is less than 200 mg/dL (or 200 milligrams of cholesterol per deciliter of blood). A level of

240 mg/dL or above is considered “high” blood cholesterol. But even levels in the “borderline-high” category (200–239 mg/dL) still increase the risk of heart disease.

Before age 45, the total blood cholesterol level of women averages below 200 mg/dL. But between the ages of 45 and 55, women’s average cholesterol level rises to almost 220 mg/dL, and to nearly 240 mg/dL for women between the ages of 55 and 64. Women who have a cholesterol level over 240 mg/dL are more than twice as likely to develop heart disease as women with levels below 200 mg/dL.

HDL levels are interpreted differently than total cholesterol levels. The *lower* your HDL level, the higher your heart disease risk. An HDL level of under 35 is a major risk factor for heart disease. The higher your level, the less risk you incur. A level of 60 or higher is considered protective.

Total and HDL-cholesterol are measured first. Depending on what these initial measurements show and whether you have any other heart disease risk factors, your doctor may want to measure your LDL level as well (see box on p. 19). For this test, you should have nothing to eat or drink except water (or black coffee or tea) for 9–12 hours beforehand.

An LDL level below 130 mg/dL is desirable. LDL levels of 130–159 mg/dL are borderline-high. Levels of 160 mg/dL or above are high. As with total cholesterol, the higher the LDL number, the higher the risk.

Prevention and Treatment. If your tests show that your blood cholesterol levels are in the desirable range, congratulations! To help keep your levels healthy, it will be important to eat a low saturated fat, low cholesterol diet, get regular physical activity, and control your weight. (See the specific suggestions on maintaining healthy blood cholesterol levels in the “Prevention” section of this handbook.) Saturated fat raises your blood cholesterol more than anything else in your diet.

Next Steps

IF YOUR :

THEN :

Total cholesterol is less than 200 mg/dL and HDL is 35 mg/dL or greater

You are doing well and should have your total and HDL-cholesterol levels checked again in about 5 years. In the meantime, take steps to keep your total-cholesterol level down: eat foods low in saturated fat and cholesterol, maintain a healthy weight, and be physically active. The last two steps, along with not smoking, will also help keep your HDL level up.

Total cholesterol is 200–239 mg/dL and HDL is 35 mg/dL or greater

Your doctor will see if you have other risk factors for heart disease and determine whether more tests (including a lipoprotein profile—see p. 20—to find out your LDL-cholesterol) need to be done. No matter what your risk is, it is important to eat foods low in saturated fat and cholesterol, to maintain a healthy weight, and to be physically active.

Total cholesterol is 240 mg/dL or greater or HDL is less than 35 mg/dL

You will need a lipoprotein profile to find out your LDL-cholesterol level. You need to fast for 9–12 hours before the test, having nothing but water, or coffee or tea with no cream or sugar.

What's Your Number?

BLOOD CHOLESTEROL LEVELS AND HEART DISEASE RISK *

	Desirable	Borderline-High	High
Total Cholesterol	Less than 200	200–239	240 and above
LDL Cholesterol	Less than 130	130–159	160 and above

HDL-cholesterol less than 35 is a major risk factor for heart disease.

HDL 60 or higher is protective.

*For women without heart disease. If you have heart disease, see the section beginning on p. 20.

If your blood cholesterol levels are too high, your doctor may recommend a specific treatment program for you. For most people, cutting back on foods high in saturated fat and cholesterol will lower both total and LDL-cholesterol. Regular physical activity and weight loss for overweight persons also will lower blood cholesterol levels.

Losing extra weight, as well as quitting smoking and becoming more physically active, also may help boost your HDL-cholesterol levels. Although we don't know for sure that raising HDL levels in this way will reduce the risk of coronary heart disease, these measures are likely to be good for your heart in any case.

If your new diet and other lifestyle changes do not lower your blood cholesterol level enough, your doctor may suggest that you take cholesterol-lowering medications (see box, p.22). If you have other risk factors for heart disease, you will need to lower your cholesterol more than someone without risk factors.

IF YOU HAVE HEART DISEASE

Women who have heart disease should pay even more attention to their cholesterol levels. An individual with heart disease has a much greater risk of having a future heart attack than a person without heart disease. Recent studies show that, even if your cholesterol level is not elevated, lowering it can greatly reduce your risk of a future heart attack and may actually prolong your life.

Getting Your Cholesterol Checked. Since you have heart disease, you will need to have a blood test called a lipoprotein profile. This test will determine not only your total cholesterol and HDL-cholesterol levels, but also your LDL-cholesterol level and levels of another fatty substance called triglycerides (see box, p. 21). In order to take this test, you should have nothing to eat or drink except water (or coffee or tea with no cream or sugar) for 9–12 hours beforehand.

What Are Triglycerides?

Triglycerides are another type of fat found in the blood and in food. Triglycerides are made up of saturated, polyunsaturated, and monounsaturated fats. They are produced in the liver. When alcohol or excess calories are taken in, the liver produces more triglycerides. Extremely high levels of triglycerides can cause a dangerous inflammation of the pancreas called pancreatitis. Fortunately, this is uncommon. Some people with coronary heart disease have high triglyceride levels. However, more research is needed to determine whether high triglycerides themselves cause narrowing of the arteries or are simply associated with other blood fat abnormalities and other risk factors (such as low levels of HDL-cholesterol and being overweight), which may increase the risk for coronary heart disease. Most people with raised triglycerides are also overweight, and weight reduction usually lowers the elevated levels.

To reduce blood triglyceride levels, doctors recommend a low fat, low-calorie diet, weight control, more physical activity, and no alcohol. Occasionally, medication is needed.

Understanding the Numbers. Your goal should be to have an LDL-cholesterol level of about 100 mg/dL or less, which is lower than for people who do not have heart disease. Depending on what your LDL level is, your next steps will be the following:

- *If your LDL level is 100 mg/dL or less*, you do not need to take specific steps to lower your LDL. But you will need to have your level tested again in 1 year. In the meantime, you should closely follow a diet low in saturated fat and cholesterol, maintain a healthy weight, be physically active, and not smoke. You should also follow the specific recommendations of your doctor.
- *If your LDL level is higher than 100 mg/dL*, you will need a complete physical examination to find out if you have a disease or condition

Cholesterol-Lowering Medicines—Your doctor may recommend medication as part of your cholesterol-lowering treatment plan. This is more likely if you have heart disease, if you have very high LDL levels, or if you have high blood cholesterol in combination with other heart disease risk factors.

If your doctor does prescribe medicines, you must also continue your cholesterol-lowering diet along with physical activity and weight control. These lifestyle changes lower your risk in many ways, not just by lowering your cholesterol levels, and the combination of lifestyle and medicine may allow you to take less medication. The most commonly used cholesterol-lowering medicines are as follows:

- **Hormone Replacement Therapy.** If you have reached menopause, your doctor may recommend that you begin hormone replacement therapy, which has many effects including raising HDL levels and lowering LDL levels. (See section on “Hormones and Menopause.”)
- **Statins.** Statins are used by patients with high total and high LDL-cholesterol levels. Of all the available medications, statins lower LDL-cholesterol the most, producing reductions of 20–60 percent. Currently available statins are lovastatin, simvastatin, pravastatin, fluvastatin, and atorvastatin. Side effects are usually mild, although liver and muscle problems occur rarely.
- **Bile Acid Sequestrants.** The major effect of this medication is to lower LDL-cholesterol by about 10 to 20 percent. Bile acid sequestrants are often prescribed with statin medicine for patients with heart disease to increase cholesterol reduction. Side effects may include constipation, bloating, nausea, and gas. However, long-term use of these medications is considered safe.
- **Nicotinic Acid.** Nicotinic acid, or niacin, lowers total cholesterol, LDL-cholesterol, and triglyceride levels, while raising HDL-cholesterol levels. While nicotinic acid is available without a prescription, it is very important to use it only under a doctor’s care, because of possibly serious side effects. In some people, nicotinic acid may inflame peptic ulcers or cause liver problems, gout, or high blood sugar.

that is raising your cholesterol levels. You will probably need a diet that is very low in saturated fat and cholesterol. In addition, you will need to be physically active, lose weight if you are overweight, and not smoke.

If in your doctor's judgment, your LDL level starts out too far above the LDL goal of 100 mg/dL or if your LDL level stays too high after lifestyle changes, you may need to take medicine (see box, p. 22). For many individuals, it is necessary to combine medication with lifestyle changes to get enough of a reduction in LDL-cholesterol. Your doctor can help to decide which combination of cholesterol-lowering activities is right for you.

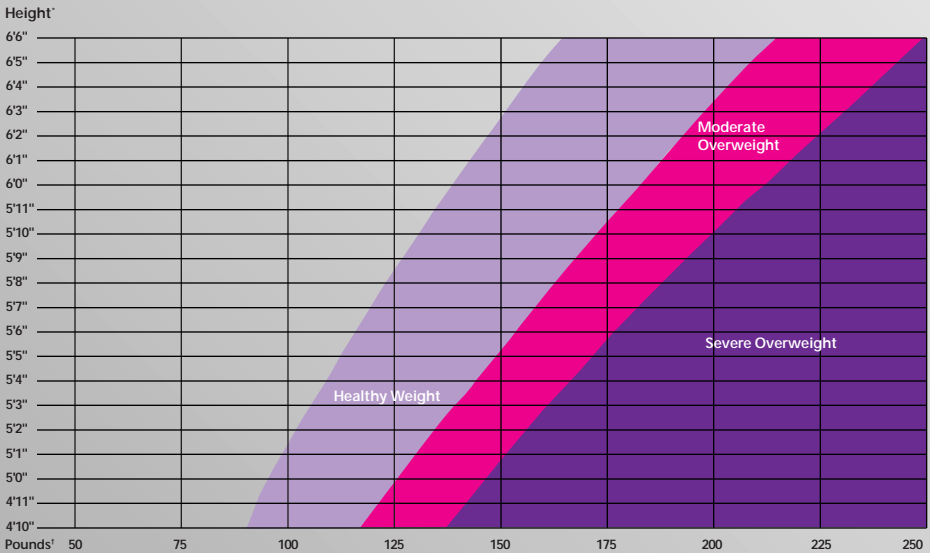
Overweight

Overweight women are much more likely to develop heart-related problems even if they have no other risk factors. According to a long-term study of nearly 116,000 women, almost 40 percent of coronary heart disease was attributed to overweight. For the heaviest women, 72 percent of coronary heart disease could be traced to excess weight. The study also showed that even a modest weight gain of 11–17 pounds after age 18 significantly increases a woman's risk of coronary heart disease.

Overweight also appears to contribute to cardiovascular disease in part by increasing the chance of developing other risk factors, such as high blood pressure, high blood cholesterol, and diabetes. However, it also appears that obesity is harmful even in the absence of these conditions. Fortunately, these conditions often can be controlled by maintaining a healthy weight and by getting regular physical activity.

What is a healthy weight for you? Currently, there is no exact answer. Researchers are trying to develop better ways to measure healthy weight. In the meantime, check the "Are You Overweight?" table to find out if your weight is within the range suggested for people of your height. Weights above the suggested "healthy weight" ranges are thought to be unhealthy for most people.

Are You Overweight?



* Without shoes

† Without clothes. The higher weights apply to people with more muscle and bone, such as many men.

Source: Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 1995, pgs. 23-24.

Those who are currently overweight should take special care not to gain additional pounds, since the more overweight a person is, the higher the chances of developing heart disease.

Research also suggests that body shape as well as weight affects heart health. "Apple-shaped" individuals with extra fat at the waistline may have a higher risk than "pear-shaped" people with heavy hips and thighs. If your waist is as large as the size of your hips, or larger, you may have a higher risk for coronary heart disease.

Physical Inactivity

Physical inactivity increases the risk of heart disease. It both contributes directly to heart-related problems and increases the chances of developing other risk factors, such as high blood pressure and diabetes.

Recent reports from the U.S. Surgeon General's Office and a National Institutes of Health (NIH) expert panel warn that physical inactivity is increasing among Americans—especially among women.

According to the first-ever *Surgeon General's Report on Physical Activity and Health*, 60 percent of American women don't get the recommended amount of physical activity, while more than 25 percent are not active at all. In part, this sedentary behavior results from a reliance on modern conveniences, such as automobiles, elevators, and escalators, which make life easier but do little to strengthen or tone the body. But even during leisure hours, many women continue to be physically inactive.

This inactivity can have serious results later in life. Besides increasing the risk of heart disease, it makes older woman who are not physically active more likely to fall than those who are physically active.

And, especially for those with bone loss (see p. 68), falls can lead to fractures and have serious, even life-threatening, consequences.

Fortunately, it doesn't take a lot of effort to become physically active. Both the Surgeon General's report and the report of the NIH Consensus Development Conference on Physical Activity and Cardiovascular Health conclude that as little as 30 minutes of moderate activity on most, and preferably all, days helps protect heart health. Examples of moderate activity are a brisk walk, raking leaves, or gardening.

If you prefer, you can divide the 30-minute activity into shorter periods of at least 10 minutes each. If you already do this level of activity, you can get added benefits by doing even more.

To find out more about physical activity and how to get started, see the section on "Becoming Physically Active" that starts on p. 48.

Diabetes is a serious disorder that raises the risk of coronary heart disease and stroke. About 75 percent of people who have diabetes die of some type of cardiovascular disease.

Compared with nondiabetic women, diabetic women are more apt to have high blood pressure and high blood cholesterol. Untreated diabetes also can contribute to the development of kidney disease, blindness, problems in pregnancy and childbirth, nerve and blood vessel damage, and difficulties in fighting infection.

The type of diabetes that develops in adulthood is usually “noninsulin-dependent diabetes mellitus,” or NIDDM. This type of diabetes, in which the pancreas makes insulin but the body is unable to use it well, is the most common form of the disease. For unknown reasons, the risks of heart disease and heart-related death are higher for diabetic women than for diabetic men.

While there is no cure for diabetes, there are steps one can take to control it. About 80 percent of all NIDDM diabetics are overweight. It appears that overweight and growing older promote the development of diabetes in certain people. Losing weight and increasing physical activity may help postpone or prevent the disease. For lasting weight loss, engage in regular, brisk physical activity and eat a diet that is limited in calories and fat.

Other Factors

Stress

In recent years, we have read and heard much about the connection between stress and coronary heart disease. And many studies do report such a connection for both women and men. For example, the most commonly reported incident preceding a heart attack is an emotionally upsetting event, particularly one that involves anger. There also is evidence that people who become easily emotionally upset are more likely to develop hardening of the arteries. In addition, some common ways of coping with stress, such as overeating, heavy drinking, and smoking, are clearly bad for your heart.

The good news is that sensible health habits can have a protective effect. Regular physical activity not only relieves stress, but can directly lower your risk of heart disease. Recent research also shows that involvement in a stress management program following a heart attack decreases the chances of further heart-related problems.

Strong personal ties may also play an important role in heart disease management and prevention. Studies show that having emotionally supportive relationships lessens the chances of developing heart disease, and prolongs life in both women and men following a heart attack. Religious beliefs and activity also have been linked to longer survival among heart surgery patients. While these findings are promising, researchers will need to study larger groups of women over time to find out more about the links among certain behaviors, stress, and coronary heart disease in women.

Studies show that women who use high-dose birth control pills (oral contraceptives) are more likely to have a heart attack or a stroke because blood clots are more likely to form in the blood vessels. These risks are lessened once the birth control pill is stopped. Using birth control pills also may worsen the effects of other risk factors, such as smoking, high blood pressure, diabetes, high blood cholesterol, and overweight.

Much of this information comes from studies of birth control pills containing higher doses of hormones than those commonly used today. Still, the risks of using low-dose birth control pills are not fully known. Therefore, if you are now taking any kind of birth control pill or are considering using one, keep these guidelines in mind:

- *Smoking and "the pill" don't mix.* If you smoke cigarettes, stop smoking or choose a different form of birth control. Cigarette smoking boosts the risk of serious cardiovascular problems from birth control pill use, especially the risk of blood clots. This risk increases with age and with the amount smoked. For women over 35, the risk is particularly high. Women who use oral contraceptives should not smoke.
- *Pay attention to diabetes.* Glucose metabolism, or blood sugar, sometimes changes dramatically in women who take birth control pills. Any woman who is diabetic, or has a close relative who is, should have regular blood sugar tests if she takes birth control pills.
- *Watch your blood pressure.* After starting to take birth control pills, your blood pressure may go up. For most women, this increase does not go above normal. But if your blood pressure increases to 140/90 mmHg or higher, ask your doctor about changing pills or switching to another form of birth control. Once off birth control pills, your blood pressure should return to normal within a few months.
- *Talk with your doctor.* If you have a heart defect, if you have suffered a stroke, or if you have any other kind of cardiovascular disease, oral contraceptives may not be a safe choice. Be sure your doctor knows about your condition before prescribing birth control pills for you.

Over the last several years, a number of studies have reported that moderate drinkers—those who have one or two drinks per day—are less likely to develop heart disease than people who don't drink any alcohol or who drink too much. Small amounts of alcohol may help protect against heart disease by raising levels of “good” HDL cholesterol.

If you are a nondrinker, this is not a recommendation to start using alcohol. And certainly if you are pregnant, planning to become pregnant, or have another health condition that could make alcohol use harmful, you should not drink. But if you're already a moderate drinker, evidence suggests that you may be at a lower risk for heart attack. This is particularly true for women after menopause.

But remember, moderation is the key. Heavy drinking causes heart-related problems. More than three drinks per day can raise blood pressure, and binge drinking can contribute to stroke. Too much alcohol also may damage the heart muscle, leading to heart failure. Overall, people who drink heavily on a regular basis have higher rates of heart disease than either moderate drinkers or nondrinkers.

Women who drink should have no more than one alcoholic beverage a day (see box below).

What Is Moderate Drinking?

For women, moderate drinking is defined as no more than one drink per day, according to the U.S. Dietary Guidelines for Americans. Count as one drink:

- 12 ounces of regular beer (150 calories)
- 5 ounces of wine (100 calories)
- 1 1/2 ounces of 80-proof hard liquor (100 calories)

Source: *Dietary Guidelines for Americans*, U.S. Department of Agriculture/U.S. Department of Health and Human Services, 1995.

Keep in mind, too, that alcohol provides no nutrients—only extra calories. Most alcoholic drinks contain 100–200 calories each. Women who are trying to control their weight may want to cut down on alcohol and substitute calorie-free iced tea, mineral water, or seltzer with a squeeze of lemon or lime.

Homocysteine

Homocysteine (pronounced homo-SIS-teen) is an amino acid that is found normally in the body. Recent studies suggest that high blood levels of this substance may increase a person's chances of developing heart disease, stroke, and reduced blood flow to the hands and feet. While it is not known for sure how homocysteine contributes to heart and vessel disease, it is thought that high levels of homocysteine may damage the arteries, make the blood more likely to clot, and/or make blood vessels less flexible.

Individuals vary in their levels of homocysteine. For a few people, genetic factors contribute to high amounts of this substance in the blood. In addition, homocysteine levels may increase with age. For women, homocysteine levels may be higher after menopause than during childbearing years.

Recent research also shows that the level of homocysteine in the blood is affected by the consumption of three vitamins—folic acid, and vitamins B6 and B12. People who consume less than the recommended daily amounts of these vitamins are more likely to have higher homocysteine levels. Recommended daily amounts are as follows: 400 micrograms for folic acid, 2 milligrams for B6, and 6 micrograms for B12.

It has not yet been proven that lowering homocysteine levels will actually help to prevent heart or blood vessel disease. But until more research is done, people may help protect their health by getting enough folic acid, B6, and B12 in their diets.

Good sources of folic acid include citrus fruits, tomatoes, vegetables, whole- and fortified-grain products, beans and lentils. Beginning in 1998, the U.S. Food and Drug Administration will require that certain foods contain extra folic acid to help prevent certain birth defects. These foods include enriched breads and rolls, all enriched flours, corn meals, all enriched pasta products, and breakfast cereals.

Foods high in B6 include meat, poultry, fish, fruits, vegetables and grain products. Major sources of B12 are meat, poultry, fish, and milk and other dairy products. (For more on vitamins, see "The Vitamin Factor," p. 61)



Women Who Have Heart Disease

If you have heart disease, it is extremely important to take steps to control your condition. This section explains the symptoms of heart disease, tests you may need, warning signs of a heart attack, and how to get emergency care.

Symptoms of Heart Disease

The first noticeable symptom of coronary heart disease may be angina, which is a periodic pain or discomfort in the chest that is caused by reduced blood flow to the heart. This pain usually occurs behind the breastbone and may travel down your left arm or up your neck, or be a squeezing, pressing sensation that does not change with breathing. It is typically caused and worsened by exercise and eased by rest. The pain usually lasts 2 to 5 minutes.

Some women get a less typical angina. The chest pain may last longer, occur in a location other than behind the breastbone, or not be worsened by physical activity and eased by rest. Some women have shortness of breath or indigestion.

If you have any of these symptoms, you should contact your doctor. With treatment, the outlook is good. Without treatment, however, the symptoms may recur and worsen, and even lead to a heart attack.

DIAGNOSTIC TESTS

In most cases, you will need to have some tests to find out for sure whether you have coronary heart disease, and also to find out how severe your condition is. If your doctor does not mention tests, be sure to ask him or her whether tests could be helpful. (See "You and Your Doctor: A Healthy Partnership," p. 34.) To get complete

You and Your Doctor: a Healthy Partnership

If you have coronary heart disease, it is especially important to take an active role in your health care. That means giving as much information as you can about your condition to your physician, as well as making sure you understand all treatment decisions and procedures. Following are some tips to help ensure good, clear communication between you and your doctor:

- *Be prepared.* Before your office visit, make a list of your symptoms, past treatments, and any concerns or questions you may have. Also, bring a list of all medicines you are now taking.
- *Be open.* During the office visit, briefly describe each of your symptoms, including when each started, how often it happens, and if it has been getting worse. Also tell your doctor about any causes of stress in your life, such as taking care of a sick family member, or a difficult job situation.
- *Ask questions.* If you don't understand something your doctor says, ask for an explanation. Be sure you fully understand how to take any medication—when to take it; how much to take; what to do if you forget a dose; what other medicine, food, or activity to avoid while taking it; and what side effects may occur. It may help to write down your doctor's instructions.
- *Bring a support person.* If you are worried about understanding what the doctor says, or if you have trouble hearing, bring a friend or relative with you to the physician's office. You may want to ask that person to write down the doctor's instructions for you.
- *Speak up.* If something bothers you, say so. Your doctor needs to know if a treatment is working or not, or if you are having trouble following his or her instructions. In some cases, simply getting more information from your physician may solve a problem. In other cases, your doctor may be able to recommend a different treatment or approach that works better for you.
- *Ask about tests.* If your physician recommends a diagnostic test, ask why you need it and what you will find out from it. Also ask what the test involves and how to get ready for it, and whether you will need help getting home afterward. Also, be sure to find out if the test has any risks or side effects. Remember that your doctor only recommends a test. The decision to take it is yours.
- *Inquire about procedures.* If your doctor recommends a special procedure, ask about its benefits and risks. Find out what kind of doctor will do the procedure and whether you will need a referral. Also ask if you will need to be hospitalized and for how long, what kind of pain or discomfort you may feel, and what the recovery period will involve. Just as with tests, the decision to have any medical procedure is up to you.

information about your condition, you may need more than one test. Most of them are done outside the body and are painless. The most common tests are as follows:

- An electrocardiogram (ECG or EKG) makes a graph of the heart's electrical activity as it beats. This test can show abnormal heartbeats, heart muscle damage, blood flow problems in the coronary arteries, and heart enlargement.
- Stress test (or treadmill test or exercise ECG) records the heart's electrical activity during exercise, usually on a treadmill or exercise bicycle. Some older women may not be able to exercise due to arthritis or another condition. In such cases, a stress test can be done without exercise by using a medicine that increases blood flow to the heart muscle and shows if there are any problems in that flow.
- Echocardiography changes sound waves into pictures that show the heart's size, shape, and movement. The sound waves also can be used to see how much blood is pumped out by the heart when it contracts.
- A nuclear scan shows the working of the heart muscle as blood flows through the heart. A small amount of radioactive material is injected into a vein, usually in the arm, and a camera then records how much is taken up by the heart muscle.
- Coronary angiography (or angiogram or arteriography) shows an x-ray of blood flow problems and blockages in the coronary arteries. A thin, flexible tube, or catheter, is threaded through an artery of an arm or leg up into the heart. A fluid is then injected into the tube, allowing the heart and blood vessels to be filmed as the heart pumps. The picture is called an angiogram or arteriogram.

Heart Disease Medications

A healthy lifestyle will improve your heart's condition. But you may need medication too, especially if you have chest pain, or if you have high blood pressure or high blood cholesterol that was not lowered enough with lifestyle changes.

The following list will introduce you to some of the medications used to treat heart disease and its risk factors:

- Aspirin—helps prevent heart attacks when taken regularly in a low dose on a doctor's orders.
- Digitalis—makes the heart contract harder and is used when the heart's pumping function has been weakened; it also slows some fast heart rhythms.
- Angiotensin converting enzyme (ACE) inhibitor—stops production of a chemical that makes blood vessels narrow and is used for high blood pressure and heart muscle that has been damaged.
- Beta-blocker—reduces how hard the heart must work and is used for high blood pressure, chest pain, and to prevent a repeat heart attack.
- Nitrate (including nitroglycerine)—relaxes blood vessels and alleviates chest pain.
- Calcium-channel blocker (CCB)—relaxes blood vessels; used for high blood pressure and chest pain (see p. 13 for a special note on CCBs).
- Diuretic—decreases fluid in the body and is used for high blood pressure.
- Blood cholesterol-lowering agents—HMG CoA reductase inhibitors (or "statins"), nicotinic acid, bile acid sequestrants, fibric acid derivatives, and probucol (see p. 22 for more on cholesterol-lowering medicines).

Warning Signs of a Heart Attack

If you have heart disease, you should know the symptoms of a heart attack so that you can get immediate medical help. Not all heart attacks begin with sudden, crushing chest pain, the way they are often shown in the movies and on TV. Instead, the most common warning signals are:

- Pain or discomfort in the center of the chest that lasts more than a few minutes, or goes away and comes back.
- Pain that spreads from the chest to the arm, neck, or jaw.
- Chest discomfort with sweating, shortness of breath, tiredness, or upset stomach. These last three symptoms are particularly common in women.

Heart attack symptoms may be severe from the start, or they may be mild at first, then gradually worsen. Talk with your doctor about other symptoms of a heart attack and steps you should take (see p. 39).

Immediate Self-Help

If you experience heart attack symptoms and are taking nitroglycerin medication, take one nitroglycerin tablet as soon as you feel discomfort, a second tablet if the discomfort does not go away in 5 minutes, and a third tablet after 5 more minutes if you are still experiencing symptoms.

In addition, you should chew one adult-strength (325 mg) uncoated aspirin. Whether or not you have been prescribed nitroglycerin, you should take one aspirin. If the symptoms stop, call your doctor immediately for further advice. If symptoms continue, dial 9-1-1.

Getting Emergency Care—A Must

If the above medications do not relieve your discomfort within 15 minutes, get to the hospital fast. Be sure you know the phone number to call for emergency transportation. This is the best way to get to the hospital if you could be having a heart attack. In many areas, the emergency number will be 9-1-1; in other areas, it will be a 7-digit emergency number. (For more on what to do in case of a heart attack, see “Steps for Survival” on p. 39.)

Medical science now offers treatments that can stop heart attacks in their tracks if the treatments are given very quickly after the attack begins. These new treatments include “clot-dissolving” drugs or coronary angioplasty (also called balloon angioplasty) to reopen the clogged blood vessel that has cut off the oxygen supply to the heart. These treatments save lives and reduce damage to the heart muscle—but only if they are given immediately.

New research shows that clot-dissolving medicine also can be used to treat a stroke. But once again, it must be used quickly in order to be effective. That means if you have stroke symptoms, you should get emergency help immediately. *Warning signs for stroke include weakness or numbness in the face, arm, hand, leg, or foot; sudden blurred vision; difficulty speaking; and sudden dizziness or loss of coordination.*

Steps WHAT TO DO IF YOU MIGHT for BE HAVING A HEART ATTACK Survival

Nobody plans to have a heart attack. But just as many people have a plan to follow in case of fire, it is a good idea to have a plan to deal with a possible heart attack. Knowing what to do can save your life. Fill out this form and make several copies of it. Keep one copy near a phone at home, another at work, and a third copy in your purse.

WHAT TO DO AHEAD OF TIME

1. Discuss heart attack symptoms and what you plan to do in case of a heart attack with your doctor, family, coworkers, and friends. Tell others how they can help you if you have symptoms (for example, help you with your medication or call 9-1-1 for you).
2. Make a list of all your medications and how often you take each one. This list would be valuable information to the emergency department doctor or nurse.

Medication _____ How much/how often? _____

Medication _____ How much/how often? _____

Medication _____ How much/how often? _____

Medication _____ How much/how often? _____

3. Know the location of the nearest 24-hour emergency department.

■ At home, the closest emergency department is _____

■ At work, the closest emergency department is _____

4. Know who should be notified in case of an emergency.

Notify _____ at these phone numbers:

home _____ office _____ .

WHAT TO DO IF YOU HAVE HEART ATTACK SYMPTOMS

1. *What you may feel:* Chest pain or discomfort, left arm pain, pain radiating to your neck or jaw, sweating, shortness of breath, upset stomach, tiredness.

2. *Take medication right away.*

- Chew one adult-strength (325 mg) tablet of uncoated aspirin.
- If you have been prescribed nitroglycerin, place one tablet under your tongue immediately. Take a second tablet if the discomfort doesn't stop in 5 minutes. Take a third tablet after 5 more minutes if the discomfort still hasn't gone away. If the symptoms do stop, call your doctor at this phone number: _____.

3. *Call for emergency transportation* if symptoms continue for more than 15 minutes.

■ At home, the emergency phone number is _____

■ At work, the emergency phone number is _____







Prevention: A Personal Project

Preventing or controlling heart disease, by and large, means making changes in the way we live. For each individual, a healthy heart requires a personal action plan. But where does one begin? A complete medical checkup is a sensible first step, especially if you have multiple risk factors. Your doctor or other health professional can tell if you have cardiovascular disease or its risk factors, and if so, work out a practical treatment plan. Even if you don't have any risk factors now, you can discuss ways to lessen your chances of developing them.

Good communication with your health professional is very important. Choose someone you trust who will listen to your questions, answer them fully, and take your concerns seriously. (See "You and Your Doctor" on p. 34.)

But while advice from a health professional is important, the final responsibility for heart health lies with each woman. Only you can make the kinds of lifestyle changes—changes in eating, drinking, smoking, and physical activity—that will help protect against, or control, cardiovascular diseases. Remember, even if you have heart disease, you can help your heart become stronger and healthier.

To learn about the organizations and educational materials available to help you, see "Resources for a Healthy Heart" on p. 99. In the meantime, keep reading. The self-help suggestions that follow can help you get started on a personal program for a healthy heart.

To Do!

THE HEALTHY HEART ACTION PLAN

- Quit smoking
- Cut back on foods high in fat, saturated fat, and cholesterol, and eat more fruits and vegetables
- Check blood pressure and blood cholesterol levels
- Be more physically active
- Lose weight if you are overweight

Self-Help Strategies for a Healthy Heart

KICKING THE SMOKING HABIT

There is nothing easy about giving up cigarettes. But as hard as quitting may be, the results are well worth it. One year after you stop smoking, your risk of coronary heart disease will drop by more than half. Within several years, it will approach the heart disease risk of someone who has never smoked. This means that no matter what your age, quitting will lessen your

chances of developing coronary heart disease.

Meanwhile, for those who now have heart disease, giving up cigarettes lowers the risk of a heart attack. Quitting also reduces the risk of a second heart attack in women who have already had one.

Quitting will also save you money. Over 10 years, a two-pack-a-day smoker can spend more than \$10,000 on cigarettes. And that price tag doesn't take into account the extra costs of smoking-related illness, such as doctors' bills, medicines, and lost wages.

Take some time to think about other benefits of being an ex-smoker. In addition to reducing your chances of heart attack and stroke, quitting will lessen your chances of developing lung cancer, emphysema and other lung diseases; result in fewer colds or flu each year; and give you more energy to pursue the physical activities you enjoy. In addition, if you have children living at home, they are likely to have fewer coughs, colds, and earaches once you stop smoking.

Take a few minutes now to write down all of the reasons you want to quit. Understanding what you and your family have to gain from quitting is an important first step in kicking the smoking habit.

GETTING READY TO QUIT

Once you decide to stop smoking, a few preparations are in order. Set a target date for quitting—perhaps the first day of a month. Don't choose a time when you know you will be under a lot of stress. To help you stick to your quit date, you might want to write a brief contract that states your intention to quit, your quitting date, and some ways you plan to reward yourself for becoming an ex-smoker. Have someone sign it with you.

Consider asking your contract cosigner—or another friend or family member—to give you special support in your efforts to quit. Plan to get in touch with your supporter regularly to share your progress and to ask for encouragement. Give your “cheerleader” a copy of your list of reasons so that he or she can remind you of your goals. If possible, quit with a spouse or friend.

A Weighty Concern

Many women fear that if they stop smoking they will gain unwanted weight. But most ex-smokers gain less than 10 pounds. Weight gain may be partly due to changes in the way the body uses calories after smoking stops. Also, some people eat more when quitting because they substitute high-calorie food for cigarettes. Choosing more lower-calorie foods and increasing your level of physical activity can reduce the amount of weight you gain.

If you do gain some weight, you can work on losing it after you have become comfortable as a nonsmoker. When you think about the enormous health risks of smoking, the possibility of putting on a few pounds is not a reason to continue.

Three Aids for Quitting

As you prepare to quit smoking, give serious consideration to using a nicotine aid to help you stay off cigarettes. Three products—nicotine gum, a nicotine patch, and a nicotine nasal spray—can help you successfully quit by lessening your withdrawal symptoms. The gum and patch are now available over the counter, while the nasal spray is available only by prescription.

However, nicotine aids are not for everyone. Pregnant women, nursing mothers, and people with serious heart problems cannot use them safely. Talk with your doctor about whether you should try any of these aids.

BREAKING THE HABIT

- *Surviving "Day One."* On the evening before your quit day, "clean house." Throw away all cigarettes, matches, and lighters, and give away your ashtrays. Plan some special activities for the next day to keep you busy, such as a long walk or an outing with a friend. Ask family members and friends not to offer you cigarettes or to smoke in front of you. Your goal is to get through that first important day smoke-free. If you succeed on the first day, it will help give you the confidence to succeed on the second—and on each day after that.
- *Know yourself.* To quit successfully, you need to know your personal smoking "triggers." These are the situations and feelings that typically bring on the urge to light up. Some common triggers include drinking coffee, finishing a good meal, watching television, having an alcoholic drink, talking on the phone, or watching someone else smoke. Stress can also be a trigger. Make a list of the situations and feelings that particularly tempt you to smoke. Especially during the first weeks after quitting, try to avoid as many triggers as you can.

- *Find new habits.* Replace “triggers” with new activities that you don’t associate with smoking. For example, if you always had a cigarette with a cup of coffee, switch to tea for awhile. If you always smoked at the table after dinner, get up as soon as the meal is over and go out for a walk. If you’re feeling tense or angry, try a relaxation exercise such as deep breathing to calm yourself. (Take a slow, deep breath, count to five, and release it. Repeat 10 times.)
- *Keep busy.* Get involved in projects that require you to use your hands, such as needlework and jigsaw puzzles. When you feel the urge to put something in your mouth, have low-calorie substitutes on hand, such as vegetable sticks, apple slices, or sugarless gum. Some people find it helpful to inhale on a straw or chew on a toothpick until the urge passes.
- *Be physically active.* Walk, garden, or bicycle. Physical activity will make you feel better and help prevent weight gain.
- *Know what to expect.* During the first few weeks after quitting, you may experience some temporary withdrawal symptoms, such as headaches, irritability, tiredness, constipation, and trouble concentrating. These symptoms may come and go, and be stronger or weaker on different days. While these feelings are not pleasant, it is important to know that they are signs that your body is recovering from smoking. Most symptoms end within 2 to 4 weeks.
- *Help is available.* A number of free or low-cost programs are available to help you stop smoking. They include programs offered by local chapters of the American Lung Association and the American Cancer Society. Other low-cost programs can be found through hospitals, health maintenance organizations (HMOs), workplaces, and community groups. Some programs offer special support groups for women.

- *Be good to yourself.* Get plenty of rest, drink lots of fluids and eat three balanced, healthy meals per day. If you are not as productive or cheerful as usual during the first several weeks after quitting, don't feel guilty. Give yourself a chance to adjust to your new nonsmoking lifestyle. Ask your friends and family to give you lots of praise for kicking the habit—and don't forget to pat yourself on the back. You are making a major change in your life, and you deserve a lot of credit.

IF YOU “SLIP”

A slip means that you have had a small setback and smoked a cigarette after your quit date. Most smokers slip three to five times before they quit for good. But to get right back on the nonsmoking track, here are some tips:

- *Don't get discouraged.* Having a cigarette or two doesn't mean you can't quit smoking. A slip happens to many, many people who successfully quit. Keep thinking of yourself as a non-smoker. You are one.
- *Learn from experience.* What was the trigger that made you light up? Were you driving home from work, having a glass of wine at a party, feeling angry at your boss? Think back on the day's events until you remember what the specific trigger was.
- *Take charge.* Make a list of things you will do the next time you are in that particular situation—and other tempting situations as well. Sign a new contract with your support person to show yourself how determined you are to kick the habit. Reread your list of all the reasons you want to quit. You're on your way.

BECOMING PHYSICALLY ACTIVE

Regular physical activity can help you reduce your risk of coronary heart disease. Staying active helps take off extra pounds, helps to prevent and control high blood pressure, boosts the level of “good” HDL-cholesterol, and helps to prevent diabetes. Some studies show that inactive people are more likely to have heart attacks.

For those who have heart disease, regular, moderate physical activity lowers the risk of death from heart-related causes. However, if you have heart disease, check with your doctor first to find out what kinds of activities are best for you.

Physical activity has many other benefits. It strengthens the lungs, tones the muscles, keeps the joints in good condition, improves balance, and helps many people cope better with stress and anxiety.

Older women, in particular, can benefit from physical activities that strengthen bones and promote coordination and balance. Exercises such as T'ai Chi can improve balance and may be done alternately with heart-healthy physical activities. The National Institute on Aging has a list of physical activities that are particularly helpful for older individuals.

The good news is that to reap benefits from physical activity, you don't need to train for a marathon. You need only engage in about 30 minutes per day of moderate-level activity on most—and preferably all—days. (See box on “Healthy Moves,” p. 52.)

Some examples of everyday activities that can improve heart health are brisk walking, bicycling, housecleaning, raking leaves, and gardening. You can engage in any of these activities for 30 minutes at one time, or you can do them in shorter periods of at least 10 minutes each, as long as you total approximately 30 minutes per day.

It is important to know that the people likely to reap the most health benefits are those who are just starting to become physically active. If you have not been physically active until now, gradually build up to approximately 30 minutes per day of moderate-level activity.

If you are already engaging in this recommended level of physical activity, you may receive extra health and fitness benefits from doing these activities for a longer period each day, or by becoming involved in more vigorous activity.

Some people should get medical advice before starting a program of physical activity. For example, if you have heart trouble or have had a heart attack, if you are over 50 years old and are not used to moderately energetic activity, or if you have a family history of developing heart disease at an early age, check with your doctor before you start.

Once you get started, keep these guidelines in mind:

- *Go slow.* Before each activity session, allow a 5-minute period of stretching and slow movement to give your muscles a chance to warm up. At the end of your activity, take another 5 minutes to “cool down” with a slower, less energetic pace.
- *Listen to your body.* A certain amount of stiffness is normal at first. But if you hurt a joint or pull a muscle or tendon, stop the activity for several days to avoid more serious injury. Most minor muscle and joint problems can be healed by rest and over-the-counter painkillers.
- *Pay attention to warning signals.* While physical activity can strengthen your heart, some types of activity may worsen existing heart problems. Warning signals include sudden dizziness, cold sweat, paleness, fainting, or pain or pressure in your upper body just after engaging in physical activity. If you notice any of these signs, call your doctor immediately.
- *Keep at it.* Unless you have to stop your program of physical activity for a health reason, stay with it. If you feel like giving up because you think you’re not going as fast or as far as you “should,” set smaller, short-term goals for yourself as well as grander ones. If you find yourself becoming bored, try engaging in an activity with a friend. Or switch to another activity. The health rewards of regular, moderate-level physical activity are well worth the effort.

A Sample Walking Program

	W A R M U P	A C T I V I T Y	C O O L D O W N	T O T A L T I M E
WEEK 1				
Session A	Walk slowly 5 min.	Then walk briskly 5 min.	Then walk slowly 5 min.	15 min.
Session B	Repeat above pattern			
Session C	Repeat above pattern			
Continue with at least three exercise sessions during each week of the program.				
WEEK 2	Walk slowly 5 min.	Walk briskly 7 min.	Walk slowly 5 min.	17 min.
WEEK 3	Walk slowly 5 min.	Walk briskly 9 min.	Walk slowly 5 min.	19 min.
WEEK 4	Walk slowly 5 min.	Walk briskly 11 min.	Walk slowly 5 min.	21 min.
WEEK 5	Walk slowly 5 min.	Walk briskly 13 min.	Walk slowly 5 min.	23 min.
WEEK 6	Walk slowly 5 min.	Walk briskly 15 min.	Walk slowly 5 min.	25 min.
WEEK 7	Walk slowly 5 min.	Walk briskly 18 min.	Walk slowly 5 min.	28 min.
WEEK 8	Walk slowly 5 min.	Walk briskly 20 min.	Walk slowly 5 min.	30 min.
WEEK 9	Walk slowly 5 min.	Walk briskly 23 min.	Walk slowly 5 min.	33 min.
WEEK 10	Walk slowly 5 min.	Walk briskly 26 min.	Walk slowly 5 min.	36 min.
WEEK 11	Walk slowly 5 min.	Walk briskly 28 min.	Walk slowly 5 min.	38 min.
WEEK 12 AND BEYOND	Walk slowly 5 min.	Walk briskly 30 min.	Walk slowly 5 min.	40 min.

Healthy Moves

Here are some examples of moderate physical activities and chores that you can do to reduce your risk of heart disease.

-
- Walking, brisk pace (3–4 miles per hour)
 - Conditioning or general calisthenics
 - Housework
 - Racket sports, such as table tennis
 - Mowing lawn (power mower)
 - Golf (pulling cart or carrying clubs)
 - Home repair and maintenance
 - Jogging
 - Swimming, moderate effort
 - Cycling, moderate speed (10 miles per hour or less)
 - Gardening
 - Canoeing, leisurely pace (2–3.9 miles per hour)
 - Dancing

Source: Adapted from *Dietary Guidelines for Americans*, U.S. Department of Agriculture/U.S. Department of Health and Human Services, 1995.

EATING FOR HEALTH

The health of your heart has a lot to do with the food you eat. Following the “Dietary Guidelines for Americans” lessens your risk of heart disease in three ways:

- It helps reduce high blood cholesterol levels.
- It helps control high blood pressure.
- It helps take off extra pounds.

As a bonus, the kinds of eating habits that are good for your heart may also help prevent cancer and a number of other health problems.

The Healthy Diet: Back to Basics

Each day, choose different foods that you enjoy eating from these food groups:

FOOD GROUP/DAILY SERVINGS	WHAT COUNTS AS A SERVING*
Breads, cereals, rice, and pasta/ 6–11 servings	<ul style="list-style-type: none">■ 1 slice bread■ 1/2 bun or bagel■ 1 ounce dry cereal■ 1/2 cup cooked cereal, rice, pasta
Vegetables/3–5 servings	<ul style="list-style-type: none">■ 1 cup raw leafy greens■ 1/2 cup other vegetables■ 3/4 cup vegetable juice
Fruits/2–4 servings	<ul style="list-style-type: none">■ 1 medium apple, banana, orange■ 1/2 cup fruit—fresh, cooked, canned■ 3/4 cup juice
Milk, yogurt, and cheese/2–3 servings	<ul style="list-style-type: none">■ 1 cup milk (skim or low fat)■ 8 ounces low fat yogurt■ 1 1/2 ounces low fat natural cheese■ 2 ounces low fat processed cheese
Meat, poultry, fish, dry beans and peas, eggs, nuts, and seeds/2–3 servings	<ul style="list-style-type: none">■ this totals 6 ounces of cooked lean meat, poultry, or fish per day■ count 1/2 cup cooked dry beans, or 2 Tbsp. peanut butter, or 1/3 cup of nuts as 1 ounce meat
Fats, oils, and sweets	<ul style="list-style-type: none">■ use sparingly

Source: *Dietary Guidelines for Americans*, U.S. Department of Agriculture/U.S. Department of Health and Human Services, 1995.

* These serving sizes may differ from those on the Nutritional Facts labels on packaged foods (see p. 58).

Dietary Guidelines for Americans

Use these seven guidelines together as you choose a healthful and enjoyable diet.

- Eat a variety of foods.
- Balance the food you eat with physical activity—maintain or improve your weight.
- Choose a diet with plenty of grain products, vegetables, and fruits.
- Choose a diet low in fat, saturated fat, and cholesterol.
- Choose a diet moderate in sugars.
- Choose a diet moderate in salt and sodium.
- If you drink alcoholic beverages, do so in moderation.

LOWERING BLOOD CHOLESTEROL

Reducing your blood cholesterol level can greatly lessen your chances of developing heart disease. For those who have heart disease, lowering blood cholesterol is still more important. If you have angina or have had a heart attack, keeping your blood cholesterol low will help lessen your risk of having a future heart attack and may well prolong your life.

In general, each 1 percent reduction in blood cholesterol produces a 2 percent reduction in the risk of a heart attack. This means that if you lower your blood cholesterol by 25 percent, you may cut your risk of heart attack in half.

For most people, blood cholesterol levels can be lowered by being physically active, maintaining a healthy weight, and by eating less saturated fat, total fat, and cholesterol. Use the guide to choosing low-saturated fat, low-cholesterol foods on p. 77. However, the particular diet that will work best for you depends on your current health status. Here are some specific guidelines for heart-healthy eating:

The eating pattern recommended for healthy Americans who do not have a cholesterol problem that needs a doctor's attention is:

- Less than 10 percent of the day's total calories from saturated fat.
- 30 percent or less of the day's total calories from fat.
- Less than 300 milligrams of dietary cholesterol per day.

If you have high blood cholesterol, your doctor will first prescribe a diet similar to the one above, but have you take special care to limit calories from saturated fat to 8-10 percent of the day's calories. If you follow this Step I eating pattern for about 3 months and your blood cholesterol does not drop enough, you may need to cut back still more on saturated fat and cholesterol and follow a Step II eating pattern.

If you have heart disease, you will need to adopt an eating pattern that is especially low in saturated fat and cholesterol. Specifically, you should follow the Step II diet:

- Less than 7 percent of the day's total calories from saturated fat.
- 30 percent or less of the day's total calories from fat.
- Less than 200 milligrams of dietary cholesterol a day.

When starting the Step II diet, you should get help from a registered dietitian or other qualified nutritionist.

FAT-FINDING

Now, let's get practical. Which fats are found in which foods?

- *Saturated fat* is found mainly in food that comes from animals. Whole-milk dairy products such as butter, cheese, milk, cream, and ice cream all contain high amounts of saturated fat. The fat in meat and poultry skin is also loaded with saturated fat. A few vegetable fats—coconut oil, cocoa butter, palm kernel oil, and palm oil—are also high in saturated fat. These fats are sometimes found in cookies, crackers, coffee creamers, whipped toppings, and snack foods. Because fats are invisible in many foods, it is very important to read food labels (see p. 58). Remember: *Saturated fat boosts your blood cholesterol level more than anything else in your diet. Eating less saturated fat is the best way to lower your blood cholesterol level.*

Figuring Out Fat

Your personal “fat allowance” depends on how many calories you take in each day. If you do not have a cholesterol problem and have no heart disease, the saturated fat in your diet should be less than 10 percent of daily calories, and total fat should be no more than 30 percent.

The chart below shows the upper limit on total fat and saturated fat grams you should eat, depending on how many calories you consume each day. If you have high blood cholesterol or heart disease, the amounts below will be less. Check food product labels to find out the number of fat grams (saturated and total) in each serving.

TOTAL CALORIES PER DAY	SATURATED FAT IN GRAMS	TOTAL FAT IN GRAMS
1,600	18 or less	53 or less
2,000	22 or less	67 or less
2,400	27 or less	80 or less

- *Unsaturated fat* does not raise blood cholesterol levels, but like all fats it has 9 calories a gram. One type is polyunsaturated fat, which is found in many cooking and salad oils, such as safflower, corn, soybean, cottonseed, sesame, and sunflower oils, and in some margarines. Another type is monounsaturated fat, which is found in olive, canola, and peanut oils.
- *Cholesterol* is found only in foods that come from animals. Egg yolks and organ meats (liver, for example) are very high in cholesterol. Meat and poultry have similar amounts of cholesterol. Eating less cholesterol will help lower blood cholesterol levels in most people.

NOW YOU'RE COOKING

Planning and cooking meals aimed at reducing blood cholesterol don't have to be complicated. Here are some suggestions:

- Choose fish, poultry, and lean cuts of meat, and remove fats from meats and skin from chicken before eating. Eat up to 6 ounces per day.
- Broil, bake, roast, or poach foods rather than fry them.
- Cut down on sausage, bacon, and processed high-fat cold cuts.
- Limit organ meats such as liver, kidney, or brains.
- Instead of whole milk or cream, drink skim or 1 percent milk. Try nonfat or low fat yogurt in place of sour cream. Use nonfat or low fat cheeses. Sherbet and nonfat or low fat frozen yogurt can be delicious replacements for ice cream.
- Instead of butter, use liquid or tub margarine or liquid vegetable oils high in poly- or monounsaturated fats. All fats and oils should be used sparingly.
- Eat egg yolks only in moderation. Egg whites contain no fat or cholesterol and can be eaten often. In most recipes, substitute two egg whites for one whole egg.
- Eat plenty of fruits and vegetables, as well as cereals, breads, rice, and pasta made from whole grains (for example, rye bread, whole wheat spaghetti, bran cereal). These foods are good sources of starch and fiber, and usually contain no cholesterol and little or no saturated fat.
- Liquid vegetable oils are a good choice for sautéing vegetables, browning potatoes, popping corn, and for making baked goods, pancakes, and waffles. Use small amounts or try using a vegetable oil cooking spray.

Reading the Label

PRODUCT:

CHECK FOR:

Nutrition Facts

Serving Size 1 cup (228g) ←

Servings Per Container 2 ←

Amount Per Serving

Calories 250 Calories from Fat 110

		% Daily Value*
Total Fat 12g	↑	18%
Saturated Fat 3g		15%
Cholesterol 30mg		10%
Sodium 470mg		20%
Total Carbohydrate 31g		10%
Dietary Fiber 0g		0%
Sugars 5g		
Protein 5g		
Vitamin A 4%	•	Vitamin C 2%
Calcium 20%	•	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 • Carbohydrates 4 • Protein 4

- Serving size
- Number of servings
- Calories
- Total fat in grams
- Saturated fat in grams
- Cholesterol in milligrams

■ Here, the label gives the amounts for the different nutrients in one serving. Use it to help you keep track of how much fat, saturated fat, cholesterol, and calories you are getting from different foods.

■ The “% Daily Value” shows you how much of the recommended amounts the food provides in one serving, if you eat 2,000 calories a day. For example, one serving of this food gives you 18 percent of your total fat recommendation.

■ Here you can see the recommended daily amounts for each nutrient for two calorie levels.

Healthy Snacking

Many snacks, including many types of cookies, cheese crackers, and chips, are high in saturated fat, cholesterol, and calories. Eat them occasionally, if at all. This doesn't mean, however, that you can't enjoy between-meal treats. Keep the following low fat foods on hand for snack attacks:

- Frozen grapes or banana slices; other fresh fruits
- Bagels and bread sticks*
- Unsweetened, ready-to-eat cereals*
- Fruit leather or other dried fruit
- No-oil baked tortilla chips*
- Fat free or low fat cookies such as animal crackers, fig and other fruit bars, ginger snaps, and vanilla or lemon wafers
- Fat free or low fat crackers* such as melba toast, rice, rye, and soda crackers
- Frozen low fat or nonfat yogurt and fruit ices
- Fat free pretzels* or air-popped popcorn*

Keep in mind that while these treats may be low in fat, many are not low in calories. So watch how much you eat, especially if you are trying to control your weight.

*If you are watching your sodium intake, be sure to look for low-sodium or unsalted types.

- Many store-bought baked goods, snacks, and other prepared foods have hidden saturated fats because they are made with hydrogenated vegetable oils, or palm kernel or coconut oil. They may also contain lard, butter, or cream. Get in the habit of reading product labels, and choose products that are lowest in fat and saturated fat. New baked goods have been developed that contain no cholesterol and very little fat. But keep in mind that they may still be high in calories.

For more meal ideas, see "Recipes for a Healthy Heart" and "Meal Planning: A Change of Heart" at the back of this book.

What About Potassium?

Research shows that eating a lot of fruits and vegetables and nonfat or low fat dairy products can lower blood pressure. Such foods supply plenty of potassium, magnesium, fiber, and calcium. Potassium, in particular, seems to prevent high blood pressure. Most women can get enough potassium in foods. Good sources of potassium are many fruits and vegetables, some dairy foods, and fish.

EATING SMART AWAY FROM HOME

Following a heart-healthy diet is a bit more challenging when you're away from home, but there are many ways to eat right when eating out. Choose restaurants that have low fat, low cholesterol menu choices, and ask that gravy, butter, and rich sauces be served on the side. If the restaurant offers a salad bar, load up on vegetables and limit foods such as eggs, bacon, and cheese. Go easy on the salad dressing, and choose low-calorie types when they are offered.

Even at fast-food restaurants, you can make healthy choices. Choose grilled (not fried or breaded) chicken sandwiches, regular-sized hamburgers, or roast beef sandwiches. When ordering pizza, ask for vegetable toppings such as green pepper, onions, and mushrooms, instead of meat toppings and extra cheese.

PREVENTING AND CONTROLLING HIGH BLOOD PRESSURE

More than half of American women will develop high blood pressure at some point in their lives. Women who have the highest risk include those who are African American, have a family history of high blood pressure, are overweight, or have "high-normal" blood pressure (130–139 over 85–89 mmHg). Blood pressure tends to get higher as you age—but it need not. By taking preventive steps, a healthy blood pressure can be maintained throughout life.

The **WILL A SUPPLEMENT A DAY** **Vitamin** **PROTECT YOUR HEART?**

Factor You may have read in the news that vitamins—particularly the antioxidant vitamins E and beta carotene—may protect against heart disease and stroke. The theory is that antioxidants possibly prevent the biochemical process that converts LDL cholesterol into a form that can stick to and clog arteries.

The word “possibly” is important here. So far, evidence for the heart health benefits of antioxidants is mixed. While some studies have shown a protective effect, others have shown no benefit at all. Currently, the National Heart, Lung, and Blood Institute (NHLBI) is supporting two large studies on the effects of antioxidants on women’s heart disease, which will soon give us more definite information on the impact of these vitamins.

Until those research results become available, we cannot be sure that consuming a lot of vitamin E or beta carotene supplements is helpful or harmful. Also unknown is whether the vitamins give benefits when taken as supplements or whether they need to be consumed through foods.

However, since many foods rich in these vitamins are good for you in any case, it makes sense to add them to your diet. Good sources of beta carotene are carrots, squash, yams, peaches, apricots, spinach, and broccoli. Foods rich in vitamin E include vegetable oils (especially safflower and sunflower oils), wheat germ, and leafy green vegetables.

Hold the Salt

HOW TO REDUCE SALT AND SODIUM IN YOUR DIET

You can help prevent and control high blood pressure by cutting down on table salt and on sodium, an ingredient in salt that is found in many packaged foods. Following are some tips:

-
- Add less salt at the table and in cooking. If possible, reduce the amount a little each day until none is used. Try seasoning foods instead with pepper, garlic, ginger, minced onion or green pepper, and lemon juice.
 - Use fewer sauces, mixes, and "instant" products, including flavored rices, pasta, and cereals, since they usually have salt added.
 - Use fresh, frozen, or canned fruits.
 - Use vegetables that are fresh, frozen without sauce, or canned with no salt added.
 - Check nutrition labels for the amount of sodium in foods, especially on cans, boxes, bottles, and bags. Look for products that say "sodium free," "very low sodium," "low sodium," "reduced sodium," "less sodium," "light in sodium," or "unsalted."
 - While salt substitutes containing potassium chloride may be useful for some individuals, they can be harmful to people with certain medical conditions. Ask your doctor before trying salt substitutes.

The Sensible Snack

To help cut back on sodium, snack on:

- Bagels, raisin toast, or English muffins with jelly and a little margarine
- Air-popped popcorn with no salt or butter
- Unsalted pretzels and crackers
- Low fat cookies (animal crackers, fig bars, ginger snaps)
- Vegetables (fresh, plain frozen, or no-salt-added canned)
- Fruits
- Fruit juices and drinks
- Nonfat frozen yogurt, sherbet, and popsicles
- Hard candy, jelly beans

Eat less of:

- Salted popcorn with butter
- Salted chips, pretzels, and crackers
- French fries
- Pork rinds

Especially if you have heart disease, controlling high blood pressure will improve your health. For example, women who have had a heart attack are less likely to have another one if they take steps to reduce high blood pressure.

To prevent high blood pressure—or to help control blood pressure if it is now too high—take these steps:

- Lose weight if you are overweight.
 - If you drink alcohol, have no more than one drink per day. That means no more than 12 ounces of beer, 5 ounces of wine, or 1½ ounces of hard liquor.
 - Try to engage in 30 minutes of moderate physical activity on most or all days of the week. Physical activity also helps weight control and is good for your entire cardiovascular system.
 - Use salt and sodium in small amounts, if at all. (See boxes on “Hold the Salt” and “The Sensible Snack.”)
- If your doctor prescribes medication, be sure to take it exactly as directed. High blood pressure medicine must be taken in the right amounts and at the right times in order to work properly.

LOSING WEIGHT: FOUR WAYS TO WIN

If you are overweight, taking off pounds can lower the chances of developing cardiovascular diseases in several ways. First, since overweight raises the risk of heart disease, losing weight will directly lower your risk. Secondly, weight loss will also help control diabetes. Third and fourth, shedding pounds can lower both high blood pressure and cholesterol. In fact, for some people, weight loss along with other dietary changes may be the only treatment needed. But even if medication is required for one of the above conditions, the healthier your weight, the less medication you may need.

If you are overweight, at the very least you should not gain any additional weight. The more overweight you are, the higher the chance that you will develop heart disease.

In a society so concerned about thinness, it may be hard to listen to yet more advice about the need to take off pounds. But too often, women are pressured to lose too much weight and for the wrong reasons: to look better in trendy clothes, to attract male attention, to have today's super-slim athletic look. The aim here is not to promote the false and discouraging idea that "thin is beautiful," but to show the link between reasonable weight and good health—especially the health of your heart. Weight loss is advised only to reach a healthy weight, not to drop to an extreme level.

Taking off pounds, and especially keeping them off, can be quite a challenge. Here are some suggestions for making weight loss an easier, safer, and more successful process:

- *Eat for health.* Choose a wide variety of low-calorie, nutritious foods in moderate amounts from the basic food groups. Include pasta, rice, bread, and other whole-grain foods, and fruits and vegetables—and other foods low in fat, since fat is the richest source of calories. But keep in mind that while more low-saturated fat food products are now available, many of them are still loaded with sugar and therefore high in calories. To make every calorie count, cut down on snack foods that are high in calories but provide few other nutrients.

Move It and Lose It

ACTIVITY	CALORIES BURNED PER HOUR *
Bicycling, 6 mph	240
Bicycling, 12 mph	410
Cross-country skiing	700
Jogging, 5.5 mph	740
Jogging, 7 mph	920
Running in place	650
Swimming, 25 yds/min.	275
Swimming, 50 yds/min.	500
Tennis, singles	400
Walking, 2 mph	240
Walking, 3 mph	320
Walking, 4.5 mph	440

*For a healthy 150-pound woman. A lighter person burns fewer calories; a heavier person burns more.

Source: *Exercise and Your Heart*, National Heart, Lung, and Blood Institute, 1993.

- *Make a plan.* If you have a lot of weight to lose, ask your doctor, a registered dietitian, or a qualified nutritionist to help you develop a sensible, well-balanced plan for gradual weight loss. To lose weight you will need to take in fewer calories than you burn. That means that you must either choose food with fewer calories or become more physically active—and preferably, do both.
- *Take it slowly.* The safest course is to take off weight gradually—no more than $\frac{1}{2}$ to 1 pound per week. Don't think of weight control as a quick fix, but as a healthful, lifelong habit.
- *Keep milk on the menu.* Don't cut out dairy products in trying to reduce calories and fat. Dairy products are rich in calcium, a nutrient that is particularly important for women. Instead,

choose non- or low fat dairy products. For instance, if you are used to drinking whole milk, gradually cut back to 2 percent milk, move to 1 percent, and then to skim milk. This way the calories are reduced while the amount of calcium remains the same.

There are other ways to keep up your calcium. Try canned fish with soft bones, such as salmon and sardines, dark green leafy vegetables, broccoli, tofu processed with calcium sulfate, and tortillas made with lime-processed corn.

- *Beyond dieting.* To keep the pounds off, change your basic eating habits rather than simply “go on a diet.” Keep a food diary of what, when, and why you eat to help you understand your eating patterns and what affects them. Learn to recognize social and emotional situations that trigger overeating and figure out ways to cope with them. Set short-term goals at first.
- *Forget the fads.* Tempting as their promises are, fad diets are not the answer. Most provide poor nutrition and cause many side effects, especially those with less than 800 calories a day. Although fad diets can give quick and dramatic results, most of the weight loss is due to water loss. The weight returns quickly once you stop dieting.
- *Get a move on.* Physical activity can help burn calories, tone muscles and control appetite. (It also gives you something to do when you feel that familiar urge for a slice of chocolate fudge cake.) Even moderate activity, such as brisk walking, will burn up calories and help control weight.
- *Ask for support.* Tell your family and friends about your weight loss plans and let them know how they can be most helpful to you. You might also want to join a self-help group devoted to weight control. These groups provide support and practical suggestions on changing eating habits and achieving long-term weight loss.

Other Prevention Issues

HORMONES AND MENOPAUSE

Should menopausal women use “hormone replacement therapy?”

There is no simple answer to this question.

Menopause is caused by a decrease in estrogen produced by a woman’s ovaries. It happens naturally in most women between the ages of 45 and 55, and it also occurs in women of any age whose ovaries are removed by an operation.

As estrogen levels begin to drop, some women develop uncomfortable symptoms such as “hot flashes” and mood changes. Hormone replacement therapy (HRT)—a term for prescription hormone medications—can be used to relieve these symptoms. Some women are prescribed medication that contains only estrogen. Others take estrogen combined with a second hormone called progestin, a synthetic form of progesterone.

HORMONE THERAPY AND HEART HEALTH

The latest research indicates that HRT may have important heart benefits for women after menopause. The National Institutes of Health supported a study on HRT called the Postmenopausal Estrogen/Progestin Interventions (PEPI) Trial. It studied postmenopausal women who took one of four kinds of hormone therapy—a daily dose of estrogen alone, daily estrogen plus daily progestin, daily estrogen plus progestin 12 days per month, and daily estrogen plus progesterone 12 days per month. The most important results include:

- All four treatments raised levels of HDL, or “good” cholesterol. The best results occurred with the estrogen-only and estrogen-plus-progesterone treatments.
- All four treatments lowered levels of LDL, or “bad” cholesterol. Each treatment lowered LDLs by about the same amount.

Did You Know?

Many women think that breast cancer is a bigger threat than heart disease. But the leading causes of death for American women in 1994 were:

■ Heart disease	371,000
■ Cancer (all types)	254,000
Lung	59,000
Breast	44,000
Ovarian	14,000
Cervical	5,000
Uterine	6,000
■ Stroke	93,000
■ Chronic obstructive pulmonary disease	48,000
■ Pneumonia/influenza	44,000

- All four treatments lowered levels of fibrinogen. Fibrinogen is a substance in the blood that allows clots to form more easily, which in turn increases the risk of heart attack and stroke.
- None of the hormonal treatments increased blood pressure, caused weight gain, or changed insulin levels.
- All of the treatments caused a rise in triglyceride levels, which are fatty substances carried through the blood to the body's tissues. Their link to heart disease risk is unclear.

Because of these and other promising findings about the positive impact of hormone replacement therapy on heart disease risk factors, some postmenopausal women are advised to use HRT, especially if they have high blood cholesterol.

OTHER HEALTH BENEFITS

In addition to the effects of HRT on heart disease risk factors reported by the PEPI study, other research has found that hormone therapy helps to prevent osteoporosis, a thinning of the bones that makes them more likely to break in later life. As women age, they lose mineral density in their bones. This loss is believed to happen most rapidly during early menopause, but to continue more slowly after that.

The PEPI study found that all of the hormonal treatments increased bone density, regardless of a woman's ethnic or racial background, alcohol intake, weight, degree of physical activity, or whether she had undergone a hysterectomy. The hormone treatments were

particularly helpful for smokers, who lost bone mass more quickly than nonsmokers if they did not use HRT.

The researchers concluded that HRT can slow the bone loss associated with menopause, as well as increase bone mass, a decade and more after menopause.

THE RISKS OF HORMONE THERAPY

The PEPI study also reported one troubling result: The estrogen-only treatment caused several types of hyperplasia, which are abnormal cell growths in the lining of the uterus. The most serious type, called *atypia*, increases the risk of uterine cancer. One-third of women with a uterus who took estrogen alone developed either atypia or a less serious type of hyperplasia. Women who had had a hysterectomy, which is the surgical removal of the uterus, could not develop hyperplasia.

While the PEPI study could not examine breast cancer risk, some other research suggests that HRT may be linked to a small increased risk of breast cancer, especially among women who have used hormone therapy for 5 or more years. Other research suggests that hormone replacement therapy also may increase the likelihood of headaches, including migraines, in some women.

SHOULD YOU USE HORMONE REPLACEMENT THERAPY?

Together with your doctor, you must decide whether the benefits of hormone therapy are worth the risks. Keep in mind that women are much more likely to die of heart disease than from uterine, breast, and ovarian cancers combined. Nonetheless, if you are considering HRT, you will need to consider your own particular health needs as well as your personal and family history of heart disease; uterine, breast, and ovarian cancers; and osteoporosis.

When choosing a particular type of hormone replacement therapy, postmenopausal women and their health care provider should consider these guidelines:

- If you have *not* had a hysterectomy, consider taking a therapy that combines estrogen with progestin, or estrogen with natural progesterone. If you decide to take estrogen alone, you should have a yearly examination of your uterine lining because of the risk of hyperplasia.
- If you *have* had a hysterectomy, there is no benefit in adding a progestin. Estrogen alone appears to be the best choice. Since your uterus has been removed, using estrogen alone poses no risk of abnormal changes in the uterine lining. Also, the addition of a progestin will not increase bone density more than estrogen alone.

IF YOU DECIDE TO USE HRT

If your decision to use HRT is related to an expected improvement in cholesterol levels, you should have your total, HDL, and LDL cholesterol levels measured before you begin hormone therapy. You can then compare those numbers with those of later tests to help you determine the effects of hormone therapy on your cholesterol levels.

Every 6 to 12 months, you and your doctor should discuss whether you need to continue treatment. Be alert for signs of trouble, particularly abnormal bleeding, extreme dizziness, or severe headaches. While these symptoms could be caused by factors other than HRT, you should report them immediately in any case. See your doctor at least once a year for a complete physical examination.

ASPIRIN

The research on aspirin is promising: This well-known “wonder drug” may help to both prevent and treat heart attacks.

A study of more than 87,000 women found that those who took a low dose of aspirin regularly were less likely to suffer a first heart attack than women who took no aspirin. Women over age 50 appeared to benefit most. While earlier research has shown that aspirin can help prevent heart attacks in men, this was the first study to suggest a similar result for women.

Other recent research suggests that only a tiny daily dose of aspirin may be needed to protect against heart attacks. One study found that for both women and men, taking only 30 mg of aspirin daily—one-tenth the strength of a regular aspirin—helped prevent heart attacks as effectively as the usual 300 mg dose. The smaller dose also caused less stomach irritation.

Aspirin also reduces the chances that women who have already had a heart attack or stroke will have, or die from, another one. Aspirin may also increase the chances of survival after a heart attack, if it is taken quickly. A major study showed that taking a low dose of aspirin within the first hours of an attack reduced deaths by 23 percent.

However, you should not take aspirin either to treat or prevent a heart attack without first discussing it with your doctor. Aspirin is a powerful drug with many side effects. It can increase your chances of getting ulcers, kidney disease, liver disease, and stroke from a hemorrhage. Only a doctor who knows your complete medical history and current health can judge whether the benefits you may gain from aspirin outweigh the risks.



Research: A New Focus on Women

As you have read through this book, you may have noticed the recurring words: “more research is needed.” This is true. Until very recently, men were the main subjects of heart disease research. We now know, however, that coronary heart disease is indeed a woman’s concern. We know that we need to understand more about women’s heart problems if we are to prevent and treat these problems successfully. As a result, a major, government-funded research project called the Women’s Health Initiative is now under way. It includes studies on:

- The effects of hormone replacement therapy on cardiovascular diseases, uterine cancer, breast cancer, and osteoporosis. Both estrogen-only treatments and estrogen-progestin combinations are being studied.
- The dosage of aspirin that can safely and effectively protect women from heart attack.
- The effect of a low-saturated fat diet on preventing coronary heart disease in women.
- Whether commonly used programs to encourage physical activity, weight control, and quitting smoking are successful for women.
- Possible links between stress, hormonal changes, and coronary heart disease risk in women.

These and other important research projects will give us new information and tools to better protect ourselves from coronary heart disease. They will also help doctors identify and treat women’s heart problems more successfully. Where women’s hearts are concerned, knowledge is power—the power to improve our health and enrich our lives.



The Heart of the Matter

Getting serious about heart health may seem like a huge project. Because it means making basic changes in health and living habits, for many it is a major effort. But it doesn't have to be an overwhelming one. Some people find it easier to tackle only one habit at a time. If you smoke cigarettes and also eat a high-fat diet, for example, work on kicking the smoking habit first. Then, once you have gotten used to life without cigarettes, begin skimming the fat from your diet.

And remember: nobody's perfect. Nobody always eats the ideal diet or gets just the right amount of physical activity. Few smokers are able to swear off cigarettes without a slip or two along the way. The important thing is to follow a sensible, realistic plan that will gradually lessen your chances of developing heart disease, or help you to control it.

Women are taking a more active role in their own health care. We are asking more questions and we are seeking more self-help solutions. We are concerned not only about treatment, but also about the prevention of a wide range of health problems. Taking steps to control and prevent cardiovascular diseases is part of this growing movement to promote and protect personal health. The rewards of a healthy heart are well worth the effort.

Meal Planning: A Change of Heart

HIGHER-FAT DIET (37% FAT)

Breakfast

1 fried egg
2 slices white toast with 1 teaspoon butter
1 cup orange juice

Snack

1 doughnut

Lunch

1 grilled cheese (2 ounces)
sandwich on white bread
2 oatmeal cookies
black coffee or tea

Snack

20 cheese cracker squares

Dinner

3 ounces fried hamburger with ketchup
1 baked potato with sour cream
³/₄ cup steamed broccoli with
1 teaspoon butter
1 cup whole milk
1 piece frosted marble cake

Nutrient Analysis

Calories 2,000
Total fat (percent of calories) 37
Saturated fat (percent of calories) 19
Cholesterol 505 mgs

LOWER-FAT DIET (30% FAT)

Breakfast

1 cup corn flakes with blueberries
1 cup 1% milk
1 slice rye toast with 1 teaspoon margarine
1 cup orange juice
black coffee or tea

Snack

1 toasted pumpernickel bagel
with 1 teaspoon margarine

Lunch

1 tuna salad (3 ounces) sandwich
on whole wheat bread with lettuce
and tomato
1 graham cracker
tea with lemon

Snack

1 crisp apple

Dinner

3 ounces broiled lean ground beef
with ketchup
1 baked potato with low fat plain
yogurt and chives
³/₄ cup steamed broccoli with
1 teaspoon margarine
tossed garden salad with 1 tablespoon oil
and vinegar dressing
1 cup 1% milk
1 small piece homemade gingerbread
with maraschino cherry and sprig of mint

Nutrient Analysis

Calories 2,000
Total fat (percent of calories) 30
Saturated fat (percent of calories) 10
Cholesterol 186 mgs

A Guide to Choosing Low Fat, Low-Cholesterol Foods

Variety is the spice of life. Choose foods every day from each of the following food groups. Choose different foods from within groups, especially foods low in saturated fat and cholesterol (the Choose column). As a guide, the recommended daily number of servings for adults is listed for each food group. But you'll have to decide on the number of servings you need to lose or maintain your weight. If you need help, ask a dietitian or your doctor.

Sources: *Dietary Guidelines for Americans*, U.S. Department of Agriculture/U.S. Department of Health and Human Services, 1995; *Second Report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults*, NHLBI, 1993.

BREADS, CEREALS, PASTA, RICE

(6 to 11 servings daily; serving size is 1 slice bread, half a bun, or bagel, 1 ounce dry cereal, 1/2 cup cooked cereal, rice, or pasta)

Choose

- Breads, like: whole wheat, pumpernickel, rye, and white; sandwich buns; dinner rolls; rice cakes
- Low fat crackers, like: matzah, pita; bagels; English muffins; bread sticks, rye, saltines, zwieback
- Hot cereals, most cold dry cereals
- Pasta, like: plain noodles, spaghetti, macaroni
- Any grain rice

Go Easy On

- Store-bought pancakes, waffles, biscuits, muffins, cornbread

Decrease

- Croissants, butter rolls, sweet rolls, Danish pastry, doughnuts
- Most snack crackers, like: cheese crackers, butter crackers, those made with saturated fats
- Granola-type cereals made with saturated fats
- Pasta and rice prepared with cream, butter, or cheese sauces, egg noodles

VEGETABLES

(3 to 5 servings daily; serving is 1 cup leafy raw, 1/2 cup cooked or chopped raw, 3/4 cup juice)

Choose

- Fresh, frozen, canned, or dried vegetables
-

Decrease

- Vegetables prepared in butter, cream, or sauce
 - French fries
-

FRUITS

(2 to 4 servings daily; serving is 1 piece, 1/2 cup diced, 3/4 cup fruit juice or cocktail)

Choose

- Fresh, frozen, canned, or dried fruits
-

Go Easy On

- Avocados and olives
-

MILK, YOGURT, AND CHEESE

(2 to 3 servings daily; 3 servings for women who are pregnant or breast feeding, and teenagers and young adults to age 24; serving size is 1 cup milk or yogurt; 1 ounce natural cheese, 1 1/2 ounce processed cheese)

Choose

- Skim milk, 1% milk, skim-milk buttermilk, low fat evaporated or nonfat milk
 - Nonfat or low fat yogurt and frozen yogurt
 - Low fat and fat-free cheeses, string cheese, skim-milk buttermilk, low fat skim-milk, and fat-free cottage and ricotta cheese
 - Nonfat sour cream
-

Go Easy On

- 2% milk
 - Part-skim ricotta
 - Part-skim or imitation hard cheeses, like: part-skim mozzarella
 - "Light" cream cheese
 - "Light" sour cream
-

Decrease

- Whole milk, like: regular, evaporated, condensed
 - Cream, half-and-half, most nondairy creamers and products, real or nondairy whipped cream
 - Cream cheese, sour cream, ice cream, custard-style yogurt
 - Whole-milk ricotta
 - High-fat cheese, like: Neufchatel, Brie, Swiss, American, mozzarella, feta, cheddar, Muenster
-

MEAT, POULTRY, FISH, DRY BEANS, EGGS, AND NUTS

(2 to 3 servings daily)

LEAN MEAT, POULTRY, FISH

(serving is 2–3 ounces of cooked lean meat, poultry, or fish)

Choose

- Lean cuts of meat with fat trimmed, like:
Beef—round, sirloin, top loin, extra lean ground beef
Lamb—leg-shank
Pork—tenderloin, leg shank sirloin, top loin
Veal—shoulder, ground, cutlet, sirloin
- Poultry without skin
- Fish, most shellfish

Go Easy On

- Lean ground beef, flank steak
- Shrimp, abalone, squid

Decrease

- Fatty cuts of meat like:
Beef—brisket, regular ground, short ribs, chuck roast
Lamb—rib, chops
Pork—spareribs, blade roll or roast
- Goose, domestic duck
- Organ meats, like: liver, kidney, sweetbreads, brain
- Sausage, bacon, frankfurters, regular luncheon meats
- Caviar, roe

DRY BEANS AND PEAS

(serving is $\frac{1}{2}$ cup tofu or cooked dry peas or beans— $\frac{1}{2}$ cup cooked dry beans or 2 Tbsp of peanut butter or $\frac{1}{3}$ cup of nuts counts as 1 ounce of lean meat)

Choose

- Dried peas and beans, like: split peas, black-eyed peas, chick peas, kidney beans, navy beans, lentils, soybeans, soybean curd (tofu)

Go Easy On

- Refried beans (read food label for fat content)

E G G S

(no more than 4 egg yolks a week)

Choose

- Egg whites
- Cholesterol-free egg substitutes

Decrease

- Egg yolks
- Whole eggs

N U T S

(serving is $\frac{1}{3}$ cup)

Go Easy On

- Nuts and seeds
- Peanut butter

FATS, OILS, AND SWEETS

(use sparingly)

FATS AND OILS

Choose

- Unsaturated vegetable oils like: corn, olive, peanut, rapeseed (canola oil), safflower, sesame, soybean
- Margarine or shortening made with unsaturated fats listed above: diet and tub
- Low fat and fat-free mayonnaise, low fat and fat-free salad dressings made with unsaturated fats listed above

Decrease

- Butter, coconut oil, palm kernel oil, palm oil, lard, bacon fat
- Stick margarine or shortening made with saturated fats listed above
- Dressings made with egg yolk, such as hollandaise sauce and Caesar salad dressing
- Regular salad dressing and mayonnaise

SWEETS AND SNACKS

(Remember: fat-free and low fat choices may be high in calories)

Choose

- Nonfat and low fat frozen desserts, like: sherbet, sorbet, Italian ice, frozen yogurt, popsicles
- Fat-free cakes and cookies
- Low fat cakes, like: angel food cake
- Low fat cookies, like: fig bars, gingersnaps
- Low fat candy, like: jelly beans, hard candy
- Low fat snacks, like: plain popcorn, pretzels, graham crackers
- Nonfat beverages, like: carbonated drinks, juices, tea, coffee

Go Easy On

- Frozen desserts, like: ice milk
- Homemade cakes, cookies, and pies using unsaturated oils sparingly
- Fruit crisps and cobblers
- Potato and corn chips prepared with unsaturated vegetable oil

Decrease

- High-fat frozen desserts, like: ice cream, frozen tofu
- High-fat cakes, like: most store-bought, pound, and frosted cakes
- Regular pies and cookies
- Most candy, like: chocolate bars
- Potato and corn chips prepared with saturated fat
- Buttered popcorn
- High-fat beverages, like: frappes, milkshakes, floats, eggnogs

LABEL INGREDIENTS

(Choose foods lower in fat, saturated fat, or cholesterol, go easy on products that list first any fat, oil, or ingredients higher in saturated fat or cholesterol. Choose more often those products that contain ingredients lower in saturated fat or cholesterol.)

Choose

- Ingredients Lower in Saturated Fat or Cholesterol: carob, cocoa; oils, like: corn, cottonseed, olive, safflower, sesame, soybean, or sunflower; nonfat dry milk, nonfat dry milk solids, skim milk
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Decrease

- Sources of Saturated Fat and Cholesterol: animal fat, bacon fat, beef fat, butter, chicken fat, cocoa butter, coconut, coconut oil, cream, egg and egg-yolk solids, ham fat, hardened fat or oil, hydrogenated vegetable oil, lamb fat, lard, meat fat, palm kernel oil, palm oil, pork fat, turkey fat, coconut, palm, or palm kernel oil, vegetable shortening, whole-milk solids

Recipes for a Healthy Heart

These recipes come from various ethnic groups and include soups, entrees, side dishes, and desserts. They're full of taste but lower in fat, cholesterol, and sodium.

MINISTRONE

A cholesterol free classic Italian vegetable soup brimming with fiber-rich beans, peas, and carrots.

1/4 C	olive oil
1 clove	garlic, minced or 1/8 tsp garlic powder
1 1/3 C	coarsely chopped onion
1 1/2 C	coarsely chopped celery and leaves
1 Tbsp	chopped fresh parsley
1 C	sliced carrots, fresh or frozen
4 3/4 C	shredded cabbage
1 can	(1 lb) tomatoes, cut up
1 C	canned red kidney beans, drained and rinsed
1 1/2 C	frozen peas
1 1/2 C	green beans
1 can	(6 oz) tomato paste
dash	hot sauce
11 C	water
2 C	uncooked, broken spaghetti

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1. Heat oil in a 4-quart saucepan.
 2. Add garlic, onion, and celery and sauté about 5 minutes.
 3. Add all remaining ingredients except spaghetti, and stir until ingredients are well mixed.
 4. Bring to a boil. Reduce heat, cover, and simmer about 45 minutes or until vegetables are tender.
 5. Add uncooked spaghetti and simmer 2-3 minutes only.

Yield: 16 servings

Serving size: 1 cup

Each serving provides: 153 calories; 4 g total fat; 0 mg cholesterol; 191 mg sodium

**ROCKPORT
FISH
CHOWDER**

Low fat milk and clam juice are the secrets to the lower fat and saturated fat content of this satisfying supper soup.

2 Tbsp	vegetable oil
$\frac{3}{4}$ C	coarsely chopped onion
$\frac{1}{2}$ C	coarsely chopped celery
1 C	sliced carrots
2 C	potatoes, raw, peeled and cubed
$\frac{1}{4}$ tsp	thyme
$\frac{1}{2}$ tsp	paprika
2 C	bottled clam juice
8	whole peppercorns
1	bay leaf
1 lb	fresh or frozen (thawed) cod or haddock fillets, cut into $\frac{3}{4}$ -inch cubes
$\frac{1}{4}$ C	flour
3 C	low fat (1%) milk
1 Tbsp	fresh parsley, chopped

1. Heat oil in a large saucepan. Add onion and celery and sauté about 3 minutes.
 2. Add carrots, potatoes, thyme, paprika, and clam broth. Wrap peppercorns and bay leaves in cheese cloth. Add to pot. Bring to a boil, reduce heat, and simmer 15 minutes.
 3. Add fish and simmer an additional 15 minutes, or until fish flakes easily and is opaque.
 4. Remove fish and vegetables; break fish into chunks. Bring broth to a boil and continue boiling until volume is reduced to 1 cup. Remove bay leaves and peppercorns.
 5. Shake flour and $\frac{1}{2}$ cup low fat (1%) milk in a container with a tight-fitting lid until smooth. Add to broth in saucepan with remaining milk. Cook over medium heat, stirring constantly, until mixture boils and is thickened.
 6. Return vegetables and fish chunks to stock and heat thoroughly. Serve hot, sprinkled with chopped parsley.
-

Yield: 8 servings
Serving size: 1 cup each
Each serving provides: 186 calories; 6 g total fat; 1 g saturated fat; 34 mg cholesterol; 302 mg sodium

**BAKED
TROUT**

Try baking this fish
with only a small
amount of oil.

2 lb	trout fillet, cut into 6 pieces (or use any kind of fish)
3 Tbsp	lime juice (about 2 limes)
1 medium	tomato, chopped
1/2 medium	onion, chopped
3 Tbsp	cilantro, chopped
1/2 tsp	olive oil
1/4 tsp	black pepper
1/4 tsp	salt
1/4 tsp	red pepper (optional)

1. Preheat oven to 350° F.
 2. Rinse fish and pat dry. Place in baking dish.
 3. In a separate dish, mix remaining ingredients together and pour over fish.
 4. Bake for 15-20 minutes or until fork-tender.
-

Yields: 6 servings

Serving size: 1 piece

Each serving provides: 230 calories; 9 g total fat; 2 g saturated fat; 58 mg cholesterol; 162 mg sodium

**MEDITER-
RANEAN
BAKED FISH**

This dish is baked and flavored with a Mediterranean-style tomato, onion, and garlic sauce to make it lower in fat and salt.

2 tsp	olive oil
1	large onion, sliced
1 can	(16 oz) whole tomatoes, drained (reserve juice) and coarsely chopped
1	bay leaf
1	clove garlic, minced
1 C	dry white wine
1/2 C	reserved tomato juice from canned tomatoes
1/4 C	lemon juice
1/4 C	orange juice
1 Tbsp	fresh grated orange peel
1 tsp	fennel seeds, crushed
1/2 tsp	dried oregano, crushed
1/2 tsp	dried thyme, crushed
1/2 tsp	dried basil, crushed
to taste	black pepper
1 lb	fish fillets (sole, flounder, or sea perch)

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1. Heat oil in large nonstick skillet. Add onion, and sauté over moderate heat 5 minutes or until soft.
 2. Add all remaining ingredients except fish.
 3. Stir well and simmer 30 minutes, uncovered.
 4. Arrange fish in 10 x 6-inch baking dish; cover with sauce.
 5. Bake, uncovered, at 375 ° F about 15 minutes or until fish flakes easily. Remove bay leaf before serving.

Yield: 4 servings

Serving size: 4 oz fillet with sauce

Each serving provides: 177 calories; 4 g total fat; 1 g saturated fat; 56 mg cholesterol; 281 mg sodium

**SPAGHETTI
WITH
TURKEY
MEAT SAUCE**

Using nonstick cooking spray, ground turkey, and no added salt helps to make this classic dish heart-healthy.

as needed nonstick cooking spray
1 lb ground turkey
1 can (28 oz) tomatoes, cut up
1 C finely chopped green pepper
1 C finely chopped onion
2 cloves garlic, minced
1 tsp dried oregano, crushed
1 tsp black pepper
1 lb spaghetti, uncooked

1. Spray a large skillet with nonstick spray coating. Preheat over high heat.
 2. Add turkey; cook, stirring occasionally, for 5 minutes. Drain fat and discard.
 3. Stir in tomatoes with their juice, green pepper, onion, garlic, oregano, and black pepper. Bring to a boil; reduce
 - heat. Simmer covered for 15 minutes, stirring occasionally. Remove cover; simmer for 15 minutes more. (If you like a creamier sauce, give sauce a whirl in your blender or food processor.)
 4. Meanwhile, cook spaghetti in unsalted water. Drain well.
 5. Serve sauce over spaghetti.
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Yield: 6 servings

Serving size: 5 oz sauce and 9 oz spaghetti

Each serving provides: 330 calories; 5 g total fat; 1 g saturated fat; 60 mg cholesterol; 280 mg sodium

CHICKEN**ORIENTALE**

With no added salt and very little oil in the marinade, these broiled or grilled kabobs made with skinless chicken breasts are lower in saturated fat, cholesterol, and sodium.

8	boneless, skinless chicken breasts
8	fresh mushrooms
to taste	black pepper
8	parboiled whole white onions
2	oranges, quartered
8	canned pineapple chunks
8	cherry tomatoes
1	6 oz can frozen, concentrated apple juice, thawed
1 C	dry white wine
2 Tbsp	soy sauce, low sodium
dash	ground ginger
2 Tbsp	vinegar
1/4 C	vegetable oil

1. Sprinkle chicken breasts with pepper.
 2. Thread 8 skewers as follows: chicken, mushroom, chicken, onion, chicken, orange quarter, chicken, pineapple chunk, cherry tomato.
 3. Place kabobs in shallow pan.
 4. Combine remaining ingredients and save 1/2 cup in another bowl; spoon the rest over kabobs. Marinate in refrigerator at least 1 hour.
 5. Drain. Broil 6 inches from heat, 15 minutes on each side, brushing with reserved marinade every 5 minutes. Discard any leftover marinade.
-

Yield: 8 servings

Serving size: 1/2 chicken breast kabob

Each serving provides: 359 calories; 11 g total fat; 2 g saturated fat; 66 mg cholesterol; 226 mg sodium

**CHICKEN
AND RICE**

Skinned chicken
makes this dish lower
in saturated fat and
calories.

6	chicken pieces (legs and breasts), skinned
2 tsp	vegetable oil
4 C	water
2	tomatoes, chopped
1/2 C	green pepper, chopped
1/4 C	red pepper, chopped
1/4 C	celery, diced
1 medium	carrot, grated
1/4 C	corn, frozen
1/2 C	onion, chopped
1/4 C	fresh cilantro, chopped
2 cloves	garlic, chopped fine
1/8 tsp	salt
1/8 tsp	pepper
2 C	rice
1/2 C	peas, frozen
2 ounces	Spanish olives
1/4 C	raisins

1. In a large pot, brown chicken pieces in oil.
 2. Add water, tomatoes, green and red peppers, celery, carrots, corn, onion, cilantro, garlic, salt, and pepper. Cover and cook over medium heat for 20–30 minutes or until chicken is done.
 3. Remove chicken from the pot and place in the refrigerator. Add rice, peas, and olives to the pot. Cover pot and cook over low heat for about 20 minutes, until rice is cooked.
 4. Add chicken and raisins and cook for another 8 minutes.
-

Yield: 6 servings

Serving size: 1 cup rice and 1 piece chicken

Each serving provides: 448 calories; 7 g total fat; 2 g saturated fat; 49 mg cholesterol; 352 mg sodium

**GRILLED
CHICKEN
WITH GREEN
CHILE SAUCE**

The secret to this dish is marinating the meat, which makes it tender without adding a lot of fat.

4	skinless, boneless chicken breasts
1/4 C	olive oil
juice of 2	limes
1/4 tsp	oregano
1/2 tsp	black pepper
1/4 C	water
10–12	tomatillos, husks removed and cut in half
1/2 medium	onion, quartered
2 cloves	garlic, finely chopped
2	serrano or jalapeño peppers
2 Tbsp	cilantro, chopped
1/4 tsp	salt
1/4 C	low fat sour cream

1. Combine the oil, juice from 1 lime, oregano, and black pepper in a shallow glass baking dish. Stir. Place the chicken breasts in the baking dish and turn to coat each side. Cover the dish and refrigerate for at least several hours or overnight. Turn the chicken periodically to marinate chicken on both sides.
2. Put water, tomatillos, and onion into a saucepan. Bring to a gentle boil and cook uncovered for 10 minutes or until the tomatillos are tender.
3. Place the chicken breast on a hot grill and cook until done. Place the chicken on a serving platter.
4. Spoon a tablespoon of low fat sour cream over the chicken breast. Pour the sauce over the sour cream.

Yield: 4 servings

Serving size: 1 breast

Each serving provides: 192 calories; 5 g total fat; 2 g saturated fat; 71 mg cholesterol; 220 mg sodium

BAKED PORK CHOPS

These spicy and moist pork chops are made with no added fat, egg whites, evaporated skim milk, and a lively herb mixture that contains no salt.

6	lean center-cut pork chops, 1/3-inch thick
1	egg white
1 C	evaporated skim milk
3/4 C	cornflake crumbs
1/4 C	fine dry bread crumbs
4 tsp	paprika
2 tsp	oregano
3/4 tsp	chili powder
1/2 tsp	garlic powder
1/2 tsp	black pepper
1/8 tsp	cayenne pepper
1/8 tsp	dry mustard
1/2 tsp	salt
as needed	nonstick spray coating

1. Trim all fat from chops.
2. Beat egg white with evaporated skim milk. Place chops in milk mixture and let stand for 5 minutes, turning chops once.
3. Meanwhile, mix together cornflake crumbs, bread crumbs, spices, and salt.
4. Spray a 9x13-inch baking pan with nonstick spray coating.
5. Remove chops from milk mixture. Coat thoroughly with crumb mixture.
6. Place chops in pan and bake in 375° F oven for 20 minutes. Turn chops and bake 15 minutes longer or till no pink remains.

Note: If desired, substitute skinless, boneless chicken, turkey parts, or fish for pork chops and bake for 20 minutes.

Yield: 6 servings

Serving size: 1 pork chop

Each serving provides: 186 calories; 5 g total fat; 2 g saturated fat; 31 mg cholesterol; 393 mg sodium.

**BAVARIAN
BEEF**

This classic German
stew is made with lean
trimmed beef stew
meat and cabbage.

1½ lb	lean beef stew meat (trimmed of fat), cut in 1-inch pieces
1 Tbsp	vegetable oil
1 large	onion, thinly sliced
1½ C	water
¾ tsp	caraway seeds
½ tsp	salt
⅛ tsp	black pepper
1	bay leaf
¼ C	white vinegar
1 Tbsp	sugar
½	small head red cabbage, cut into 4 wedges
¼ C	crushed gingersnaps

1. Brown meat in oil in a heavy skillet. Remove meat and sauté onion in remaining oil until golden. Return meat to skillet. Add water, caraway seeds, salt, pepper, and bay leaf. Bring to a boil. Reduce heat, cover, and simmer 1¼ hours.
 2. Add vinegar and sugar; stir. Place cabbage on top of meat. Cover and simmer 45 minutes more.
 3. Arrange meat and cabbage on a platter and keep warm.
 4. Strain drippings and skim off fat. Add enough water to drippings to yield 1 cup of liquid. Return to skillet with gingersnap crumbs. Cook and stir until thickened and mixture boils. Serve with meat and vegetables.
-

Yield: 5 servings

Serving size: 5 oz

Each serving provides: 244 calories; 11 g total fat; 3 g saturated fat; 56 mg cholesterol; 323 mg sodium

**NEW
ORLEANS
RED BEANS**

This vegetarian main dish is cholesterol free, virtually fat free, and chock full of vegetables.

1 lb	dry red beans
2 qt	water
1½ C	chopped onion
1 C	chopped celery
4	bay leaves
1 C	chopped green pepper
3 Tbsp	chopped garlic
3 Tbsp	chopped parsley
2 tsp	dried thyme, crushed
1 tsp	salt
1 tsp	black pepper

1. Pick through beans to remove bad beans; rinse thoroughly.
 2. In a large pot combine beans, water, onion, celery, and bay leaves. Bring to a boil; reduce heat. Cover and cook over low heat for about 1½ hours or until beans are tender. Stir. Mash beans against side of pan.
 3. Add green pepper, garlic, parsley, thyme, salt, and black pepper. Cook, uncovered, over low heat till creamy, about 30 minutes. Remove bay leaves.
 4. Serve with hot cooked brown rice, if desired.
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Yield: 8 servings

Serving size: 1¼ cup

Each serving provides: 171 calories; less than 1 g total fat; less than 1 g saturated fat; 0 cholesterol; 285 mg sodium

**SWEET
& SOUR
SEASHELLS**

Draining the marinade before serving keeps the fat and sodium low in this cold pasta salad.

1 lb	uncooked small seashell macaroni (9 cups cooked)
2 Tbsp	vegetable oil
$\frac{3}{4}$ C	sugar
$\frac{1}{2}$ C	cider vinegar
$\frac{1}{2}$ C	wine vinegar
$\frac{1}{2}$ C	water
3 Tbsp	prepared mustard
to taste	black pepper
2 oz jar	sliced pimentos
2 small	cucumbers
2 small	onions thinly sliced
18	lettuce leaves

1. Cook macaroni in unsalted water, drain, rinse with cold water, and drain again. Stir in oil.
 2. Transfer to 4-quart bowl. Place sugar, vinegars, water, prepared mustard, pepper, and pimento in blender. Process at low speed 15–20 seconds, or just enough so flecks of pimento can be seen. Pour over macaroni.
 3. Score cucumber peel with fork tines. Cut cucumber in half lengthwise, then slice thinly. Add to pasta with onion slices. Toss well.
 4. Marinate, covered, in refrigerator 24 hours. Stir occasionally.
 5. Drain and serve on lettuce.
-

Yield: 18 servings

Serving size: $\frac{1}{2}$ cup

Each serving provides: 149 calories; 2 g total fat; less than 1 g saturated fat; 0 mg cholesterol; 33 mg sodium

**VEGETABLES
WITH A
TOUCH
OF LEMON**

Lemon juice, herbs, and a small amount of oil make this sauce as tasty as it is healthy.

1/2 small head	cauliflower, cut into florets
2 C	broccoli, cut into florets
2 Tbsp	lemon juice
1 Tbsp	olive oil
1 clove	garlic, minced
2 tsp	fresh parsley, chopped

1. Steam broccoli and cauliflower until tender (about 10 minutes).
 2. In a small saucepan, mix the lemon juice, oil, and garlic, and cook over low heat for 2 or 3 minutes.
 3. Put the vegetables in a serving dish. Pour the lemon sauce over the vegetables. Garnish with parsley.
-

Yield: 6 servings

Serving size: 1/2 C

Each serving provides: 22 calories; 2 g total fat; less than 1 g saturated fat; 0 mg cholesterol; 7 mg sodium

**GARLIC
MASHED
POTATOES**

No added fat or salt is used or needed in this tasty potato dish.

1 lb	(about 2 large) potatoes, peeled and quartered
2 C	skim milk
2	large cloves garlic, chopped
1/2 tsp	white pepper

1. Cook potatoes, covered, in a small amount of boiling water for 20–25 minutes or until tender. Remove from heat. Drain and recover.
 2. Meanwhile, in a small saucepan over low heat, cook garlic in milk until garlic is soft, about 30 minutes.
 3. Add milk-garlic mixture and white pepper to potatoes. Beat with an electric mixer on low speed or mash with a potato masher until smooth.
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Microwave Directions

Scrub potatoes, pat dry, and prick with a fork. On a plate, cook potatoes, uncovered, on 100% power (high) until tender, about 12 minutes, turning potatoes over once. Let stand 5 minutes. Peel and quarter. Meanwhile, in a 4-cup glass measuring cup, combine milk and garlic. Cook, uncovered, on 50% power (medium) until garlic is soft, about 4 minutes. Continue as directed above.

Yield: 4 servings

Serving size: 3/4 cup

Each serving provides: 141 calories; less than 1 g total fat; less than 1 g saturated fat; 2 mg cholesterol; 70 mg sodium

CRUNCHY**PUMPKIN PIE**

This pie uses only a small amount of oil in the crust and skim milk in the filling to make it heart-healthy.

For the Pie Crust

1 C	quick cooking oats
1/4 C	whole wheat flour
1/4 C	ground almonds
2 Tbsp	brown sugar
1/4 tsp	salt
3 Tbsp	vegetable oil
1 Tbsp	water

For the Pie Filling

1/4 C	packed brown sugar
1/2 tsp	ground cinnamon
1/4 tsp	ground nutmeg
1/4 tsp	salt
1	egg, beaten
4 tsp	vanilla
1 C	canned pumpkin
2/3 C	evaporated skim milk

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1. Preheat oven to 425 °F.
 2. Mix oats, flour, almonds, sugar, and salt together in small mixing bowl.
 3. Blend oil and water together in measuring cup with fork or small wire whisk until emulsified.
 4. Add oil mixture to dry ingredients and mix well. If needed, add small amount of water to hold mixture together.
 5. Press into a 9-inch pie pan and bake for 8–10 minutes, or until light brown.
 6. Turn down oven to 350 °F.
 7. Mix sugar, cinnamon, nutmeg, and salt together in a bowl.
 8. Add eggs and vanilla and mix to blend ingredients.
 9. Add pumpkin and milk and stir to combine.
 10. Pour into prepared pie shells.
 11. Bake 45 minutes at 350 °F or until knife inserted near center comes out clean.
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Yield: 9 servings

Serving size: 1/9 of a 9-inch pie

Each serving provides: 177 calories; 8 g total fat; 1 g saturated fat; 24 mg cholesterol; 153 mg sodium

**RICE
PUDDING**

This delicious dessert reduces the fat and calories by using skim instead of whole milk.

6 C water
2 cinnamon sticks
1 C rice
3 C skim milk
 $\frac{2}{3}$ C sugar
 $\frac{1}{2}$ tsp salt

1. Put the water and cinnamon sticks into a medium saucepan. Bring to a boil.
 2. Stir in rice. Cook on low heat for 30 minutes until rice is soft and water has evaporated.
 3. Add skim milk, sugar, and salt. Cook for another 15 minutes until it thickens.
-

Yield: 5 servings

Serving size: $\frac{1}{2}$ cup

Each serving provides: 372 calories; less than 1 g total fat; less than 1 g saturated fat; 3 mg cholesterol; 366 mg sodium

**WINTER
CRISP**

Only 1 tablespoon of margarine is used to make the crumb topping of this tart and tangy fruit dessert that is cholesterol free and low in sodium.

For the Filling

1/2 C	sugar
3 Tbsp	all-purpose flour
1 tsp	lemon peel, grated
3/4 tsp	lemon juice
5 C	apples, unpeeled, sliced
1 C	cranberries

For the Topping

2/3 C	rolled oats
1/3 C	brown sugar, packed
1/4 C	whole wheat flour
2 tsp	ground cinnamon
1 Tbsp	soft margarine, melted

-
1. To prepare filling, in a medium bowl combine sugar, flour, and lemon peel; mix well. Add lemon juice, apples, and cranberries; stir to mix. Spoon into a 6-cup baking dish.
 2. To prepare topping, in a small bowl, combine oats, brown sugar, flour, and cinnamon. Add melted margarine; stir to mix.
 3. Sprinkle topping over filling. Bake in a 375° F oven for approximately 40–50 minutes or until filling is bubbly and top is brown. Serve warm or at room temperature.

Note: For a summertime crisp, prepare as directed but substitute 4 cups fresh or unsweetened frozen (thawed) peaches and 3 cups fresh or unsweetened frozen (unthawed) blueberries for apples and cranberries. If frozen, thaw peaches completely (do not drain). Do not thaw blueberries before mixing or they will be crushed.

Yield: 6 servings

Serving size: 1 1/4-inch by 2-inch piece

Each serving provides: 284 calories; 6 g total fat; 1 g saturated fat; 0 mg cholesterol; 56 mg sodium

Resources for a Healthy Heart

National Heart, Lung, and Blood Institute (NHLBI)

Information Center

P.O. Box 30105

Bethesda, MD 20824-0105

1-800-575-WELL; (301) 251-1222

Website: <http://www.nhlbi.nih.gov/nhlbi/nhlbi.htm>

Call the 800 number for information about the prevention and control of high blood pressure and high blood cholesterol. Write for a list of free or low-cost publications on all aspects of heart health.

National Institute on Aging (NIA)

Information Center

P.O. Box 8057

Gaithersburg, MD 20898-8057

1-800-222-2225

1-800-222-4225 (TTY) (for hearing impaired)

Website: <http://www.nih.gov/nia>

Provides information on a wide range of topics related to health and aging, including physical activities for older persons.

Consumer Information Center (CIC)

CIC has free or low-cost consumer booklets from more than 40 Federal departments and agencies, including the U.S. Department of Agriculture and the U.S. Food and Drug Administration. Topics include the *Dietary Guidelines for Americans*, the food labels, and other health issues. For a catalog, write to:

Catalog

Pueblo, CO 81009

Or call (719) 948-4000.

The catalog and many of the publications also are available on the Internet:

On the World Wide Web at <http://www.pueblo.gsa.gov>

On the gopher at gopher.gsa.gov

National Cancer Institute (NCI)

Office of Cancer Communications
Bldg. 31, Room 10A24
9000 Rockville Pike
Bethesda, MD 20892
1-800-4-CANCER; (301) 496-5583
Website: <http://www.nci.nih.gov/>

Provides free publications on how to stop smoking and many other cancer-related topics.

American Heart Association (AHA)

National Center
7320 Greenville Avenue
Dallas, TX 75231
1-800-AHA-USA1

Website: <http://www.amhrt.org/>

Contact the national office or your local AHA affiliate for a list of publications on heart health. Single copies of most publications are free.

HEART HEALTH RECORD

Use this chart to record your progress toward your healthy heart goals.

SMOKING

Quit Date _____

CHOLESTEROL

Goals

Total _____

HDL _____

LDL _____

Date	Level		
	Total	HDL	LDL
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

BLOOD PRESSURE

Goal _____

Date	Blood Pressure
_____	_____
_____	_____
_____	_____

WEIGHT

Goal _____

Date	Weight
_____	_____
_____	_____
_____	_____

**U. S. DEPARTMENT OF HEALTH
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Public Health Service
National Institutes of Health
National Heart, Lung, and Blood Institute

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LABEL INGREDIENTS

(Choose foods lower in fat, saturated fat, or cholesterol, go easy on products that list first any fat, oil, or ingredients higher in saturated fat or cholesterol. Choose more often those products that contain ingredients lower in saturated fat or cholesterol.)

Choose

- Ingredients Lower in Saturated Fat or Cholesterol: carob, cocoa; oils, like: corn, cottonseed, olive, safflower, sesame, soybean, or sunflower; nonfat dry milk, nonfat dry milk solids, skim milk
-

Decrease

- Sources of Saturated Fat and Cholesterol: animal fat, bacon fat, beef fat, butter, chicken fat, cocoa butter, coconut, coconut oil, cream, egg and egg-yolk solids, ham fat, hardened fat or oil, hydrogenated vegetable oil, lamb fat, lard, meat fat, palm kernel oil, palm oil, pork fat, turkey fat, coconut, palm, or palm kernel oil, vegetable shortening, whole-milk solids