

DO YOUR PART



CARE FOR  
YOUR HEART



This patient guide will provide you with information related to the care of your heart. It is only the beginning of the educational process to become an active and effective partner in managing your cardiovascular health.

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**Dietary changes, exercise, weight loss, and/or use of medication can help you care for your heart.**

**Do your part.**

- Control your blood pressure
- Control your cholesterol
- Watch your weight
- Get regular exercise
- Quit smoking
- Limit alcohol use
- Reduce stress
- Keep diabetes in check
- Know your heart medications

# Contents

Do your part. The information below is presented in this booklet. It will give you tools to assist you in taking care of your heart. These tools are only useful if you use them.

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This patient guide does not give you specific plans to care for your heart. You and your health care team will develop an individual plan to manage your cardiovascular health. Following the tip cards will help you practice heart-healthy behaviors. Record your goals and monitor your progress using the tip cards provided in the back of this booklet.

## Tip Cards

- Tips for a Heart Healthy Diet
- Body Mass Index Card
- Exercise Do's and Don'ts
- Stress Buster Tip Card
- Take Care of My Heart Card
- Blood Pressure Tracker
- Exercise/Activity Log
- My Eating Plan
- My Food Diary
- My Cardiovascular Action Plan
- Questions to Ask

## How Heart Disease Develops

Some hardening of arteries often occurs when people grow older. This condition, known as arteriosclerosis, is the thickening and hardening of arteries, which results in loss of elasticity or stretching. There are several types of this condition, all of which can lead to heart disease.

Atherosclerosis is one type of arteriosclerosis. It clogs or blocks the inner walls of coronary arteries, which are the tubes that supply your heart with the oxygen-rich blood it needs. The artery walls become thicker due to a buildup of plaque that reduces or blocks the flow of blood to the heart. Plaque is the cholesterol and fatty substances that build up layer upon layer and form a hard substance inside your arteries. You can't see or feel plaque buildup on the walls of your arteries, but when this buildup affects the flow of blood to your heart, heart tissue is damaged. Certain medical conditions, habits such as eating a high fat diet, smoking, and not exercising are just some of the risk factors that can cause atherosclerosis.

## Heart Disease Risk Factors

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### **Risk Factors You Can Control**

- High Blood Pressure
- High Blood Cholesterol
- Being Overweight
- Amount of Exercise
- Smoking
- Alcohol Consumption
- Your Stress Level
- Diabetes

### **Risk Factors You Cannot Control**

- Your age
- Your sex
- Your family medical history

## Is it Angina or is it a Heart Attack?

### **Angina**

Goes away with rest

Lasts 20 minutes or less

### **Heart Attack**

Does not go away with rest

Lasts over 20 minutes

**Angina** is discomfort or pain in your chest that happens when your heart doesn't get as much blood and oxygen as it needs. Arteries that supply blood to your heart can become partially blocked. If not enough blood can flow to your heart, you may feel chest pain or discomfort. Although uncomfortable, angina does not cause permanent heart damage.

A **heart attack** occurs when plaque forms a clot, blocking blood flow to your heart. If the clot cuts off the blood flow to the heart, that part of the heart muscle begins to die, which causes permanent damage. It can be fatal.

Signs and symptoms that may be present during angina or a heart attack may include:

- Unusual chest pain, pressure or burning which may spread into arms, neck, back, or jaw
- Shortness of breath, dizziness
- Sweating
- Nausea (feeling like you are going to throw up)
- Unexplained indigestion
- Numbness or tingling in shoulders, arms or wrists

## Emergency Interventions if you have symptoms of a heart attack.

- Call 9-1-1 right away.
- Take an aspirin. It prevents the formation of blood clots, reduces inflammation and can reduce damage to the heart during a heart attack.
- If you cannot call 9-1-1, have someone drive you to the hospital right away.
- Do not drive yourself unless you have absolutely no other choice.



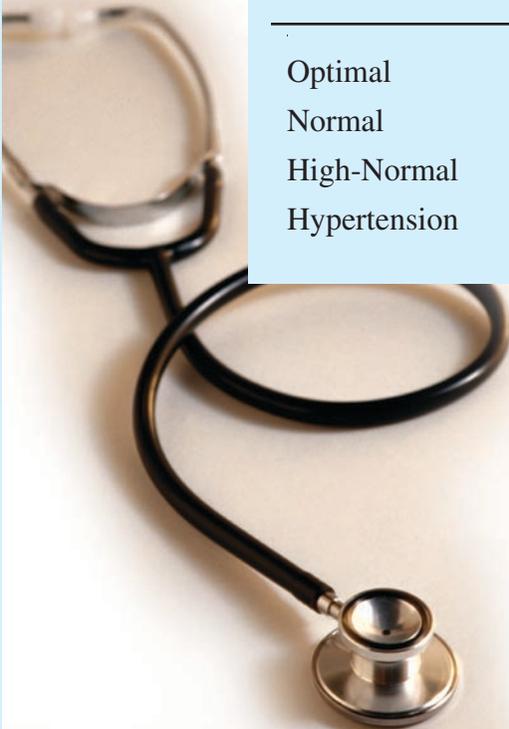
## Blood Pressure

Blood pressure is the force of blood against the walls of the arteries. It rises and falls at different times throughout the day. If blood pressure stays above the normal range over a period of time, it is called high blood pressure or hypertension. High blood pressure makes the heart work too hard and contributes to atherosclerosis. It also increases the risk of heart disease and stroke. Untreated high blood pressure can lead to kidney disease. Most people with high blood pressure are unaware that they have it since there are usually no obvious physical symptoms associated with it. However, it can be a “silent killer”.

## Blood Pressure Levels

Blood pressure is recorded as two numbers - the systolic pressure (as the heart beats) over the diastolic pressure (as the heart rests between beats). Blood pressure 140/90 mm Hg or greater, is considered high blood pressure and is also called hypertension.

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Category	Systolic (Top number)	Diastolic (Bottom number)
Optimal	<120	<80
Normal	<130	<85
High-Normal	130-139	85-89
Hypertension	>140	>90

# Cholesterol

Cholesterol is a soft, waxy substance found in fats in the blood and in your body's cells. It's normal to have some cholesterol, because it's needed to form cell membranes and to serve other needed bodily functions. You get cholesterol in two ways. Your body makes some of it, and the rest comes from cholesterol in foods that you eat, such as meats, eggs, butter, cheese and whole milk. Some foods contain products that cause your body to make more cholesterol. However, too much cholesterol can cause the buildup of plaque, which can lead to heart disease.

Your goal is to maintain a desirable cholesterol level depending on your risk factors. You and your health care provider should determine your desirable levels.

## Manage Your Weight

Being overweight can cause high blood cholesterol and high blood pressure. Being overweight also makes your heart work harder than it should. Too much weight puts extra strain on your heart and increases your risk for heart problems. Diets alone are not recommended to lose weight because they only work on a short-term basis. When you go off the diet, you usually gain the weight back.

How to take weight off and remain at your desirable weight goal:

### Change What You Eat

- Eat foods with less fat.
- Eat less salt and food containing sodium.

### Change Your Eating Habits

- Make breakfast or lunch your main meal and eat a light dinner.
- Eat smaller portions.
- Limit sweets; eat fruits instead.
- Eat because you're hungry not because you're tired, stressed, lonely, or bored.
- Don't skip meals. If you're not hungry, eat less, but eat something.
- Cut down on salt used in cooking.
- Do not add salt to foods.

## Get Regular Exercise

Be sure to check with your health care provider before beginning any exercise program. Start slow and make it fun. Think about possible roadblocks. Decide how to deal with problems. Don't be discouraged by minor setbacks.

Benefits of regular exercise may include:

- better muscle tone
- lower blood pressure
- stress reduction
- improved cholesterol levels
- controlled diabetes

Exercise is a 3-part program.

### 1. **Warm Up** (5 minutes)

Slowly raise your heart rate with mild exercise. Do slow, gentle stretching exercises.

### 2. **Aerobic Exercise** (20 minutes)

Aerobic exercise is any activity that requires some physical movement and that:

- uses large muscle groups.
- raises your heart rate.
- is rhythmic and steady.
- you can do without stopping.

Aerobic exercise makes your muscles, including your heart muscle, stronger. It can help you lose weight, bring your blood pressure down and manage other heart disease risk factors such as high blood cholesterol.

### 3. **Cool Down** (5 minutes)

Slowly lower your heart rate with mild exercise. Give your muscles a gentle, thorough stretch.

## Finding Your Pulse

Check your heart rate by counting the tiny pulses that move through your body each time your heart beats. Be sure to use your fingers – not your thumb. Your thumb has its own pulse.



To find your pulse at your wrist, place your fingers on the inside of your wrist at the base of your thumb.



To find your pulse at your neck, place your fingers in the groove of your neck right below your jawbone.

Take your resting heart rate or your heart rate prior to starting your exercise. Your heart rate refers to how fast your heart is beating. You will need this number to calculate your exercise heart rate. Check your heart rate to find out whether you are exercising at the right level. You and your provider may refer to the following table to determine what level of effort (%) you should maintain during your exercise activity.

## Calculating Your Target Heart Rate

Your target heart rate is how fast your heart should be beating 10 minutes into your aerobic workout. Use this method to calculate your target heart rate range. Exercise for 10 minutes. Stop and check your heart rate for 10 seconds.

Compare that number with the chart provided on the next page. The number will allow you to quickly check your level of effort. It will tell you if you are working out too hard or not hard enough.

## TARGET HEART RATE CHART (10 second count)

AGE	55%-65%**		65%-85%**		85%-Max**	
	Beats Per Min	Beats Per 10 Seconds	Beats Per Min	Beats Per 10 Seconds	Beats Per Min	Beats Per 10 Seconds
To 19	111-131	19-22	131-171	22-29	171-201	29-34
20-24	109-129	18-22	129-168	22-28	168-198	28-33
25-29	106-125	18-21	125-164	21-27	164-193	27-32
30-34	103-122	17-20	122-160	20-27	160-188	27-31
35-39	101-119	17-20	119-156	20-26	156-183	26-31
40-44	98-116	16-19	116-151	19-25	151-178	25-30
45-49	95-112	16-19	112-147	19-25	147-173	25-29
50-54	92-109	15-18	109-143	18-24	143-168	24-28
55-59	90-106	15-18	106-139	18-23	139-163	23-27
60-64	87-103	15-17	103-134	17-22	134-158	22-26
65-69	84-99	14-17	99-130	17-22	130-153	22-26
70-74	81-96	14-16	96-126	16-21	126-148	21-25
75-79	79-93	13-16	93-122	16-20	122-143	20-24
80-84	76-90	13-15	90-117	15-20	117-138	20-23
85+	74-88	12-15	88-115	15-20	115-135	20-23

\*\*Determined by your health care provider

Stop exercising and call your health care provider if you have:

- Chest pain or pain in your neck and arms.
- Trouble breathing normally.
- An irregular or rapid heartbeat.
- An upset stomach, blurred vision, or dizziness.

\* Reproduced with permission from the International Fitness Association, Orlando, FL.

## Limit Alcohol Use

Too much alcohol can raise blood pressure, cause heart failure, and lead to a stroke! A person who drinks a moderate amount of alcohol has a lower risk of having heart disease than the non-drinker. “Moderate” means an average of one drink for women or two drinks for men per day.

The following amounts are examples of one drink:

- 1½ fluid ounces of 80-proof spirits (such as bourbon, vodka, or gin)
- 1 fl oz of 100 proof spirits
- 4 fl oz of wine
- 12 fl oz beer

## Quit Smoking and/or Using Tobacco Products

Smoking increases your risk for heart disease. It reduces the amount of oxygen in your blood, raises your heart rate and your blood pressure. Smokeless forms of tobacco such as chew and dip also contain nicotine products which are harmful to your health. Consult with your health care provider as to the best method to assist you in participating in a tobacco cessation program.

Here are some helpful hints

- Make an agreement with yourself to quit.
- Fight the urge by going where smoking isn't allowed.
- Avoid being around people who smoke.
- Keep active and busy doing things that make it hard to smoke, like working in the yard or washing dishes.
- Get information.
- Ask your family and friends to support you.



## Reduce Stress

You can have a healthier heart when you reduce your stress. Stress is your body's response to change. Stress may increase your blood pressure and your heart rate. Stress can damage the artery walls, which leads to plaque build up. It can also lead you to unhealthy habits like smoking, drinking, or overeating.

There are many things you can do to manage your stress.

- Use relaxation methods such as deep breathing exercises and counting to ten, before acting.
- Schedule time to rest and relax each day on your calendar.
- Exercise.
- Do an activity every day that you enjoy.

Other stress busters are listed on a tip card in the back of this booklet.

## Depression

Depression is very common if you have heart disease. It has been linked with a higher risk of developing high blood pressure, having a heart attack, or dying from heart disease. Depression interferes with the body's natural sensitivity that helps the body adjust to the common changes in blood pressure. Without properly adjusting to changes in blood pressure, the heart is working harder and is more at risk of heart disease. The same activities that reduce the risk of heart disease reduce the risk of depression: exercise, stress reduction, good eating and drinking habits, and thinking positively.

## Diabetes

Diabetes is a disease in which high levels of sugar are in the blood because the body does not produce or properly use insulin. Insulin is a hormone the body makes to convert sugar, starches, and other food into energy needed for daily life. If you have diabetes, your body doesn't make adequate amounts of insulin, putting you at a higher risk for having a heart attack or stroke due to the damage done to your blood vessels. Good control of your diabetes reduces the risk of heart attack and stroke. Talk to your health care provider to learn about ways to reduce your chance of heart attack and stroke.

# Heart-Healthy Medication Instructions

- Take your medications exactly as instructed by your provider.
- Take your medications at the same time every day.
- Make sure you know what kind of medications you are on.
- DO NOT skip doses or stop taking medication unless ordered by your provider.
- If you miss a dose, call your provider. Do not take an extra dose to make up for the missed dose.
- Keep all medications in the original container.
- Know what each medication is for and what it looks like.
- Keep a list of all your medications with dosage schedules and times of administration in your wallet or purse.
- Bring your list and all medications with you when you come to an appointment.
- Do not run out of your medication. Order refills in advance of running out.
- Never take a medication that has been prescribed for someone else.
- Let your provider know what herbal or “natural” medication, vitamins or supplements that you may be taking.

Check with your health care provider for the following situations:

- If you have side effects.
- Before taking any over-the-counter medications.



## Common Heart Medications:

CATEGORY	NAME	FUNCTION
Antiplatelet	Aspirin Clopidogrel Ticlopidine	Prevents blood from clotting
Anticoagulants	Warfarin Heparin  Low molecular weight heparins	Prevents blood from clotting in a different way than aspirin
Beta-blockers  Alpha Beta-blockers	Atenolol Metoprolol Propranolol  Carvedilol	Decreases the heart rate
ACE Inhibitors	Lisinopril Captopril Ramipril Enalapril Fosinopril	Decreases the pressure the heart has to beat against
Angiotensin II blockers	Losartan Valsartan Olmesartan Candesartan Eprosartan Irbesartan Telmisartan	Decreases the pressure the heart has to beat against



## Common Heart Medications:

CATEGORY	NAME	FUNCTION
Cholesterol lowering agents	Statins Niacin Bile Acid Resins Fibrates	Lipid lowering drug that reduces serum cholesterol
Nitrates	Nitroglycerin Isosorbide	Improves blood flow to the heart
Diuretics	Thiazides Furosemide Spironolactone	Removes excess water from the body
Calcium Channel Blockers	Nifedipine Diltiazem Verapamil Amlodipine Felodipine	Reduces blood pressure
Alpha Blockers	Prazosin Terazosin Doxazosin	Reduces blood pressure
Digoxin	Digoxin	Improves strength of and efficiency of the heart
Vasodilators	Minoxidil Hydralazine	Reduces blood pressure





## The Heart-Healthy Diet Reduced Saturated Fat and Cholesterol

Saturated fat and cholesterol are the two biggest threats to your heart. Do your heart a favor. Choose low-fat, low-cholesterol foods whenever possible.

Foods to Choose	Foods to Lose
Canola or olive oil	Coconut or palm oil
Non-fat or 1% milk, non-fat or low-fat yogurt	Cream, whole milk, powdered creamers
Fresh fruits and vegetables	Olives, coconut, avocados
Whole-grain bread, cereal, pasta, pretzels	Doughnuts, muffins, pastries
Fish, white meat chicken and turkey, tofu, beans, lean meat	Hot dogs, bacon, beef, sausage, liver, bologna, salami

## Tips for a Heart Healthy Diet

### 1. Use Low Fat Cooking.

- Broil, roast, bake, steam, grill, or microwave your foods.
- Remove skin/extra fat from meat before cooking.
- Use wine or broth instead of fat (e.g., oil, butter).
- Use nonstick pans or cooking sprays.
- Serve with herbs or non-fat seasoning.

### 2. Cut Sodium and Salt.

Sodium is in salt. It can be used to flavor and preserve foods. In some people, sodium can lead to high blood pressure. The Nutrition Facts label will tell you how much sodium is in a product. Check the list of ingredients. Look for the words “salt” and “sodium.” If either word is listed at the beginning of the list or more than once, the food probably has a lot of sodium. Aim to limit the sodium in your diet to < 2000 mg/day.

## Tips for a Heart Healthy Diet

### 3. Follow serving size recommendations.

One Serving	Looks like
3 oz meat/fish/poultry	Deck of playing cards
Medium piece of fruit	Tennis ball
1 oz cheese	One thumb length
½ cup ice cream	Tennis ball
½ cup pasta/rice	Tennis ball
1 oz nuts/candy	One handful
1 medium potato	Computer mouse
1 cup cereal/milk	A fist
1 tsp butter	First joint of thumb

## Tips for a Heart Healthy Diet

### 4. Eat Less Sugar:

Research suggests that a diet high in sugar can increase a person's risk of heart disease. For a healthy heart, cut sweets out of your daily diet. Eat a piece of fruit for that "sweet taste."

### **DASH Diet:**

The DASH Diet (Dietary Approaches to Stop Hypertension) is an eating plan that was developed to help reduce blood pressure. It recommends a diet that is low in saturated fat, cholesterol, and total fat. It encourages eating whole grains, fish, poultry, and nuts. This diet alone may lower blood pressure. It also recommends reducing the amount of sodium consumed. For more information, go to the web site listed below or in the reference section.

**Web site:** [www.nhlbi.nih.gov/health/public/heart/hbp/dash](http://www.nhlbi.nih.gov/health/public/heart/hbp/dash)

## My Eating Plan

Talk about your diet and develop healthy eating goals with your health care provider or nutritionist. Make an eating plan using the sample chart below. Fill in the blanks.

Number of calories per day \_\_\_\_\_

Number of grams of fat \_\_\_\_\_

Weight goal \_\_\_\_\_

Foods to avoid or reduce \_\_\_\_\_

Foods to include or increase \_\_\_\_\_

Sample:

	Heart Healthy Meals
Breakfast	
Lunch	
Snacks	
Dinner	

## Body Mass Index (BMI) Tip Card

Body Mass Index (BMI) is a way to measure body fat based on your height and weight. BMI is a reliable indicator of total body fat, which is related to the risk of disease and death. The score is valid for men and women, but it does have some limits. It may overestimate body fat in athletes and others who have a muscular build. It may also underestimate body fat in older persons and others who have lost muscle. You may need to seek nutritional counseling if you fall outside of the normal range.

Check with your fitness center, wellness program or medical clinic for the availability of the BMI body fat testing service.

To calculate your BMI, use the web site.

### BMI Calculator

<http://www.nhlbhsupport.com/bmi/>

My body mass index should be: \_\_\_\_\_

My goal weight should be: \_\_\_\_\_

### Exercise/Activity Log

Develop a 4-8 week activity plan with your health care provider. Use this sample chart to keep track of your efforts.

Sample Plan: I plan to walk for at least 30-60 minutes 3-4 days each week.

	Date	Type of Exercise or Activity	Total Minutes	How I Felt
Week 1				
Week 2				
Week 3				
Week 4				
Week 5				
Week 6				
Week 7				

Your target heart rate: \_\_\_\_\_ per 10 seconds.

### 3 Day Food Diary

	Day 1	Day 2	Day 3	How I felt
Breakfast				
Lunch				
Dinner				
Snacks				

Weight (weigh yourself once a week) \_\_\_\_\_

Keep track of what you eat every day using the food diary.

## Exercise Do's

- DO see a provider before starting an exercise program.
- DO schedule your exercise sessions like you would any other appointment.
- DO drink one or two glasses of water before you start and keep drinking while you exercise.
- DO use the right equipment and wear the right shoes for the activity.
- DO use proper exercise form so you don't get hurt.
- DO warm-up before exercise and cool down after exercise.
- DO exercise 3-5 days each week for 20-60 minutes each time.

## Suggestions For Exercise

- Join a cardiac rehab program
- Walk in the local mall
- Take a walk in the park

## Stress Busters Tip Card

- Write down your thoughts and feelings. Keep a journal or talk on tape about how you feel. It can help you see things that trigger your stress.
- Think of waiting time as free time. Read a book, write letters, or just relax.
- Do one thing at a time. Don't try to eat, watch TV, and talk to your family all at once.
- Talk out your problems with a counselor or a trusted friend.
- Plan ahead. Buy more stamps or bus tokens before you run out. Fill up the gas tank when you still have a quarter tank.
- Take a break in the middle of the day - even if only for 20 minutes.
- Use progressive relaxation - tense and relax your body, one part at a time to relieve stress. Start at your feet or head. Tighten the muscles; hold for a few seconds, and then release them.

### Stress Busters Tip Card

- Use visualization - Close your eyes, breathe deeply, and imagine yourself in a special place. Imagine how you feel. If other thoughts enter your mind, take a deep breath and try again.
- Listen to music, sing, or play an instrument.
- Say a prayer or repeat a word slowly in your mind until you feel calm.
- Spend time on activities to help focus your mind on something you enjoy. Refinish a piece of furniture, paint a picture.

### Exercise Don'ts

- DON'T exercise right after eating a large meal or in very cold or hot weather.
- DON'T drink alcohol or take drugs that make you drowsy or dizzy before exercise.
- DON'T exercise if you have signs of an infection (such as sore throat, swollen glands, or fever).
- DON'T do very demanding activities like digging, heavy housework, or lifting heavy objects if you have a heart condition.
- DON'T push it. Start slowly and build up a little bit at a time.
- DON'T exercise to the point of exhaustion or the inability to talk normally while exercising.









[inside back page](#)

This patient education booklet was prepared by the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) in support of the Veterans' Affairs (VA)/Department of Defense (DoD) Cardiovascular Clinical Practice Guidelines, ([www.OQP.med.va.gov/cpg/cpg.htm](http://www.OQP.med.va.gov/cpg/cpg.htm); [www.QMO.amedd.army.mil](http://www.QMO.amedd.army.mil)).

The guideline recommendations were developed from an in-depth review and analysis of the literature by the experts in the field including physicians, physical therapists, nurse practitioners, registered nurses, dietitians and ancillary staff for the Departments of the Army, Navy and Air Force and the Veterans Administration.

The information presented in this booklet supports the recommendations of the VA/DoD Cardiovascular Clinical Practice Guidelines (Hypertension, Dyslipidemia, and Ischemic Heart Disease), but is not intended to take the place of expert medical care or treatment. Follow your health care provider's advice, if it differs from what is provided in this booklet.

Portions of this booklet were adapted from: American Heart Association, the National Heart, Lung, and Blood Institute and the International Fitness Association.



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