

CardioSmart Survival Guides:

Heart Failure
Coronary Artery Disease
Arrhythmia
High Blood Pressure
Heart Attack





Heart Failure

What is it?

Contrary to the way it sounds, heart failure doesn't mean that your heart has stopped beating.

Heart failure (HF) affects the way the heart works (functions) and/or its structure (anatomy), making it harder and harder for the heart to supply enough blood flow to meet your body's needs.

That's why most people with HF get short of breath. They also report not having the energy they once did. Even climbing the stairs or carrying groceries may leave you winded. But your symptoms will depend on the course of your heart failure.

There are two types of HF:

1. With **systolic HF** the pumping action of the heart is reduced or weakened.
2. With **diastolic HF** the heart's squeezing capacity is normal, but the heart can't keep the lungs from getting congested. This type is more common in older people with a long history of high blood pressure.

Three important contributors to HF are:

- Coronary artery disease
- High blood pressure
- Direct injury to the heart muscle by infections, toxins, etc.

Did You Know?

Heart failure - the heart's ability to pump enough blood through the body - affects more than 5.7 million Americans. If you have HF, you're not alone.

10 Tips for Living Well with HF

People with HF are living better and longer than ever before thanks to new therapies and earlier diagnoses. But you must take an active role in your care to stay well. Here are some tips to help:

(Many of these steps can help prevent fluid retention – when your body doesn't get rid of enough water. This can cause swelling or puffiness in your ankles and water in your lungs.)

1. **Keep an eye on the scale.** Weigh yourself each morning. If you notice that you are gaining 2 to 3 pounds in a day, let your health care provider know. This can be a sign that your body is retaining fluid, which can be a sign of worsening heart failure.



2. **Limit your fluid intake.** Drinking too much water or other beverages can get you into trouble. Your doctor can help you find the right balance. At each visit, he or she will check to see if you have extra fluid in your body.

“There are lots of steps people can take to control heart failure. We have everything from simple medication to heart transplantation.” – Alfred Bove, M.D., Temple University Medical Center

machines so keep an eye out.

3. **Cut out the salt.** Eating salty foods can also cause your body to retain water.
4. **Check your blood pressure.** Three out of four people have high blood pressure before they develop HF. If you have a home blood pressure cuff, check your pressure and report it to your doctor. He or she can provide guidance on how often to measure your pressure. Nowadays, many local drug stores and even some grocery stores offer free blood pressure machines so keep an eye out.
5. **Get organized.** Buy a notebook to record your weight, fluid intake, blood pressure measurements and any other concerns. Make sure to include the date for each entry and bring your notebook with you to your appointments.
6. **Stay active.** Studies find that moderate exercise – walking, bicycling, swimming or low impact aerobics – can help most people with HF. Physical activity is key to your heart and general health. Before getting started, talk with your doctor about the type of activities you can undertake.
7. **Stick with your medication schedule.** You are likely taking multiple medications to keep your HF under control. Let your doctor know if you are having trouble taking or affording them or have troublesome side effects. Never stop, skip or change the amount (dose) of medication you take without consulting your doctor first.
8. **Be wary of tobacco, drugs and alcohol.** Don't smoke or use illicit drugs. Because alcohol can be a direct toxin (harmful) to the heart, it's best to avoid it altogether if you have HF.
9. **Get a flu shot.** Influenza – the flu – can cause inflammation or swelling throughout the body and make heart disease worse. Protect yourself by getting vaccinated every flu season.
10. **Keep a positive outlook.** Many people with HF can feel depressed, which can make it harder for you to manage your condition. Find ways to cope by joining a support group, keeping up with hobbies, and talking openly with family and friends. Don't be afraid to seek professional help if needed.



HF is a lifelong condition, so the more informed and equipped you are to manage it, the better you'll feel. Visit www.cardiosmart.org and talk to your doctor about what you can do to protect your heart health.

Questions to Ask Your Health Team

Think about and write down questions or concerns you have before each appointment so that you don't forget. Here are some examples:

- What should I expect within the next few weeks, months and years? How is my heart failure likely to progress?
- What types of exercise are suitable for me?
- How can I best manage my fluid intake?
- Can you show me how to correctly check my blood pressure at home?
- Can you review each medication I am taking and what it is for?
- Are there side effects I should worry about? Can these be managed?

Resources

CardioSmart

www.cardiosmart.org

Heart Failure Society of America

<http://www.abouthf.org/default.htm>

National Heart, Lung and Blood Institute: Heart Failure:

http://www.nhlbi.nih.gov/health/dci/Diseases/Hf/HF_WhatIs.html

For more information, visit the American College of Cardiology's CardioSmart National Care Initiative at www.cardiosmart.org.



Coronary Artery Disease

What is it?

If you have coronary artery disease (called CAD for short) your heart muscle may not be able to get the blood and oxygen it needs. That’s because, over time, a buildup of cholesterol and fat in the blood can stick to the inner walls of the arteries. As this happens, the arteries (which are like fuel lines that supply blood to the heart) can narrow or become blocked. The result can be chest pain or heart attack.

5 Tips for Living Well with CAD

If you have CAD, there are many things you can do to reduce your risk of heart problems down the line. Do the right thing for your heart by following these five tips:

1. **Know Your Bad (LDL) Cholesterol.** Keeping this number in check has been proven to lower the risk of heart attack, stroke, death and the need for heart procedures.

Here’s a general rule:

Types of People	Target LDL cholesterol level
Most adults	Less than 130 mg/dl
Those with a few risk factors for heart disease	Less than 100 mg/dl
People with CAD	Ideally lower than 70 mg/dl

Total cholesterol levels, triglycerides, blood pressure, blood sugar (glucose) and abdominal fat can also be good indicators for future heart disease. Know your numbers and what you can do to stay heart healthy.

2. **Exercise and exercise some more.** Physical activity is essential to maintaining health over the long-term. Of course, actually getting regular exercise is probably easier said than done given the competing demands of daily life. But you need to make the time -- even if it’s taking a walk after dinner, gardening, riding a bike or cleaning the house.

Did You Know?

CAD – a build up of gunk or plaque in the arteries that supply blood to the heart – is the most common type of heart disease. CAD is also called atherosclerosis or hardening of the arteries.

Having a hard time?

- Make a weekly date to walk with a friend, family member and/or dog!
- Try something new – sign up for a fun fitness class or go for an easy hike.



- Move while the TV is on. Instead of sitting on the couch to watch your favorite show, lift weights or do leg lifts or sit ups – they'll add up over time.
- Schedule workouts in the morning before other daily activities can get in the way.

Whenever you start a new exercise program, talk with your doctor about what activities are best and ease into the new workout routine.

3. **Eat healthier.** The foods you choose to put into your body can affect the way it works, fights disease and stays healthy. If you have CAD, making smart food choices is essential. Remember:

- There are no quick fixes. Most experts will tell you that denying yourself some of your favorite foods will likely backfire. The key is moderation. For example, eating steak five times a week is certainly not good for your heart, but once a week may be reasonable.
- Opt for healthier options. Grab an apple instead of a bag of chips. If you're always craving ice cream, switch to frozen yogurt instead. Fruits, vegetables, whole grains and fiber are all heart-healthy foods.
- Watch out for extra cholesterol, saturated fat and trans fats (for example, whole milk dairy products, animal fats and meat) as these can raise "bad" blood cholesterol levels.
- Cut down on processed foods to lower both calories and sodium.

4. **Take your medications as directed.** If you have CAD, the medications your doctor has recommended are potentially lifesaving. Never stop or lower the amount of medication you take without talking to your doctor first. If you are unsure of why you are taking a specific medicine, ask your doctor to explain. He or she should also talk to you about the risks of side effects and how to manage them.

5. **Learn about your heart.** CAD is a lifelong condition, so the more informed and equipped you are to manage it, the better you'll feel.

Visit www.cardiosmart.org and talk to your doctor about what you can do to protect your heart health.

"Everyone knows we should exercise more, eat a healthier diet, lose weight and maintain a decent blood pressure. But few people know what their bad cholesterol is and how much of an impact lowering this number can have on the heart." - Christopher Cannon, M.D., Brigham and Women's Hospital, Boston, MA

Questions to Ask Your Health Team



Think about and write down questions or concerns you have before each appointment so that you don't forget. Here are some examples:

- What is my bad (LDL) cholesterol?
- How badly are my arteries blocked and what does this mean for the future?
- Are there steps I can take to help prevent problems and manage coronary artery disease?
- How often should I try to exercise? What types of activities would you recommend for me?
- Why is my medication important?
- Are there side effects I should watch for? Can these be managed?

For more information, visit the American College of Cardiology's CardioSmart National Care Initiative at www.cardiosmart.org.



Arrhythmia

What is it?

Most of us have felt our heart race or skip a beat. It's fairly normal every once and a while. But for some people, it's a sign of arrhythmia – a disorder of your heart rate or rhythm – that needs to be checked out by a specialist.

If you have an arrhythmia (there are multiple types), your heart either beats:

- too fast
- too slow or
- with an irregular pattern

This change in your heart rhythm is usually caused by a “glitch” in your heart’s electrical activity, which tells the heart when to contract and pump blood to the body. Your heart doesn’t beat with the regularity of a Swiss watch, and many factors can cause an irregularity.

Some of these factors include:

- having had a heart attack
- having heart failure
- blood chemistry imbalances
- abnormal hormone levels
- alcohol, caffeine and other substances or medicines
- a variety of inherited abnormalities

Did You Know?

Our heart beats an average of 70 to 80 times a minute and over 100,000 times a day! It's no wonder millions of people notice palpitations such as skipping a beat, fluttering or a racing heart.

8 Tips for Staying Heart Healthy with Arrhythmias

Living with an arrhythmia varies tremendously from one person to the next. It will depend on the type of arrhythmia you have, how serious it is and the recommended treatment. Some people can take a single medication to correct their heart’s rhythm; others undergo electrophysiology studies or require a pacemaker or implantable defibrillator.

No matter what kind of arrhythmia you have, there are things you can do to keep your heart healthy and ticking as it should. Here are some tips:

1. **Get it checked out.** If you have a history of arrhythmias or suspect you have an arrhythmia, it's important to see a specialist and stick with your treatment plan.



2. **Stay in sync with your heart.** Make sure you and your loved ones know the symptoms of an irregular heartbeat. Symptoms of arrhythmias may include:

- Fast or slow heart beat
- Skipping beats
- Lightheadedness, dizziness or blackout
- Chest pain
- Shortness of breath
- Paleness
- Sweating

Although many arrhythmias are not dangerous, some can be life-threatening. Tell your doctor if you have any of these symptoms, if your arrhythmia seems to be getting worse or if you notice any other changes in the way your heart beats.

3. **Know how to check your pulse.** Find your pulse on the inside of your wrist (along the same side as your thumb). Gently place your pointer and middle fingers here. Once you feel the thumping of your pulse, count the number of beats for 15 seconds. Multiply this number by four to determine how many times your heart beats in one minute. Pay attention to whether your beats seem evenly spaced or not, or if they are too fast or too slow. Let your doctor know if something seems amiss.

4. **Adopt a healthy lifestyle.** As with all heart problems, the choices you make every day can make a difference in your symptoms and general heart health.

Eating a diet rich in fiber and low in fat, getting regular exercise (that is appropriate for your condition and fitness level), maintaining a healthy weight and quitting the habit if you smoke can help keep your heart healthy and prevent many arrhythmias from getting worse.

5. **Cut down on caffeine and alcohol.** Some people's hearts are very sensitive to caffeine and/or alcohol. Talk with your doctor about whether you should stay away from caffeinated beverages like coffee, tea and some sodas, alcohol and certain medications. Also let your doctor know if you notice that certain activities or foods trigger your heart to beat abnormally.

“Arrhythmias span a whole spectrum that runs from no symptoms at all, to shortness of breath or feeling an extra heartbeat to life threatening situations causing sudden death and virtually everything in between.”- Douglas P. Zipes, M.D., Distinguished Professor, Indiana University School of Medicine and Editor of *HeartRhythm*

6. **Stay on top of your heart health.** If you have an arrhythmia, it's important to keep track of other risk factors for heart disease. This includes knowing your cholesterol levels, blood sugar level, blood



pressure and weight. If any of these numbers are high, talk with your doctor about your target goals and how to keep them under control.

7. **If you are prescribed a medication, take it as directed.** Whatever your treatment, follow your doctor’s advice. Always let your doctor know about any side effects you experience or if you can’t afford your medication. Never stop, skip or change the amount (dose) of medication without talking to your doctor first. Also, be sure to check with your doctor about taking any dietary supplements since these “natural” substances can affect heart health.
8. **Relax.** Prolonged stress and anxiety can affect your body and your heart. Take care of yourself and try to lower stress levels by setting limits, getting a massage, signing up for a yoga class, meditating or engaging in other activities that help you to relax.

Questions to Ask Your Health Team

Think about and write down questions or concerns you have before each appointment so that you don’t forget. Here are some examples:

- What type of arrhythmia do I have?
- Are there certain activities or foods that I should avoid?
- Why is it important to get my heart rate back to normal?
- Why do I need to take a blood thinning medication?
- What can I do to prevent my arrhythmia from getting worse?
- Does my arrhythmia need to be monitored? If so, how?
- What are the signs and symptoms that my arrhythmia is becoming more serious?

For more information, visit the American College of Cardiology’s CardioSmart National Care Initiative at www.cardiosmart.org.



High Blood Pressure

What is it?

Blood pressure is the force of your blood moving against the walls of your arteries. It's expressed as two numbers:

1. Your systolic blood pressure (top number) – the pressure or force in the arteries when the heart beats
OVER
2. Your diastolic blood pressure (bottom number) –the lowest pressure measured when the heart is at rest between beats

If you have high blood pressure, your reading is “140 over 90” (140/90 mmHg) or higher. High blood pressure (also called hypertension) forces the heart to work harder. Over time, this can weaken the heart muscle, upping your chances of a stroke, heart attack, kidney damage and vision loss. But there are plenty of steps you can take to lower this number.

Your doctor has probably set a target goal for your blood pressure. For people with coronary artery disease, diabetes and chronic kidney disease you may want to keep you blood pressure under 130 over 80.

Know Your Numbers:

Types of BP	Systolic BP (mm Hg)		Diastolic BP (mm Hg)
Normal blood pressure	below 120	and	below 80
Upper end of normal (also called prehypertension)	120 to 139	or	80 to 89
High blood pressure (also called hypertension)	140 and above	or	90 and above

10 Tips for Managing Your High Blood Pressure

Simple lifestyle changes can go a long way to lower blood pressure. When they don't, blood pressure-lowering medications usually can.

1. **Get moving.** Regular physical activity is known to lower blood pressure. It also supports good heart health as we age and helps combat stress.



Too busy to exercise? Simply taking more steps every day can pay off. Consider buying a pedometer – a device that clips onto your belt that counts the number of steps you take – and try to walk more than 10,000 steps a day (that’s about four miles!). It sounds like a lot, but it’s easier than you might think. Build exercise into your daily routine. For example, park farther away from the store, take the stairs instead of the elevator, go for a brisk 10-minute walk during your lunch hour.

“When it comes to lowering your blood pressure, improving your dietary and exercise habits is essential. Sometimes people go right to medications, but losing 10 pounds if the person needs to and getting into a regular exercise routine can have a big impact.” – Roger S. Blumenthal, MD, Johns Hopkins Hospital Ciccarone Preventive Cardiology Center

2. **Focus on nutrition.** What you choose to put into your body can affect the way it works, fights disease and stays healthy. It can also influence blood pressure levels. Try to eat a diet low in saturated fats and packed with plenty of fresh fruits and vegetables, whole grains and low-fat dairy products.
3. **Put down the salt shaker.** Consuming lots of salt can boost your blood pressure readings, so try to cut it out of your diet.

Limit your sodium intake to no more than 2,400 mg a day (about the amount in a teaspoon); your doctor may advise even less depending on your blood pressure level. Most dietary salt comes from packaged and processed foods and eating out. When you cook, use spices and herbs for flavor instead of reaching for the salt shaker.

4. **Watch your portions.** You probably remember the familiar saying “your eyes are bigger than your stomach.” Not watching portion sizes is one way we can get into trouble – by eating too many calories and gradually packing on the pounds. Don’t fill your plate or eat more than you need to. If you eat meat, make sure it is no bigger than the size of a pack of cards.
5. **Shed excess pounds.** Losing just 10 pounds (if you need to) can make a big difference in your blood pressure readings. Trimming down has a host of other health benefits too. If you are very overweight or obese, try to lose two pounds a month over the next six months.
6. **If you are prescribed medicine for high blood pressure, take it every day.** Your medication won’t work unless you take it as directed. Always let your doctor know of any side effects you experience or if you can’t afford your medication. Never stop, skip or change the amount (dose) of medication without talking to your doctor first.
7. **Check your blood pressure as often as your doctor recommends.** If you don’t have a home blood pressure cuff, free blood pressure machines have started popping up in many local drug stores and even some grocery stores. Keep an eye out for one, roll up your sleeve and check your blood pressure numbers. Your blood pressure fluctuates, so you should check it on several different occasions.



8. **Cut back on alcohol or don't drink at all.** Men should not consume more than two drinks a day; women should only have one. If you smoke, stop.
9. **Breathe easy.** High and prolonged levels of stress can up your blood pressure. It can also lead to depression and anxiety. Anything that can help you to relax – for example, meditation, yoga, stress management, pacing and setting limits – may help lower blood pressure.
10. **Get enough sleep.** Sleep deprivation can leave you zapped of energy. It can also affect your health. Your body is thought to regulate hormones – including stress hormones – and repair injuries to the body as you sleep. Not catching enough ZZZs means this may not happen. If you are having difficulty sleeping through the night, talk with your doctor about how to get more rest.

Did You Know?

One in three Americans has high blood pressure, and many don't even know they have it.

Questions to Ask Your Health Team

Think about and write down questions or concerns you have before each appointment so that you don't forget. Here are some examples:

- What are my current blood pressure numbers?
- What is my target blood pressure?
- Should I be taking my blood pressure at home? How often?
- What might be causing my high blood pressure?
- How much should I weigh/what is my ideal body weight?
- What types of food can help me keep my blood pressure in check? What is the DASH diet?
- How much exercise should I be getting?
- What are the possible side effects of my blood pressure medication?
- If I have diabetes or metabolic syndrome, are there blood pressure medications that are better for me?
- Can stress and anxiety raise blood pressure levels?

For more information, visit the American College of Cardiology's CardioSmart National Care Initiative at www.cardiosmart.org.



Heart Attack

What is it?

The heart muscle is a living tissue that needs oxygen and nutrients to function. Most heart attacks (known medically as myocardial infarction) happen when blood flow to the heart muscle is suddenly cut off – starving a part of the heart muscle. In general, heart attack occurs when a clot forms on a ruptured cholesterol plaque in the coronary artery, in turn blocking the blood supply.

8 Tips for Staying Heart Healthy after a Heart Attack

If you’ve had a heart attack, you know how scary it is. You also know how important it is to stay heart healthy to help prevent another one. Here are some quick tips to help:

1. **If you smoke, stop.** If you were a smoker before your heart attack, the most important thing you can do for your heart (and general health) is to quit. The risk of having another heart attack if you are a smoker is at least two times greater than those who don’t smoke.
2. **An aspirin a day, may keep a heart attack (and stroke) away.** For most heart attack survivors, aspirin can substantially lower their chances of having another heart attack. That’s because aspirin can stop clots from forming by thinning your blood. Talk to your doctor about the amount (dose) you should be taking and if you have any allergies or a history of stomach ulcers or bleeding.
3. **Lower cholesterol.** Cholesterol-lowering medications – most often statins – are prescribed to help prevent another heart attack. Statins can even help you live longer after your initial heart attack. In addition to medications, lifestyle changes such as exercising and adopting a better diet can also help lower cholesterol levels. The general rule is to keep your LDL or “bad” cholesterol under 100 mg/dl, and ideally lower than 70 mg/dl.
4. **Get moving.** Regular physical activity strengthens the heart muscle and is important for overall health too. It can also help you to lose weight and lower blood pressure and cholesterol levels – each of which ups the chance of heart attack.

The type of exercise you can do will depend on:

- The size of your heart attack
- How long it has been since the heart attack
- Any other health conditions you have
- Your general fitness level

Did You Know?

Each year over a million people in the U.S. have a heart attack. Older people are more likely to die from heart attack than younger folks, yet aggressive interventions are more life-saving for older patients than younger patients.



Remember, you don't need to engage in high impact workouts. Even taking a brisk walk five times a week for 30 to 45 minutes can help you improve muscle and heart tone. Talk with your doctor before getting started. He or she may do what is called an exercise prescriber treadmill test to help determine the level of exercise that is safe for you as you recover.

5. **Stay within your ideal body weight.** Excess weight not only forces your heart to work harder, but it can raise your blood pressure and cholesterol levels. If you need to lose weight, talk with your doctor about a safe way to do so.
6. **Adopt healthy eating habits.** Be thoughtful about the foods you eat. Eat a diet rich in fruits, vegetables and whole grains and try to cut down on saturated, trans and other types of fats.
7. **Know the signs and act fast.** We already know men and women can differ when it comes to matters of the heart. But it turns out the signs of a heart attack can also be different between men and women. For example, women more often report an overwhelming feeling of fatigue and shortness of breath instead of the classic symptoms of chest discomfort that radiates or moves to the neck or arms. If you think you are having another heart attack, dial 9-1-1 immediately.

Common Signs of a Heart Attack:

- Chest discomfort including tightness, pressure, or pain
- Shortness of breath
- Discomfort in upper body including arms, shoulders, neck or back
- Nausea, vomiting, dizziness, lightheadedness, sweating

8. **Stay heart safe by sticking to your medication plan.** If you were treated with angioplasty, usually with the placement of a coronary stent (a small mesh tube that is used to treat narrowed or weakened arteries) – you will be prescribed two types of (antiplatelet) medications to prevent a clot from forming inside the stent, usually for at least one year. Not taking one or both of these medicines puts you at a substantial risk of a clot forming in the stent and another heart attack. In fact, the chances of dying from this type of heart attack may be as high as 30 percent.

It is critical to take these medications for the length of time recommended by your doctor. Never stop them without your cardiologist's advice. If you are having a procedure or elective surgery and another doctor asks you to stop taking these medications in preparation for surgery because of increased bleeding risk, make sure he or she talks to your cardiologist about the safety of stopping these drugs.



Also let your doctor know if you are having trouble taking or affording any of your medications or if you have any side effects.

Questions to Ask Your Health Team

Think about and write down questions or concerns you have before each appointment so that you don't forget. Here are some examples:

“If you smoke, quit. There is nothing a cardiologist can do with medication, bypass surgery or coronary stenting that even closely approaches the importance of smoking cessation when it comes to lowering the risk of another heart attack. I almost never see a patient who has had a heart attack under the age of 45 who wasn't a smoker.” – Ralph Brindis, M.D., M.P.H., president of the American College of Cardiology

- How serious was my heart attack?
- What are the chances that I will have another one? What can I do to try to prevent this from happening again?
- What types of exercise are safe for me?
- Should I look into starting a cardiac rehabilitation program?
- Are there any activities I should not do?
- Should I take aspirin daily? If so, what amount (dose)?
- What do my medications do? Why are they important?
- If I am a smoker, are there resources nearby that can help me quit
- Should I be taking my blood pressure at home?

For more information, visit the American College of Cardiology's CardioSmart National Care Initiative at www.cardiosmart.org.