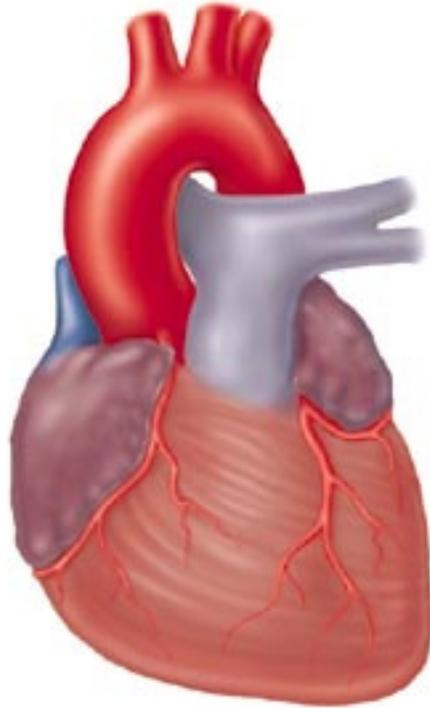


Heart Failure



A Patient's Guide

UAMS
MEDICAL
CENTER

UNIVERSITY OF ARKANSAS
FOR MEDICAL SCIENCES

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Heart Failure

Congestive heart failure means that your heart doesn't work as well as it should. It can make it harder for you to do things that may have been easy for you in the past. There are ways to help your heart do its job.

How Does it Feel?

Below is a list of things you might notice or feel:

- Shortness of breath, wheezing, or coughing when you exert yourself
- Feeling weak or tired
- Problems breathing when you lie down
- Waking up at night coughing or short of breath
- The need to go to the bathroom many times during the night
- Swollen ankles or feet
- Dizzy spells



What Causes Heart Failure?

Heart failure happens when another problem makes the heart weak. Coronary artery disease, where some of the heart's blood vessels are narrowed, is a common cause of heart failure. Other things that can lead to heart failure are:

- heart attacks
- high blood pressure
- heart muscle diseases
- problems with the heart's valves
- irregular heart rhythms

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At Home: Living with Heart Failure

Medications

- Your job: right medication, right time, right dose!
- Take your medications at about the same time each day.
- Do not stop or skip doses unless you consult your heart doctor.
- Do not take any supplements or over-the-counter medicines without talking with your doctor FIRST.
- Ask questions about anything that is unclear.

Diet

- Do not add salt to foods as you cook or at the table.
- Read the Nutrition Facts food label to find the sodium content of a food.
- Learn which foods are high in sodium and make healthier low-sodium choices.
- Limit fluid intake - everything you drink as well as foods that melt at room temperature - to 2 quarts a day (2 quarts equal 8 cups).

Weight

Weigh yourself every day - at the same time of day. Use the same scale each time. Write it down (see page 3).

Call your doctor if you:

- Gain weight - 3-5 pounds in 1 to 2 days.
- Have more swelling or shortness of breath than usual.
- Have an upset stomach, vomiting or diarrhea.
- Feel dizzy, have a headache or have a change in blood pressure from your normal readings.
- Have muscle aches or a fever.
- Run out of a medication.

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Daily Weight Log

1. Make 12 copies of this blank chart so you have enough for one full year.
2. Weigh yourself every day and write it down.
 - Weigh yourself every morning when you get up. Do this before you eat and after going to the bathroom.
 - Use the same scale. (Place scale on a hard surface and not on a rug).
 - Wear the same amount of clothing each time you weigh yourself.
 - Write your weight down.
3. Call your doctor if you gain weight – 3 to 5 pounds in 1 to 2 days. Your doctor may need to adjust your medications.
4. Bring this daily weight log with you when you visit your doctor.

Month/Year _____

Date:	Weight:	Date:	Weight:	Date:	Weight:
1		11		21	
2		12		22	
3		13		23	
4		14		24	
5		15		25	
6		16		26	
7		17		27	
8		18		28	
9		19		29	
10		20		30	
				31	

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What You Can Do About Heart Failure

Heart failure won't go away entirely, but you and your doctor can work together to help make your life better. Your doctor can give you medication to make it easier for your heart to work. You can make some changes in the way you eat and the way you live to give your heart some extra help. Listen to your body and tell your doctor when you're feeling better and when you're feeling worse. This will help your doctor know the best treatment for you.

How Your Heart Works

Your heart is a muscle that pumps blood through your body. The right side of the heart pumps blood to the lungs. In the lungs, blood receives oxygen. The oxygen-rich blood travels back to the left side of the heart, where it is pumped to your organs, arms and legs, brain and all the other parts of your body. After your body uses the oxygen in the blood, it sends the blood back to the right side of the heart and the process starts again.

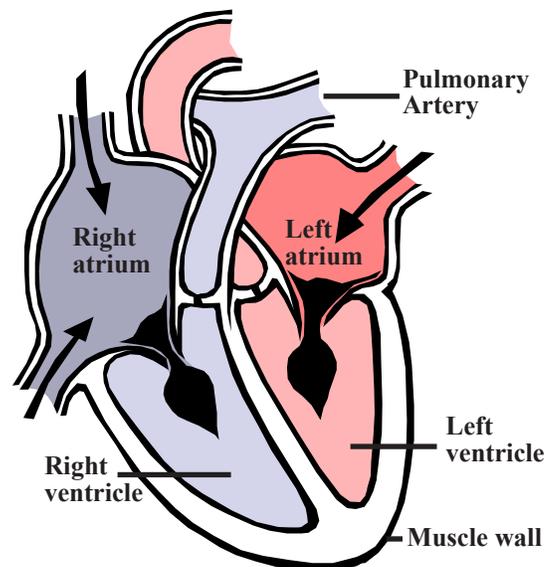
Your Heart Pumps Blood

Four chambers hold the blood as it moves through the heart. The upper chambers are called **atria** and the lower chambers are called **ventricles**. The heart muscle pumps blood from chamber to chamber.

Coronary arteries are blood vessels that wrap around the surface of your heart. They supply the heart muscle with blood and oxygen.

Four valves act like one-way doors, separating the chambers and keeping the blood moving forward. Valves open to let blood through and close to keep it from moving backward.

The **pulmonary artery** carries oxygen-poor blood from the heart to the lungs. The **pulmonary veins** carry oxygen-rich blood from the lungs to the heart.



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When something damages the heart, the heart muscle pumps with less force, so less blood moves through the heart. To keep the same amount of blood moving through the body, the chambers stretch and enlarge to hold more blood. This helps keep the blood moving, but only for a short while. The stretched-out muscle gets tired and can't pump blood like it should.

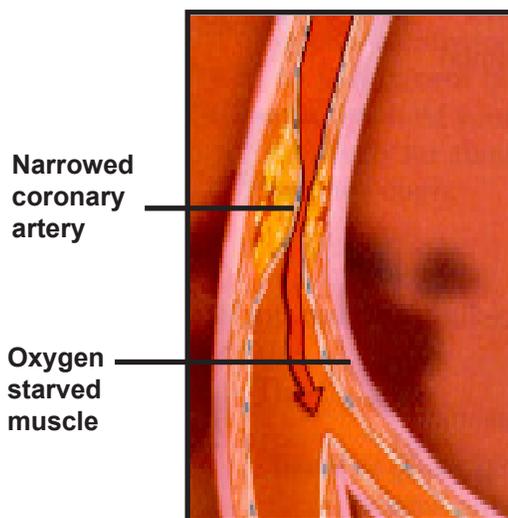
Your Body Gets Less Blood

A weakened heart moves less blood with each pump and fluid backs up in the lungs. Less blood moving through your body also means less oxygen is taken to organs like your kidneys. Your kidneys help your body get rid of extra water. If they are not working right, excess water can settle in different parts of your body. Your body then becomes congested with fluid.

- Your brain may get less blood, making you feel dizzy.
- Your lungs may fill with fluid, making it hard to catch your breath.
- Your kidneys may get less oxygen-rich blood, making your body hold water.
- Your ankles and feet may collect water, making them swell.

Why Your Heart Weakens

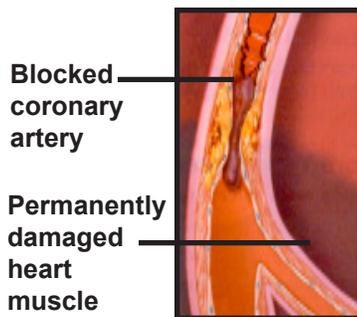
When congestive heart failure happens, there is usually an underlying cause. Many conditions can weaken the heart and cause congestive heart failure. Some conditions damage the heart muscle. Others make the heart work harder.



Coronary Artery Disease

When you have coronary artery disease, the blood vessels that supply blood and oxygen to the heart are narrowed. Oxygen-rich blood has a hard time moving through the narrow part of the artery. As a result, some areas of the heart muscle don't get enough oxygen. This part of the heart muscle is too weak to pump blood like it should. Because of this, the rest of the heart muscle has to work harder to pump the blood. If too much muscle is damaged, the heart can't pump the amount of blood it needs.

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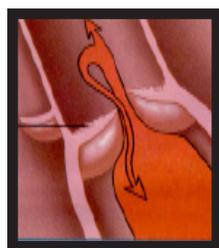
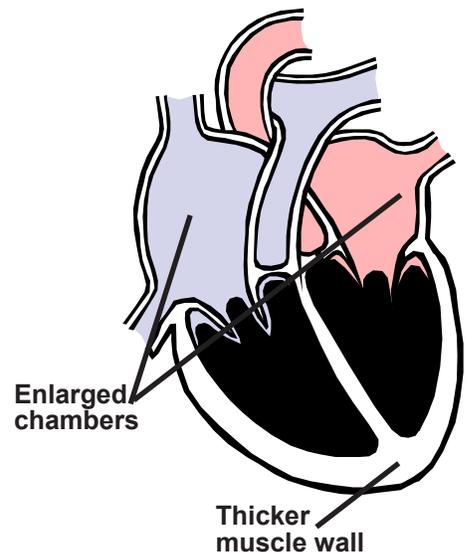


Heart Attack

A heart attack happens when a coronary artery is completely blocked, stopping blood flow to part of the heart muscle. Without oxygen-rich blood, this area of the heart is damaged. The damaged portion of the heart muscle can't pump, and the rest of the heart muscle has to work harder. The strained heart muscle tires out and may pump less blood to the rest of the body.

High Blood Pressure

Blood pressure is the force pushing blood through the blood vessels. When your blood pressure is high, your heart has to work harder. After a while, the heart's muscle walls get thick and some of the chambers may enlarge. These changes put extra strain on the heart, and the heart muscle will stretch and get weak.



Valve Disease

The valves between the chambers of your heart keep blood moving forward. If a valve doesn't open all the way, your heart has to work harder to push blood through the smaller opening. If the valve doesn't close tightly, blood may leak back into the chamber, making the heart pump the same blood through the valve over and over again. After some time, this extra work can weaken the heart.

Cardiomyopathy

Damage to the heart muscle from causes other than artery or blood flow problems is known as *cardiomyopathy*. Causes of cardiomyopathy include infections (myocarditis), alcohol abuse, the toxic effects of certain drugs (such as cocaine, or some anti-cancer drugs), or rarely, muscle degeneration. These things cause the chambers to enlarge and the heart muscle to stretch and weaken.

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Evaluating Your Heart

Your doctor will look at you, ask you questions, and do some tests. Along with looking for signs of heart failure, the doctor looks for any other things that may have caused your heart to weaken. The doctor uses the results of the exam to help develop a program to treat your heart.



History and Physical Exam

Your doctor may ask you these questions:

- How have you been feeling?
- Have you had trouble catching your breath?
- Have you been coughing?
- Do you have swelling in your feet and ankles?
- What medications are you taking?

Your doctor will also listen to your heartbeat and your breathing.

X-rays, which can show him the size and shape of your heart and find any fluid in your lungs, may be taken. An electrocardiogram (EKG or ECG), which can show the pattern of your heartbeat and the size of your heart, may also be done.

Echocardiography

An echocardiogram shows the structure and movement of your heart muscle. While you rest, sound waves bounce off your heart and are converted into a picture on a screen. The test shows whether your heart is enlarged, the thickness of the heart's walls, whether there are problems with the heart's valves, and how well the heart pumps.



Other Tests

Other tests can help your doctor find problems with your heart.

Stress tests show how your heart acts when you exercise and can help find clogged blood vessels. A Holter monitor can help find an abnormal heartbeat. Nuclear scans can show how well your heart is working and show us weak areas of the heart or blocked coronary arteries.

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Cardiac Catheterization

Cardiac catheterization may be done to help find problems that could have led to heart failure. It is done in the hospital and may require an overnight stay. A long, thin, flexible tube called a catheter is put in a blood vessel in your groin or arm and gently guided to your heart. Once the catheter is in place, X-ray contrast fluid is put in through a tube. Then, a special type of X-ray, called an angiogram, is taken. Angiograms can take pictures of clogged blood vessels. Cardiac catheterization can also show problems with pumping, heart chambers, blood flow, or valves.

Your Treatment Plan

Your doctor uses the information he gets from your exam and tests to form a treatment plan. This treatment plan can help relieve some of your symptoms and help make you more comfortable. Your treatment plan may include:

- Medications to help your heart work better
- Changes in your diet to reduce the amount of salt and sodium you eat
- Rest to give your heart a break
- The amount of activity your doctor says is okay
- Lifestyle changes, such as stopping smoking



Going to the Hospital

Sometimes, heart failure symptoms may be serious enough for you to go to the hospital for a few days. In the hospital, you'll be given medications and your heart can be watched. Some of the tests listed here may be done. Based on the results of these tests and how you are feeling, your doctor may adjust your treatment plan.

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Medications to Help Your Heart

As part of your treatment plan, your doctor may give you medications for congestive heart failure and any underlying causes you may have. These medications may improve the way your heart pumps and relieve some symptoms. Some medications can cause side effects, so tell your doctor if you have any symptoms such as nausea, dry cough, dizziness, or muscle cramps after you start taking it.

Medications for Heart Failure – *Right Medication, Right Time, Right Amount*

Digitalis

Common Names: digoxin (Digitek, Lanoxin)

Purpose: to help your heart pump more strongly and to prevent or decrease irregular heartbeats

Side Effects (from too much in your body): loss of appetite or upset stomach, flu-like symptoms, unusual tiredness or weakness, diarrhea, confusion, changes in vision, headache, weight loss

Reminders:

- Check your heart rate every day and call your doctor if it drops below 60.
- Take it on an empty stomach and at least two hours away from your other medications. Bedtime is best.
- Antacids interfere with this medicine. Take at least two hours apart.
- In keeping with your doctor's orders, have your blood tested on a regular basis to check the digoxin level in your body.

Diuretics (water pills)

Common Names: furosemide (Lasix), bumetanide (Bumex), hydrochlorothiazide (HCTZ)

Purpose: to make you urinate more to help your body get rid of excess salt and water. This lowers the workload on the heart

Side Effects: leg cramps, feeling dizzy, lightheaded or weak, lower than normal blood pressure, more trips to the bathroom

Reminders: It is not uncommon to take two different diuretics at the same time.

- Take your diuretic(s) as early in the day as you can (with breakfast). This will help cut down on trips to the bathroom at night. If you take a diuretic twice a day, take the second dose at 4:00 p.m.
- Weigh yourself every day. If you gain 3-5 pounds in 1 to 2 days, call your doctor.
- If you take Lasix, please ask your doctor about a potassium supplement.

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ACE Inhibitors

Common Names: captopril (Capoten), enalapril (Vasotec), lisinopril (Prinivil, Zestril), ramipril (Altace), trandolapril (Mavik)

Purpose: to open blood vessels so it is easier for the heart to pump blood and to help slow stretching or enlarging of your heart.

Side Effects: excessive fatigue, dry cough, feeling lightheaded or dizzy, swelling of lips or throat

Reminders:

- To give your body time to adjust, you will start by taking a small dose. Over time, you will build up to a larger dose.
- Avoid direct sunlight and/or use sunscreen. You will be more likely to get sunburned when taking this medication
- Your doctor may require you to have regular blood tests to monitor your kidneys. Follow the schedule you are given.

Angiotensin II Receptor Blockers (ARBs)

Common Names: valsartan (Diovan), losartan (Cozaar), irbesartan (Avapro, Avalide)

Purpose: to slow the process of your heart enlarging which happens with heart failure. Slowing helps prevent your heart from getting weaker. (This drug is often given if you can't tolerate an ACE inhibitor or a beta-blocker)

Side Effects: excessive fatigue, feeling lightheaded or dizzy, swelling of lips or throat.

Reminders:

- This medication may make your skin more sensitive to the sun and cause it to burn. Use sunscreen when in the sun.

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Vasodilators

Common Names: nitroglycerin (Transderm-Nitro patch or Nitrospray), isosorbide mononitrate (Monoket, Imdur, ISMO), isosorbide dinitrate (Isordil), Hydralazine (Apresoline), Nesiritide (Natreacor)

Purpose: to relax or open blood vessels, which helps the heart pump blood around your body more easily

Side Effects: feeling lightheaded or dizzy, headaches (especially with Nitro-patch), blurred vision, upset stomach

Reminders:

- Check your blood pressure every day. (When you first start this medication, check your blood pressure at least three times a day) Write it down.
- Take at lunchtime or at least three hours apart from the other medications you take for heart failure.
- You may break long-acting (LA) or slow-release (SR) tabs in half; do NOT crush them.
- It is normal to need more of this drug over time. Your doctor will let you know when you need to take more.
- Nesiritide, a special type of vasodilator, is a man-made form of B-type natriuretic peptide, a naturally occurring hormone secreted by the heart as part of the body's response to acute heart failure. This medication is injected into your vein and must be given over a period of hours in a hospital or clinic.

Beta-blockers

Common Names: carvedilol (Coreg), metoprolol (Toprol XL, Lopressor), bisoprolol (Zebeta)

Purpose: to slow your heart rate and lessen the effects of hormones that make your heart enlarge. This causes your heart to need less oxygen.

Side Effects: feeling lightheaded or dizzy, lack of energy, shortness of breath, upset stomach, impotence

Reminders:

- It is normal to have many side effects when you first start this medicine (especially the first five days). The amount you take will be increased very slowly to give your body time to adjust. Try to stick with it, as most people report feeling much better in a few weeks.
- Take with food.
- DO NOT take over the counter cold medicines or nasal decongestants, like Sudafed.

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Warfarin

Common Names: Coumadin

Purpose: to lower your chance of blood clots or stroke; thins the blood to help stop blood clots from forming and to keep clots from getting larger

Side Effects: bruising, increased risk of bleeding

Reminders:

- How much warfarin you take is determined by a blood test called prothrombin time or INR. When you first start taking warfarin therapy, you need to have your INR checked at least twice a week.
- As your blood level becomes constant, you will most likely need an INR once a month.
- Take your warfarin at the same time each day. If you forget to take a dose, call your doctor. Do not take two tablets the next day to “catch up”.
- Remind all your doctors that you are taking warfarin when they start or stop any of your other medications.
- If you are sick and unable to eat for two days or more, or you have vomiting and diarrhea that last 24 to 48 hours, contact your doctor. Your dose may need to be changed.
- Foods high in vitamin K such as broccoli, spinach, lettuce (except for iceberg), green cabbage, turnip greens, collard greens, brussels sprouts, endive, parsley and watercress may interfere with how warfarin works. You do not have to stop eating these foods but it is better to keep eating the same amounts from day to day.
- Call your doctor about any unusual bleeding, such as bruising for unknown reasons, unusual bleeding while brushing your teeth or shaving, or nosebleeds.

Aspirin

Common Names: Ascriptin, Bufferin, Ecotrin

Purpose: to lower your chance of a heart attack or stroke; helps to stop blood clots from forming by preventing platelets in the blood from sticking together

Side effects: bruising more easily

Reminders:

- Take a buffered or enteric-coated product to help protect your stomach
- If you have had a bleeding ulcer, tell your doctor before starting aspirin therapy.

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Taking Your Medication

Taking too much or too little medication can be dangerous to your heart, so do what your doctor says. Even if you start to feel better, **do not stop taking your medications or change your dosage unless your doctor tells you to.** You may be taking several different medications.

Keep a record of all your medications. Here are some tips that may help you:

- Get a pillbox that's marked with the days of the week. Fill the pillbox at the beginning of the week so that you can open a section each day and take your pills for that day.
- Take your pills at the same times each day. Try taking them at the same time you do something else - such as brush your teeth or eat a meal. It will help you to remember.
- Ask your doctor which medications can be taken with meals.



Keeping Track of Your Medications

- Don't run out of medication. Order more medication when you still have a two week supply of pills left.
- Carry your medications and a little extra with you when you travel.
- Keep a written record of all the medications you take, including over the counter medications. Always carry it with you. If your doctor, pharmacist or nurse changes the amount of a drug you take, be sure to change it on your medication list too.

Call the Doctor if you notice any of the following:

- Breathing becomes harder
- You get tired faster
- You start coughing at night
- You gain 3 to 5 pounds in 1 to 2 days
- You have dizzy spells or you faint
- You begin urinating less often
- You have tightness or pain in your chest
- You notice side effects from your medication
- Your feet or ankles swell more than usual

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Keeping Track of Liquids

Aim to drink **2 quarts (8 eight-ounce cups)** of fluid a day. Any more and you make your heart work too hard. If you drink less than this, your kidneys can't work as well as they should. (If your doctor gives you another amount of fluid per day, please follow those guidelines).

Fluids include everything you drink and any item that melts at room temperature. Count all the following as part of your daily fluid intake:

Water	Coffee/tea*	Fruit or vegetable juice/drinks
Milk	Soda/diet soda	Lemonade/iced tea
Broth/soup	Jell-O	Ice cream/frozen yogurt
Sherbert	Popsicles	Ice
Alcohol**		

* *Coffee/tea: Limit yourself to 1 caffeinated cup (8 ounces) a day.*

** *Alcohol: Check with your doctor about drinking alcohol. For many medications, alcohol is not recommended.*

Taking Care of Yourself

- Get enough rest, shorten your working hours if possible, and try to reduce the stress in your life. Anxiety and anger can increase your heart rate and blood pressure. If you need help with this, ask your health care provider.
- Check your pulse rate daily.
- Learn how to take your own blood pressure or have a family member learn how to take it.
- Take your medicine and limit the salt in your diet for the rest of your life. Be careful with salt substitutes. Many contain high levels of potassium. Some of the medicines used to treat heart failure raise the levels of potassium in your blood.
- Develop a way to make sure that you take your medicines on time.
- Weigh yourself every day, at the same time of day if possible. Contact your health care provider if you gain 3 to 5 pounds in 1 to 2 days or if you keep gaining weight over weeks to months. Weight gain may mean your body is having trouble getting rid of extra fluid.
- Know the symptoms of potassium loss, which include muscle cramps, muscle weakness, irritability and sometimes irregular heartbeat.
- Follow your health care provider's advice on how much fluid you should drink.
- Consult a written diet plan and list of foods before you prepare snacks or meals.
- Try not to eat or drink too much.
- Do not smoke. If you smoke, quit. Please call 1-800-784-8669 for help in quitting smoking.
- Increase your activity gradually, making sure that they do not cause you to become too tired or short of breath.
- Avoid extremes of hot and cold (including hot tubs), which may cause your heart to work harder.
- Go to your doctor's appointments as scheduled.

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