

Heart Failure

What is heart failure?

Heart failure (HF) means the heart is not pumping blood as well as it should. It may pump at a different speed, pump blood out with less force, or pump out less blood with each beat. Blood backs up in the blood vessels. The extra fluid in the blood vessels seeps into the lungs or other parts of the body. When fluid seeps into the lungs, it makes it hard to breathe. This is called congestion and it's why heart failure is sometimes called congestive heart failure. Fluid seeping into other parts of the body causes swelling. When there is too much fluid in the body, it puts even more strain on the heart.

Heart failure is one of the most common causes of heart-related illness and death in the US.

How does it occur?

Heart failure may result from one or more of the following:

- coronary artery disease (blockage in the coronary arteries)
- a heart infection
- heart attack
- high blood pressure
- heart valve problems
- genetic problems with the heart muscle
- alcoholism
- diabetes
- lung disease.

The following factors may worsen or trigger heart failure in people with weakened hearts:

- severe anemia (low levels of red blood cells or hemoglobin, the oxygen-carrying chemical in the blood)
- hyperthyroidism (an overactive thyroid gland)
- hypothyroidism (an underactive thyroid gland)
- high fever
- rapid heartbeat
- too much salt in the diet
- drinking too much fluid
- working your body too hard
- emotional stress.

Often no cause can be found for heart failure.

What are the symptoms?

The main symptoms of heart failure are:

- shortness of breath or trouble breathing, at first during

exercise and later with any activity or even when you are resting

- waking up at night with trouble breathing or having a hard time lying flat in bed because of shortness of breath
- coughing
- swollen ankles, feet, and legs
- weight gain caused by extra fluid in the body
- feeling tired most of the time and not able to do your usual activities
- lack of appetite and nausea
- fast heartbeat.

You may have only some of these symptoms or have different symptoms at different times.

How is it diagnosed?

Your healthcare provider will ask about your symptoms and examine you.

You may have tests, such as:

- a chest X-ray to look for fluid in the lungs and to see the size of your heart
- an electrocardiogram (ECG), a recording of the electrical activity of your heart
- blood tests
- urine tests
- an echocardiogram, a sound-wave (ultrasound) test that can show heart size, heart function, and possible heart valve disease.

How is it treated?

Heart failure can be treated and managed, but it cannot be cured. The goals of treatment are:

- Reduce the workload on your heart.
- Get rid of extra water in your body.
- Improve the ability of your heart to pump.
- Treat any problems that make your condition worse.

Limits on your activities will depend on how severe your heart failure is. A program of gentle exercise helps most people.

Medicines your healthcare provider may prescribe for heart failure are:

- ACE (angiotensin-converting enzyme) inhibitor drugs, which dilate (widen) the arteries and lower blood pressure. Dilating the arteries reduces the work the heart has to do, allowing it to pump blood more

effectively.

- Beta blockers, which lessen the effects of the high levels of adrenaline caused by heart failure. Your healthcare provider will start you on a small dose and increase your dose gradually over a few weeks. Carefully follow your provider's instructions for taking this medicine. Although you may not feel better from these drugs, your heart may get stronger after several months of treatment.
- Digoxin, which slows your heart rate and allows your heart to pump better.
- Diuretics (water pills), which help your body get rid of extra fluid through your urine.
- Other drugs that lower blood pressure to reduce the heart's workload.
- Spironolactone, a diuretic that also may keep the heart muscle from getting worse by blocking the effects of a hormone called aldosterone.
- Medicines that replace potassium lost from increased urination. (Potassium is a mineral that helps maintain normal heart rhythm.)

You will probably take a combination of drugs. Ask your healthcare provider about possible side effects of the drugs prescribed for you. Report any side effects to your provider right away. Take all of the medicine prescribed, even when you feel better.

You will need to have a low-salt (low-sodium) diet. Too much sodium causes your body to retain water, which increases the workload on your heart. You should be careful about taking nonprescription drugs because some are high in sodium. Ask your provider which nonprescription medicines are safe to use.

How long do the effects last?

Heart failure gets worse over time, but carefully following your treatment plan can:

- Slow down the worsening of heart failure and help you live longer.
- Help prevent trips to the hospital.
- Help you feel better and do more.

How can I take care of myself?

Learn to live within the limits of your condition. The following guidelines may help:

- 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 healthcare provider.
- Check your pulse daily.
 - Learn how to take your own blood pressure or have a family member learn how to take it.
 - Find a way to make sure that you take your medicines on time.
 - Weigh yourself and write down your weight every day. Weigh yourself in the morning after you use the bathroom but before eating breakfast. Tell your healthcare provider as soon as possible if you gain 3 or more pounds in 1 day or 5 or more pounds in 1 week, 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 healthcare provider's advice on how much liquid you should drink.
 - Consult a written diet plan and list of foods before you prepare snacks or meals.
 - Follow a low-sodium diet. Be careful about adding salt substitutes to your food. Many contain high levels of potassium. Some of the medicines used to treat heart failure raise the levels of potassium in your blood. Salt substitutes may raise the potassium levels too much.
 - Follow your provider's recommendations for physical activity. Exercise helps strengthen your heart and body and improves your blood flow and energy level. Avoid outdoor exercise if it is very hot, cold or humid; consider indoor activities on these days. Balance exercise with rest.
 - Quit smoking if you are a smoker.
 - Ask your provider if you should avoid drinking alcohol. Alcohol can weaken your heart or may worsen heart failure. It may also interfere with medicines you are taking.
 - Monitor your activities to make sure that they do not make you too tired or short of breath.
 - Avoid getting very hot or cold because it may cause your heart to work harder.
 - Accept the fact that you will need to take medicines for your heart and limit the salt in your diet for the rest of your life.
 - Keep all medical appointments even when you are feeling well.

Noticing the early signs of worsening heart failure can save you a trip to the hospital. It is extremely important that you call your healthcare provider if you have symptoms of worsening heart failure.

Call your healthcare provider or 911 right away if:

- You have chest pain or pressure, or neck or arm pain.
- You feel faint or pass out.

- You are severely short of breath.

Call your provider as soon as possible if you have these less urgent symptoms of worsening heart failure:

- sudden weight gain of 3 pounds in one day or 5 pounds in a week
- new or increased shortness of breath
- more swelling in the feet, ankles, or legs, or abdominal bloating, or swollen hands or face
- more tiredness than usual
- frequent dry, hacking cough.

Also call your provider if you have a fever or new or increased sputum.

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