



Education

Heart Failure

What is heart failure?

Heart failure occurs if the heart muscle is unable to ("fails to") pump enough blood to meet the body's needs. The blood begins to back up because the heart is not pumping well and the veins, tissues, and lungs become congested with fluid. At first, pressure in the heart rises and blood and fluid back up into your lungs. You will feel short of breath and get tired easily. If the condition gets worse, the higher pressure causes a buildup of fluid in your veins. Your feet, legs, and ankles will begin to swell. The body cannot get rid of this fluid.

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 that has gone untreated for years
- damage to the valves inside the heart
- drinking too much alcohol
- severe lung disease.

Often no cause can be found for heart failure.

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.

What are the symptoms?

The main symptoms of heart failure are:

- running out of energy easily
 - 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
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- breath
- swollen ankles and feet and weight gain due to too much fluid in the body.

How is it diagnosed?

Your health care provider will ask about your symptoms and examine you.

You may have some tests, such as:

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

How is it treated?

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. Most people benefit from a gentle exercise program.

Medicines your health care provider may prescribe for heart failure are:

- ACE (angiotensin-converting enzyme) inhibitor drugs, which dilate (widen) the arteries. 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. If beta blockers are given in too high a dose, they may make heart failure worse. Your health care provider will increase your dose gradually over a few weeks. Although you may not feel better from these drugs, your heart may get stronger after several months of treatment.
- Digitalis drugs, which slow your heart rate and allow your heart to pump better.
- Diuretics, which help you get rid of extra fluid in your body by urinating more.
- Drugs other than ACE inhibitors 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.)

Ask your health care provider about possible side effects of these drugs. Report any side effects to him or her right away. Take all the medicine prescribed, even when you feel better.

Your health care provider will also put you on 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?

Even with treatment, heart failure is a serious disease. It usually means a somewhat shortened life span. However, the proper mix of medicines, reduced salt in your diet, and reduced physical activity will greatly improve your symptoms. Proper treatment can usually allow you to return to relatively normal living.

The disease that caused your heart failure will continue to need close medical attention.

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 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.
- 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. Be careful with salt substitutes, however. 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 high.
- Develop a way to make sure that you take your medicines on time.
- Weigh yourself at least every other day, at the same time of day if possible. Contact your health care provider if you gain more than 3 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 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.
- Monitor your activities to make sure that they do not cause you to become too tired or short of breath.
- Avoid extremes of hot and cold that may cause your heart to work harder.
- Keep regular medical appointments.

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