

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 heart failure occur?

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

- coronary artery disease (blockage in the coronary arteries)
- an infection that may affect your heart
- heart attack
- high blood pressure
- 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:

- Hyperthyroidism (an overactive thyroid gland)

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- Severe anemia (low levels of red blood cells or hemoglobin, the chemical that carries oxygen in the blood)
- High fever
- Rapid heartbeat
- Drinking too much fluid
- Eating too much salt
- Being overweight
- Working your body too hard
- Emotional stress.

What are the symptoms of heart failure?

The main symptoms of heart failure are:

- Tiredness
- Shortness of breath or trouble breathing. At first this may occur only during exercise and later with any activity or even when you are resting
- Waking up at night because of difficulty with breathing or shortness of breath that makes it difficult to lie flat in bed
- Swollen ankles and feet and weight gain due to too much fluid in the body
- Loss of appetite.

How is heart failure diagnosed?

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

He or she may order some tests, such as:

- Chest x-ray to see the size of your heart and look for fluid in the lungs
- Electrocardiogram (ecg), a recording of the electrical activity of the heart
- Blood tests
- Urine tests
- Echocardiogram, a test that uses sound waves to show the size of your heart, heart function, and possible heart valve problems.

What is the treatment?

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, ARB's (angiotensin receptor blockers) and a newer category of medication called AR/NI (angiotensin blocker/neprilsyin inhibitor) are medications that lower blood pressure, reduce the work the heart has to do, and block the harmful effects of certain hormones on the heart. These medication classes are similar and should not be used together, but AR/NI therapy has emerged as the best in this group. Your doctor may want to transition you to this newer drug.
- 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 help 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.)
- Though not a medication, certain devices such as defibrillators and pacemakers may also be recommended by your physician to help your heart pump better and to shock your heart if it goes into an abnormal rhythm.

Ask your health care provider about possible side-effects of these drugs. Tell your health care provider right away about any side-effects you are having. Take all the medicine your doctor prescribed according to instructions, 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 will it 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.
- Reduce the stress in your life. Anxiety and anger can increase your heart rate and blood pressure. Your health care provider can help you with this.
- Check your pulse rate daily.
- Learn how to take your own blood pressure or have a family member learn how to take it.
- 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.
- 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.
- Take your medicines on time. Develop a system to make sure that you are taking your medicines according to your doctor's instructions.
- 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 (including hot tubs), which may cause your heart to work harder.
- Keep regular medical appointments.

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Patient Education Handout associated with UMHS Clinical Care Guideline

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