



Patient Information

Heart Failure: Let the Blood Flow

The heart is a muscle that works constantly to pump blood so that it can bring oxygen to tissues throughout the body. Heart failure is a gradual weakening of the heart's ability to pump blood. It can involve the left side, the right side, or both sides of the heart. When it occurs, the heart isn't pumping enough blood with each beat to keep body tissues supplied with the oxygen they need. The weakened pumping action can cause fluid to back up into the lungs (a condition known as congestive heart failure), cause the legs or abdomen to swell, and can make a person feel tired and short of breath.

The heart may become a less efficient pump as a person ages. But certain health conditions and behaviors can weaken or damage the heart further, making it work harder than it should.

How do I know if I'm at risk?

Heart failure can happen to anyone, but it usually occurs later in life—after age 65. In young adulthood, men are at greater risk, but heart failure is actually more common in women because women tend to live longer than men. It's also more common in blacks than in whites and in people with a family history of heart failure.

Conditions that put you at risk for heart failure include: coronary artery disease, past heart attacks, high blood pressure, diabetes, an overactive thyroid gland, severe lung disease, and severe anemia. In addition, abnormal heart valves or other heart defects, which may have been present since birth or caused by infection, may

contribute to a greater heart failure risk. Finally, certain lifestyle factors increase your risk. If you smoke, drink alcohol in excess, use illegal drugs, are overweight, eat foods that are high in fat and cholesterol, don't get enough exercise, or feel stressed out much of the time, your risk of developing heart failure is greater.

What are the warning signs?

Signs of heart failure include: shortness of breath (which can occur during activity or rest), feeling tired much of the time, a persistent cough that may be worse at night when lying down, lack of appetite or feeling sick to your stomach, weight gain, a frequent urge to urinate, an increased heart rate, and confusion.

Swelling in the feet, ankles, legs, or abdomen—or sudden weight gain—are signs of worsening heart failure and should prompt a visit to your doctor.

What tests do I need?

To determine if you have heart failure, your doctor may order a chest X-ray. This would show the size of your heart and whether there is any fluid buildup around it or around your lungs. Another test your doctor may order is an *electrocardiogram* (elek-tro-kard-ee-uh-gram), which is also known as an EKG. When you have an EKG, small electrodes are placed on your chest to record the electrical impulses that tell your heart when to contract and expand. Finally, your doctor may want to take a sample of blood from your arm to check certain hormone levels.

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If your doctor suspects heart failure, he or she most likely will refer you to a heart specialist, called a *cardiologist* (kard-ee-ah-uh-juhst). Your cardiologist may perform an *echocardiogram* (ek-oh-kard-ee-uh-gram), which uses sound waves to examine the heart and is the most useful heart failure test. To identify the cause of your heart failure, you may be asked to wear a Holter monitor for 24 hours. This device uses small electrodes, placed on your chest, to record your heart's rhythm as you perform your daily activities. If you have a cardiac blood pool scan, a dye will be injected into one of your veins before pictures of your heart are taken. This allows the cardiologist to see an outline of your heart's chambers and the blood vessels leading to the heart. If you undergo *cardiac catheterization* (kath-eh-t-eh-eh-zay-shun), a thin, flexible tube will be inserted through an artery in your leg or arm to allow your cardiologist to see if and where blood flow is blocked.

How can I avoid the problem?

The best way to combat heart disease is to exercise on a regular basis, avoid smoking cigarettes or using other tobacco products, eat a diet that is low in fats and high in fruits and vegetables, and maintain a healthy weight. It's also important to see your doctor regularly. He or she can routinely screen your blood pressure and cholesterol levels, prescribe an exercise program that's right for you, and offer help with weight loss, if necessary.

How is it treated?

The typical treatment for heart failure is a combination of lifestyle changes and medication. Lifestyle changes—such as reducing stress; exercising regularly;

eating a nutritionally sound diet; losing weight; and avoiding alcohol, illegal drugs, and smoking—can help you keep heart failure symptoms from getting worse. Your doctor may ask you to come in for a checkup if there are any changes in your heart failure symptoms—for example, if you start having more trouble exercising. Making and keeping appointments with your doctor is very important to your heart failure treatment.

Several medications may be prescribed for heart failure, depending on the severity of your symptoms. A common medication is a *diuretic* (dye-yuh-ret-ik), often called a water pill, which can reduce the fluid buildup in your lungs and the swelling in your feet and ankles. Another type of medication used widely is a *vasodilator* (vay-zo-dye-lat-uhr). These drugs cause the blood vessels to expand, allowing more blood to flow through them and, therefore, reducing both blood pressure and the amount of stress put on the heart. Additional drugs, including some that work by increasing the strength of the heart's contractions and others that reduce its tendency to beat faster to make up for its weak pumping action, also may be prescribed.

Sometimes, surgery is performed to correct the underlying cause of the heart failure. A valve may be replaced or, in some cases, a damaged heart is replaced with a healthy one from a human donor. ●

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7 Century Drive, Suite 302
Parsippany, NJ 07054-4609

