

Heart Failure

WHAT IS IT?

Heart failure does not mean that your heart has stopped working. Heart failure refers to a large number of conditions which affect the structure or function of the heart, making it harder and harder for the heart to supply sufficient blood flow to meet the body's needs. It occurs when one or more of the heart's four chambers lose its ability to maintain proper blood flow. This can happen because the heart can't fill well enough with blood or because the heart can't contract strongly enough to propel the blood with enough force to maintain proper circulation. In some people, both filling and contraction problems can occur.

BASIC FACTS (SEE BELOW FOR MORE INFORMATION)

- In the United States, 5.7 million people have HF and it afflicts 10 in every 1,000 people over the age of 65.
- The three major contributors to HF are coronary artery disease, hypertension, and dilated cardiomyopathy. HF can also result from heart defects, arrhythmias, unhealthy lifestyles, and more.
- The most common signs of HF are shortness of breath, fatigue, and swelling in the feet, ankles, legs, and abdomen.
- Medication can help stem progression of HF and most patients take a combination of a diuretic, ACE inhibitor, and beta-blocker. Lifestyle changes are critical to slowing heart failure.
- Some patients may need cardiac resynchronization therapy, ICDs, pacemakers, or heart assist devices.
- Patients with end-stage heart failure require heart transplantation to survive.

BACKGROUND

The problems associated with heart failure depend a lot on what part or parts of the heart are most affected. Because the left ventricle is responsible for pumping oxygen-rich blood throughout the body, it is, in many ways, the most important of the four heart chambers and critical for normal heart function. When the left ventricle cannot contract normally, as might occur after a heart attack, not enough oxygenated blood is propelled into the circulation. This can cause fatigue, shortness of breath, and a build up of fluid in the lungs. If the left ventricle stiffens and the chamber can't relax normally, as might occur with longstanding poorly controlled hypertension, the heart cannot fill properly when resting between heart beats. This can cause fatigue, shortness of breath, and a build up of fluid in the lungs. Indeed, problems with either left ventricular muscle contraction or relaxation or both can result in the exact same clinical presentation. Although failure of the right ventricle can occur on its own, the most common cause of right ventricular failure is failure of the left ventricle (as left ventricular failure causes increased fluid pressures in the lungs, which eventually begin to affect the right ventricle).

Changes to the heart's structure and function may precede the development of symptoms by months or even years (as with chronic hypertension) or may lead to heart failure quickly (as after a large heart attack).

