

ACP SPECIAL REPORT

Understanding and Living With
Heart Failure



What Is Heart Failure?



Heart failure (sometimes called **congestive heart failure**) is a condition in which **the heart isn't pumping as well as it should**. Since the heart is responsible for pumping oxygen-rich blood to the rest of the body, patients with heart failure may experience weakness and fatigue. In some patients with heart failure, fluid accumulates in the lungs and other body tissues, producing shortness of breath

and swollen legs (edema). Heart failure can result from many different conditions that directly or indirectly affect the heart.

Heart failure affects nearly 5 million Americans, and 550,000 new cases are diagnosed each year. While it's more common among older people, no age is immune to the condition.

While there is no cure yet, heart failure is very treatable, and millions of Americans lead a full life by managing their condition through medications and by making healthy changes in their lifestyles.

To learn more about heart failure, use this guide, talk to your doctor, call the American Heart Association at **1-800-AHA-USA1** or go to www.americanheart.org.

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What Are the

SIGNS?

Symptoms of Heart Failure



If you believe you or a family member has any of the symptoms of heart failure listed below, it's important to see your doctor.

Symptom	What You May Experience
Shortness of breath (dyspnea)	Breathlessness during activity, at rest or while sleeping
Persistent coughing or wheezing	Wheezing or coughing that may be dry or may produce white or pink blood-tinged phlegm
Buildup of excess fluid in the body tissues (edema)	Swelling in the feet, ankles, legs or abdomen, or unexplained weight gain
Tiredness, fatigue	A constant lack of energy and difficulty performing everyday activities
Lack of appetite, nausea	A sense of having a full or sick stomach
Increased heart rate	A feeling like the heart is racing or pounding
Irregular heart rhythm	A feeling the heart is skipping beats or occasionally pounding very hard



The causes of Heart Failure

Heart failure results not from aging, but from conditions that either damage the heart directly or make it work too hard, ultimately causing it to weaken. Coronary artery disease, including heart attack, is the most common cause of heart failure. The

coronary arteries bring oxygen-rich blood to the heart muscle. When these arteries are blocked, the heart muscle may not receive enough oxygen and the pumping action of the heart will weaken. Here is a list of conditions that can cause heart failure.

Condition	Description
Coronary artery disease	Cholesterol and fatty deposits build up in the coronary arteries, reducing blood flow to the heart muscle and causing the pumping action of the heart to weaken. When blood flow to a part of the heart muscle is blocked (usually by a blood clot), that part of the heart muscle can die (heart attack). Dead heart muscle severely weakens the ability of the heart to pump blood.
High blood pressure (hypertension)	When pressure in blood vessels is too high, the heart has to work harder to keep blood circulating, eventually weakening the heart.
Abnormal heart valves	When the valves don't open or close completely during each heartbeat, the heart muscle has to work harder to pump the blood and eventually weakens.
Heart muscle disease (cardiomyopathy) or inflammation (myocarditis)	Damaged heart muscles pump blood poorly. Such damage can result from an inherited disorder, drug or alcohol abuse, viral infections or for unknown reasons.
Heart defects present at birth (congenital heart disease)	If the heart chambers and the major blood vessels don't form correctly, the healthy parts have to work harder to overcome these abnormalities, and the heart can eventually weaken.
Severe lung disease	When the lungs don't work properly, the heart has to work harder and eventually may weaken.

Diagnostic Testing



If your doctor suspects you may have heart failure, he or she will probably ask you questions about your **history** and do a **physical examination** to look for evidence of a weak heart. You will be asked if you have any of the conditions known to cause heart failure and if you have any symptoms of heart failure, including fatigue, shortness of breath and swelling. Your doctor will listen to the heart for abnormal sounds; listen to the lungs for fluid buildup; look for swelling (edema) of the feet, legs, and abdomen; and look for extra fluid in the blood vessels by examining the veins in the neck.

After completing the history and physical examination, your doctor may order one or more commonly used diagnostic tests, such as an **electrocardiogram (EKG)**, **echocardiogram (Echo)**, **chest x-ray**, **exercise stress test** or **blood tests**. These tests help determine whether your heart is working as it should, and if not, where the problem lies. Testing is a very important part of not only diagnosing the presence of heart failure, but also finding out what is causing it so that the most specific and effective treatment can be prescribed.

Other tests may be ordered, depending upon the results of the first set of tests. These tests may include one or more of the following:

Cardiac catheterization: A thin flexible tube is passed through an artery found

in the groin or arm to reach the coronary arteries. A small amount of dye is injected into the coronary arteries to see if there are any blockages and to check the heart valves and how well the heart is pumping.

Radionuclide ventriculography or nuclear scan: This nuclear medicine test involves injecting a small amount of radioactive dye into a vein, then taking pictures of the heart as it pumps blood. The pictures will outline the chambers of the heart and the blood vessels leading to the heart and show how well the heart is pumping.

Ejection fraction: The ejection fraction measures the percent of blood in the heart that is ejected from the heart into the major artery (the aorta) with each heartbeat. This measure is used to determine the severity of heart failure—the lower the ejection fraction, the worse the heart failure. An ejection fraction greater than 50 percent is considered normal. The ejection fraction can be measured in a variety of ways including cardiac catheterization and radionuclide ventriculography.

BNP or N-proBNP blood tests: These tests look for a special chemical released from the heart during heart failure. They can be helpful in an emergency setting to help rapidly confirm or rule out the diagnosis of heart failure.

Medications



If your doctor diagnoses heart failure, he or she may prescribe medications to help treat the condition and improve your heart's functioning.

Several categories of medicines have proven effective in treating heart failure and are prescribed by doctors. Most patients will be on at least three medications from the list described below. Three of the medications listed have been shown to prolong life in patients with heart failure; other medications improve symptoms or reduce hospitalizations but do not prolong life.

Diuretics (water pills): Most of the medications from this group help eliminate excess fluids from the body and improve the symptom of breathlessness. One diuretic, spironolactone, is associated with prolonging life in selected patients with severe heart failure.

Angiotensin Converting Enzyme Inhibitors (ACE Inhibitors), Angiotensin II Receptor Blockers (ARBs), and Vasodilators: These medications reduce blood pressure and reduce the work of the heart. Depending upon your special situation, your doctor will prescribe one medicine from this group. The first choice is typically an ACE inhibitor. Several of the medications from this group have been shown to prolong life in patients with heart failure.

Beta-Blockers: These medications slow the heart rate, lower the blood pressure, and reduce the work of the heart. A special group of beta-blockers called non-selective beta-blockers has been shown to reduce the incidence of death due to heart failure.

Digitalis: This increases the strength of the heart's pumping. Use of digitalis does not prolong life but may reduce symptoms and hospitalizations related to heart failure.

Other Treatments

Automatic Implantable Cardiac Defibrillator (AICD): Some patients with heart failure and a low ejection fraction are at high risk for two deadly heart rhythms: ventricular tachycardia and ventricular fibrillation. Patients with ventricular fibrillation can suddenly collapse and die if the heart rhythm is not restored to normal. In these patients, an AICD can be implanted underneath the skin of the chest with wires that lead directly to the heart. The AICD can detect the abnormal rhythm and, by using a small electrical current, stop the ventricular tachycardia or ventricular fibrillation and restore the normal beating of the heart. This device may save the lives of some patients.

Living with Heart Failure

Doctors typically classify heart failure according to how severe a patient's symptoms are.



Below is the most commonly used system, the New York Heart Association (NYHA) Functional Classification.

Class	How Patient Feels
I	No symptoms and no limitation in ordinary physical activity
II	Mild symptoms and slight limitation during ordinary activity; comfortable at rest
III	Marked limitation in activity due to symptoms, even during the less-than-ordinary activity; comfortable only at rest
IV	Severe limitations; experiences symptoms even while at rest

If your doctor diagnoses heart failure, there are steps you can take to help your heart every day. You will need to:

- Take all your medications every day as prescribed by your doctor
- Keep all of your doctor appointments
- Make all the lifestyle changes suggested by your doctor

Important lifestyle changes include quitting smoking (if you smoke); eating a heart-healthy diet low in salt, saturated fat, and cholesterol; losing weight if you are overweight; and appropriate levels of exercise. What the exercise program consists of will depend upon the severity of your condition, but your doctor will guide you in choosing the types, duration and intensity of recreational activities available to you. By making adjustments to your diet and lifestyle, you improve not only your health but also your

entire quality of life. In other words, you'll feel better as you move forward.

Your doctor may appoint a healthcare team consisting of a dietitian, nurse specialist or other health educator specifically trained to help people living with heart failure manage their medications, monitor their condition and make lifestyle changes.

Since 1924, The American Heart Association has helped protect people of all ages and ethnicities from the ravages of heart disease and stroke. These diseases, the nation's No. 1 and No. 3 killers, claim more than 930,000 American lives a year. The association invested more than \$407 million in fiscal year 2002-03 for research, professional and public education, advocacy, and community service programs so people across America can live stronger, longer lives.

What is a doctor of internal medicine?

Doctors of internal medicine, often called “internists,” focus on adult medicine. They care for their patients for life—from the teen years through old age. Internists have had special study and training focusing on the prevention and treatment of adult diseases. At least 3 of their 7 or more years of medical school and postgraduate training are dedicated to learning how to prevent, diagnose and treat diseases that affect adults. Internists are sometimes referred to as the “doctor’s doctor” because they are called upon to act as consultants to other physicians and help solve puzzling diagnostic problems.

Why choose an internist for your health care?

An internist, just like a family or general practitioner, can serve as your primary care doctor. But internists are unique because they focus on adult medicine. Internists don’t deliver babies, they don’t treat children and they don’t do surgery. They do, however, have wide-ranging knowledge of complex diseases that affect adults. With in-depth training in adult medicine, an internist is your best choice to help you navigate the increasingly complex world of medical care.

An internist can treat you for something as routine as the flu or fatigue, or provide in-depth care for diseases such as diabetes, depression, cancer or heart disease. Internists often coordinate the subspecialists a patient might see in the process of treating an illness. Internists’ patients like knowing that they have a relationship with a physician who is equipped to deal with whatever problem the patient may have—no matter how simple or complex.

What is the American College of Physicians?

American College of Physicians (ACP) is the nation’s largest medical specialty organization and second-largest physician group. Its membership includes more than 115,000 internal medicine physicians, related subspecialists and medical students. Internists treat the majority of adults in the United States. The ACP mission is to enhance the quality and effectiveness of health care by fostering excellence and professionalism in the practice of medicine. ACP is headquartered in Philadelphia, with an office focusing on public policy in Washington, D.C.

For more information about internists and internal medicine, visit www.doctorsforadults.com.



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