



1. **What is Heart Failure?** The term "heart failure" makes it sound like the heart is no longer working at all. Actually, heart failure means that the heart isn't pumping as well as it should be. Your body depends on the heart's pumping action to deliver oxygen- and nutrient-rich blood to the body's cells. When the cells are nourished properly, the body can function normally. With heart failure, the weakened heart can't supply the cells with enough blood. This can result in fatigue and shortness of breath. Everyday activities such as walking, climbing stairs or carrying groceries can become very difficult.

Heart failure is a serious condition, but many people with heart failure lead a full, enjoyable life when the condition is managed with medications and healthy lifestyle changes.

2. **What are the signs and symptoms of Heart Failure?** By themselves, the signs of heart failure may not be cause for alarm. But if you haven't been diagnosed with heart failure and you have more than one of these symptoms, report them to a healthcare professional and ask for an evaluation of your heart.

If you have been diagnosed with heart failure, it's important for you to keep track of symptoms and report any sudden changes to your healthcare team.

- ♥ Shortness of breath - Blood "backs up" in the pulmonary veins (the vessels that return blood from the lungs to the heart) because the heart can't keep up with the supply. This causes fluid to leak into the lungs. You may experience breathlessness during activity (most commonly), at rest, or while sleeping, which may come on suddenly and wake you up. You often have difficulty breathing while lying flat and may need to prop up the upper body and head on two pillows. You often complain of waking up tired or feeling anxious and restless.
- ♥ Persistent coughing or wheezing - Fluid builds up in the lungs. You may experience coughing that produces white or pink blood-tinged mucus.
- ♥ Buildup of excess fluid in body tissues (edema) - As blood flow out of the heart slows, blood returning to the heart through the veins backs up, causing fluid to build up in the tissues. The kidneys are less able to dispose of sodium and water, also causing fluid retention in the tissues. You may experience swelling in the feet, ankles, legs or abdomen or weight gain. You may find that your shoes and rings feel tight and you may have to loosen your belt.
- ♥ Tiredness, fatigue - The heart can't pump enough blood to meet the needs of body tissues. The body diverts blood away from less vital organs, particularly muscles in the limbs, and sends it to the heart and brain. You may experience a tired feeling all the time and difficulty with everyday activities, such as shopping, climbing stairs, carrying groceries or walking.
- ♥ Lack of appetite, nausea - The digestive system receives less blood, causing problems with digestion. You may experience a feeling of being full or sick to your stomach.
- ♥ Confusion, impaired thinking - Changing levels of certain substances in the blood, such as sodium, can cause confusion. You may experience memory loss and feelings of disorientation. A caregiver or relative may notice this first.

- ♥ Increased heart rate - To "make up for" the loss in pumping capacity, the heart beats faster. You may experience heart palpitations, which feel like your heart is racing or throbbing.

3. **What Causes Heart Failure?** All of us lose some blood-pumping ability in our hearts as we age, but heart failure results from the added stress of health conditions that either damage the heart or make it work too hard.

All of the lifestyle factors that increase your risk of heart attack and stroke – smoking, being overweight, eating foods high in fat and cholesterol and physical inactivity – can also contribute to heart failure.

If you have heart failure, chances are you have (or had) one or more of the conditions listed below. Some of these can be present without you knowing it. Typically these conditions cause the "wear and tear" that leads to heart failure. Having more than one of these factors dramatically increases your risk.

- ♥ Coronary artery disease
- ♥ Heart muscle disease (cardiomyopathy)
- ♥ Past heart attack (myocardial infarction)
- ♥ High blood pressure (hypertension)
- ♥ Severe lung disease
- ♥ Abnormal heart valves
- ♥ Diabetes
- ♥ Heart defects present at birth (congenital heart disease)

Other conditions including severe anemia, hyperthyroidism, abnormal heart rhythm, and treatments for cancer. Obesity or lack of exercise may also contribute to congestive heart failure either directly or indirectly through accompanying high blood pressure, diabetes, and coronary artery disease.

4. **Diagnosing Heart Failure** Your doctor will order tests and procedures to help determine the nature of the problem with the heart's larger lower chambers, the ventricles. These chambers may have lost some of their power to pump blood to the body or relax and fill with blood. The doctor uses your test results to determine whether you have heart failure, the degree of severity, and what treatments would be most effective

To determine whether you have heart failure, your healthcare team may do some or all of these diagnostic tests and procedures.

- ♥ Physical examination
- ♥ Blood tests
- ♥ Chest X-ray
- ♥ Electrocardiogram (EKG)
- ♥ Echocardiogram (ultrasound of the heart)
- ♥ Exercise Stress Test
- ♥ MUGA scan
- ♥ Coronary angiography (cardiac catheterization)