

Congestive Heart Failure

What is congestive heart failure?

Congestive heart failure (CHF), also called heart failure, occurs when the heart can no longer pump blood efficiently, so the blood backs up in the body – particularly in the liver, lungs, hands, and feet. If blood backs up from the right side of the heart (which returns blood from the body), symptoms typically start with swelling of the legs and ankles that gets worse when the person stands and improves when he lays down. If blood backs up from the left side of the heart (which returns blood from the lungs), it can cause shortness of breath and coughing, especially during exercise such as walking up stairs or when lying down flat in bed. Many people with heart failure have symptoms related to blood backing up on both the right and left sides of the heart.

In addition to swelling (**edema**) and shortness of breath, symptoms can include heart palpitation or rapid pulse, weakness and fatigue, exercise intolerance, coughing or wheezing, sudden weight gain, and loss of appetite or nausea.

CHF is a serious, progressive condition that is usually **chronic** and can be life-threatening. It can affect the right, left, or both sides of the heart and results in reduced amounts of oxygen and nutrients being delivered to the body's organs, which can cause damage and loss of function.

Although CHF is due to failure of the heart to adequately pump out enough blood, there can be many different causes. Most often, CHF occurs because the heart has been damaged, either by high blood pressure (**hypertension**), previous **heart attacks**, or direct damage to the heart muscle (termed cardiomyopathy). CHF can also occur when there is damage to the valves within the heart or with scarring in the **pericardium**, the membrane surrounding the heart. Rarely, CHF occurs when the heart is forced to beat much more strongly than normal, such as with severe **hyperthyroidism**, and cannot keep up with the demand. Risk is increased for those who are overweight, have **diabetes**, smoke, or who abuse alcohol or cocaine.

Testing

A combination of laboratory and non-laboratory tests may be used to diagnose the condition. Non-laboratory tests may include a physical exam and medical history, **echocardiogram**, chest x-ray, and any of several nuclear or CT scans. Laboratory tests that may be ordered include:

- a **metabolic panel** to check for electrolyte balance or kidney failure (since symptoms of **kidney disease** are similar to those of CHF);
- a **CBC**, to check for **anemia**, which can cause similar symptoms to CHF as well as contribute to CHF;

- **brain natriuretic peptide (BNP) or N-terminal pro-BNP**, tests that measure production of a **hormone** found in the left ventricle (the main pumping chamber of the heart) to help diagnose and grade the severity of the heart failure.

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