

Heart Failure: Diagnosis and Treatment

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Heart failure is a frequently misunderstood medical condition that occurs commonly. An estimated 600,000 people are diagnosed yearly, and experts expect this number to increase with the aging of the nation's population. More effective treatments of other heart conditions, such as heart attacks and coronary heart disease mean that people live longer and are more likely to develop heart failure. Heart failure is one of the most common reasons for hospitalization in this country as well. In 1993, over 17.5 billion dollars was spent on heart failure alone.

In heart failure, the heart is weakened to some degree and there is impairment of the heart's ability to pump blood. The term "heart failure" is something of a misnomer in that the heart does not suddenly fail to function. Instead, the heart muscle begins to function less effectively over time. The weakening of the heart can occur fairly quickly but usually develops slowly. Heart failure can vary greatly in its severity. Some people may have mildly diminished heart pump function with few or no symptoms. Others may have severely reduced heart function and marked difficulty with normal activities.

In heart failure, the heart has been affected by a disease which either weakens or stiffens the heart muscle. Conditions that can lead to heart failure include hypertension, coronary heart disease (in which parts of the heart muscle are damaged in heart attacks or deprived of oxygen by blocked arteries), narrowed or leaking heart valves, or a direct weakening of the heart muscle. This weakening can be from viral infections of the heart, alcohol, cocaine, or inherited disorders of the heart muscle. In some cases the exact cause of the weakened heart muscle is never discovered.

The symptoms of heart failure are related to the heart's inability to pump an adequate amount of blood for a given level of activity and the body's attempt to compensate for this by retaining extra fluid. People with heart failure become easily fatigued and do not tolerate exercise well. Over time they become less able to be active. The retention of fluid can also cause fluid to accumulate in the legs, causing swelling and distension of the abdomen. Sometimes fluid accumulates in the lungs, causing severe shortness of breath and congestion of the lungs.

Medical therapy is the cornerstone of treatment for heart failure. Several classes of medications, such as beta blockers, angiotensin converting inhibitors, and some classes of diuretics have been shown to improve survival of heart failure patients. Other drugs, such as digoxin and diuretics are used to improve symptoms. In addition, new types of pacemakers have been shown to greatly improve symptoms. Finally, cardiac defibrillators improve survival for patients with severely weakened hearts.