

Diastolic Dysfunction of the Heart

Diastolic dysfunction of the left or right ventricle of the heart (main pumping chambers) occurs when the ventricle becomes stiff or relaxes slowly or incompletely. This can happen for a variety of reasons, and results in problems with filling the ventricles with an adequate amount of blood or causing increased back pressure. This usually occurs before there are problems with the pumping function.



Why is Diastolic Function of the Heart Important?

The heart is designed to be a supple, elastic muscle that fills with blood easily at low pressure. As the heart muscle stiffens or relaxes too slowly or incompletely, blood and pressure can get backed up leading to impaired heart function and symptoms.

Diastolic dysfunction can worsen overall prognosis, depending on how severe it is, so it is important to get treated by a cardiologist.

How is Diastolic Dysfunction Diagnosed?

Currently, an echocardiogram (ultrasound test of the heart) is the main noninvasive way to evaluate the diastolic function of both ventricles, as well as to identify evidence of increased pressure in the heart or increased back pressure. An echocardiogram also assesses the systolic (pumping) function of the heart, the heart valves and other aspects of the heart and its function.

What Causes Diastolic Dysfunction of the Heart?

There are many conditions that may cause abnormal diastolic function of the heart. Some of the most common conditions are:

- High blood pressure (hypertension)
- Diabetes
- Obesity
- Coronary artery disease and limited blood flow to the heart
- Previous heart attack

- Sleep apnea
- Lack of physical activity

What is the Treatment?

The mainstays of therapy are treating and controlling contributing conditions such as blood pressure, inadequate blood flow to the heart, weight, diabetes, sleep apnea, etc. Lowering the heart rate can often be helpful, as this allows more time for the ventricles (main pumping chambers) to fill with blood. This can often be achieved with specific medications, regular aerobic physical activity and weight loss.

Regular physical activity of up to 30 minutes a day (after checking with your doctor) is one of the best ways to reduce several of the conditions that can cause diastolic dysfunction.

What is Diastolic Heart Failure?

Long-standing and worsening diastolic function can often lead to diastolic heart failure. This condition is known as diastolic heart failure (DHF) or "heart failure with preserved ejection fraction" (HFPEF). In such patients, diastolic dysfunction is the underlying cause of the ventricular failure and causes the symptoms and signs of heart failure, in the presence of normal or near normal ventricular systolic or pumping function. As the conditions that cause diastolic dysfunction are increasingly common, nearly half of all patients with heart failure have diastolic heart failure.

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