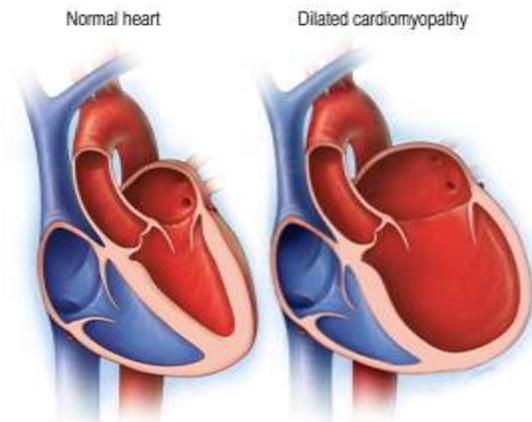


# Cardiomyopathy

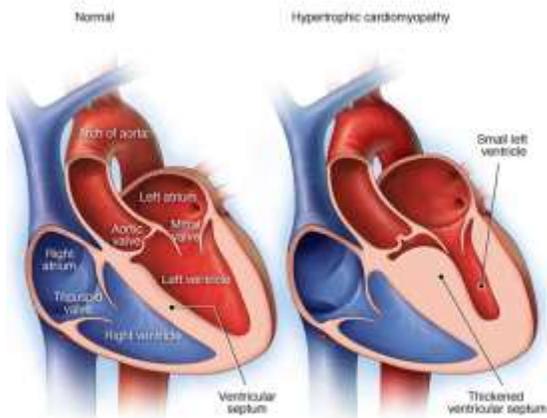
## What is Cardiomyopathy?

Cardiomyopathy is a disease of the heart muscle that makes it harder for your heart to pump blood to the rest of your body. It can lead to heart failure. The main types are:

- **Dilated, cardiomyopathy**
- **Hypertrophic cardiomyopathy and**
- **Restrictive cardiomyopathy.**



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### Symptoms:

There might be no signs or symptoms in the early stages of cardiomyopathy. But as the condition advances, signs and symptoms usually appear, including:

- Breathlessness with exertion or even at rest
- Swelling of the legs, ankles and feet
- Bloating of the abdomen due to fluid buildup
- Cough while lying down
- Fatigue
- Heartbeats that feel rapid, pounding or fluttering
- Chest discomfort or pressure
- Dizziness, lightheadedness and fainting

### Causes:

Often the cause of the cardiomyopathy is unknown. In some people, however, it's the result of another condition (acquired) or passed on from a parent (inherited)

### Contributing factors for acquired cardiomyopathy include:

- Long-term high blood pressure
- Heart tissue damage from a heart attack
- Chronic rapid heart rate
- Heart valve problems
- Metabolic disorders, such as obesity, thyroid disease or diabetes

### Diagnosis:

You might need to undergo several tests to confirm the diagnosis, including:

- **Chest X-ray** - An image of your heart will show whether it's enlarged.
- **Echocardiogram** -This uses sound waves to produce images of the heart, which show its size and its motions as it beats. This test checks your heart valves and helps your doctor determine the cause of your symptoms.
- **Electrocardiogram (ECG)** - In this noninvasive test, electrode patches are attached to your skin to measure electrical impulses from your heart. An ECG can show disturbances in the electrical activity of your heart, which can detect abnormal heart rhythms and areas of injury.

- **Treadmill stress test.** Your heart rhythm, blood pressure and breathing are monitored while you walk on a treadmill. Your doctor might recommend this test to evaluate symptoms, determine your exercise capacity and determine if exercise provokes abnormal heart rhythms.
- **Cardiac catheterization.** A thin tube (catheter) is inserted into your groin and threaded through your blood vessels to your heart. Doctors might extract a small sample (biopsy) of your heart for analysis in the laboratory. Pressure within the chambers of your heart can be measured to see how forcefully blood pumps through your heart.
- **Cardiac MRI.** This test uses magnetic fields and radio waves to create images of your heart. Cardiac MRI might be used in addition to echocardiography, particularly if the images from your echocardiogram aren't helpful in making a diagnosis.
- **Cardiac CT scan.** You lie on a table inside a doughnut-shaped machine. An X-ray tube inside the machine rotates around your body and collects images of your heart and chest to assess the heart size and function and heart valves.
- **Blood tests.** Several blood tests might be done, including those to check your kidney, thyroid and liver function, and to measure your iron levels.

One blood test can measure B-type natriuretic peptide (BNP), a protein produced in your heart. Your blood level of BNP might rise when your heart is in heart failure, a common complication of cardiomyopathy.

- **Genetic testing or screening.** Cardiomyopathy can be hereditary. Discuss genetic testing with your doctor. He or she might recommend family screening or genetic testing for your first-degree relatives — parents, siblings and children

### Treatment:

The goals of cardiomyopathy treatment are to manage your signs and symptoms, prevent your condition from worsening, and reduce your risk of complications. Treatment varies by which type of cardiomyopathy you have.

### Medications

Your doctor might prescribe medications to improve your heart's pumping ability, improve blood flow, lower blood pressure, slow your heart rate, remove excess fluid from your body or keep blood clots from forming.

### Surgically implanted devices:

Several types of devices can be placed in the heart to improve its function and relieve symptoms, including:

- **Implantable cardioverter-defibrillator (ICD).** This device monitors your heart rhythm and delivers electric shocks when needed to control abnormal heart rhythms.
- **Ventricular assist device (VAD).** This helps blood circulate through your heart. VAD usually is considered after less-invasive approaches are unsuccessful. It can be used as a long-term treatment or as a short-term treatment while waiting for a heart transplant.
- **Pacemaker.** This small device placed under the skin in the chest or abdomen uses electrical impulses to control arrhythmias.

### Nonsurgical procedures:

Other procedures used to treat cardiomyopathy or arrhythmia includes:

- **Septal ablation.** A small portion of the thickened heart muscle is destroyed by injecting alcohol through a long, thin tube (catheter) into the artery supplying blood to that area. This allows blood to flow through the area.
- **Radiofrequency ablation.** To treat abnormal heart rhythms, doctors guide long, flexible tubes (catheters) through your blood vessels to your heart. Electrodes at the catheter tips transmit energy to damage a small spot of abnormal heart tissue that is causing the abnormal heart rhythm.

### Stem Cell Therapy

A meta-analysis for comparison demonstrated that stem cell therapy improves cardiac function and reduces mortality in dilated cardiomyopathy patients, which suggested that stem cell therapy may represent a new therapy option for dilated cardiomyopathy.

### **Protocol of treatment at Stem Cell Medicare:**

We at Stem Cell Medicare have been giving treatment to patients with degenerative diseases with autologous mesenchymal stem cells with great success. We strive to design protocol for each patient to suit his needs. The technique is quite effective, safe and without any side effects.

### **The protocol involves the following steps:**

#### **Patient Selection:**

- Adult Or with Parental approval
- Patient with exclusion criteria for each disease
- Written and video consent to receive the treatment

#### **Stem Cell Extraction: The mesenchymal stem cells are collected from**

- Blood
- Bone marrow
- and or abdominal body fat

Mesenchymal cell separation the mesenchymal are separated by special procedure from the blood, bone marrow or adipose tissue samples.

**Stem Cell Processing:** Part of the blood, bone marrow and body fat stem cells are sent to a nationally accredited laboratory for amplification and differentiation of neural cells. These cells are administered on the subsequent visits.

**Quality Certificate:** Each patient receives a third party certificate (nationally accredited laboratory), for quality, quantity of viable cells.

#### **Implantation Of Stem Cells:**

The stem cell implantation can be done in the following ways.

- Intravenous administration
- Intrathecal (lumber puncture)
- Intramuscular
- Intraarterial
- Subcutaneous
- Liberation angioplasty
- Surgical administration for stroke

### **Follow up:**

The Staff at Stem Cell Medicare will call you after one month, two months and six months to see the progress of the treatment. This helps us refine our protocols to improve further. You can also call for any other help Tele numbers

### **Eligibility Criteria:**

- Clinical diagnosis of ischemic cardiomyopathy and ischemic cardiomyopathy with or without old myocardial infarct due to coronary artery disease.
- Age-20-80 years
- Left ventricular (LV) dysfunction: An ejection fraction preferably over 10% assessed by echocardiography.
- Refractory heart failure: AHA/ACC heart failure stage D.
- Heart failure symptoms: NYHA class III or IV.