

Visualizing and Predicting Heart Diseases with an InteractiveDash Board

Team ID:PNT2022TMID14156

Faculty mentor: Raghuvaran S

Team Leader: Vignesh

Team member : Yazhini

Team member: Suraksha

Team member : Shamyukta

Average Age For Different Types Of Chest Pain In Existing Heart Diseases

What could cause chest pain?

Although chest pain can sometimes be a symptom of a heart problem, there are many other possible causes. While some of these are serious conditions, most are not harmful.

Chest pain is the second biggest cause of emergency room (ER) visits in the United States, leading to over 8 million trusted Source ER visits every year. Worldwide, chest pain affects 20–40% of the general population.

Various heart problems can cause pain in the chest.

1. Heart attack

Chest pain is one of the five trusted Source main symptoms of a heart attack. The others are:

- pain in the jaw, neck or back
- lightheadedness or weakness
- pain in the arms or shoulders
- shortness of breath

Females particularly may also experience sudden tiredness, nausea, or vomiting.

If someone thinks they are having a heart attack, they should seek emergency medical help. The quicker a person can get to ER, the quicker treatment can begin.

Getting prompt treatment increases a person's chances of survival and potentially reduces the severity of the damage to the heart.

How do you recognize the signs of a heart attack?

2. Myocarditis

Myocarditis is when the heart becomes inflamed, resulting in symptoms that are similar to a heart attack, such as:

- chest pain
- shortness of breath
- fast or irregular heartbeat

Myocarditis usually results from a viral infection, according to the Centers for Disease Control and Prevention (CDC) [Trusted Source](#).

What is an inflamed heart?

3. Angina

Angina feels like a squeezing pain or pressure on the chest.

It occurs [Trusted Source](#) when not enough blood is getting to the heart.

A person may also feel pain in the:

- shoulder
- back
- neck
- arms
- jaw

Angina can feel like indigestion.

It is a symptom of coronary artery disease.

4. Aortic aneurism and dissection

Aortic dissection is a tear or separation of the inner layers of the aorta, the main artery that leads from the heart. This can lead to a buildup of blood in the artery.

An aortic aneurysm refers to an enlargement in the aorta.

Both conditions Trusted Sources can cause the aorta to rupture or burst.

Aortic dissection and a severe aortic aneurysm are emergencies and require immediate medical help.

A stable aortic aneurysm may not need emergency treatment.

5. Coronary artery dissection

Coronary artery dissection is when tearing occurs in the coronary artery wall. If the innermost layer tears, blood can seep through and build up, causing a bulge. It can lead to a heart attack.

Sudden intense pain that appears to “tear” across the chest, neck, back, or abdomen can be a symptom of coronary artery dissection.

This is a rare but serious condition. The American Heart Association (AHA) Trusted Source notes that experts do not know exactly why it happens, but it can affect people without the usual risk factors for heart disease.

6. Pericarditis

Pericarditis is inflammation of the sac around the heart.

It can result Trusted Source in:

- severe chest pain behind the breastbone
- a buildup of fluid around the heart
- cardiac tamponade, when fluid presses on the heart
- obstructive shock, when the heart cannot fill a Trusted Source with blood effectively.

Pain may be worse when a person breathes in or is lying down but improves when they sit up or lean forward.

It usually results from a viral infection, but there are many other possible causes.

7. Mitral valve prolapse

A mitral valve prolapse is when a valve in the heart is unable to close fully. In mild cases, this condition may have no obvious symptoms.

If symptoms occur, they include:

- rapid heartbeat
- chest discomfort
- fatigue