



American  
Heart  
Association.

# Understanding Heart Valve Disease

**Heart valve disease is an umbrella term for conditions that arise when any of the heart's four valves stop working properly.**

Heart valves help blood move through the heart's four chambers, then out to the body.

Valve damage can stop a heart valve from working effectively. If a valve doesn't close properly, blood can leak backward, decreasing the amount of oxygen-rich blood that can circulate throughout the body. If a valve doesn't open fully, the heart muscle must work harder to pump blood, which can cause chest pain, fatigue or other symptoms. Untreated heart valve disease may lead to complications, including heart failure.

## What are the different valves in the heart?

The heart has **four chambers**, separated by **four valves**. Heart valves play a key role in moving blood forward through the heart.

### Pulmonary valve

separates the heart's right ventricle (lower right chamber) from the pulmonary artery, a blood vessel that connects to the lungs. When the pulmonary valve opens, oxygen-poor blood leaves the right ventricle (lower right chamber) and travels through the pulmonary artery to the lungs. The blood picks up oxygen, then travels to the heart's upper left chamber.

### Aortic valve

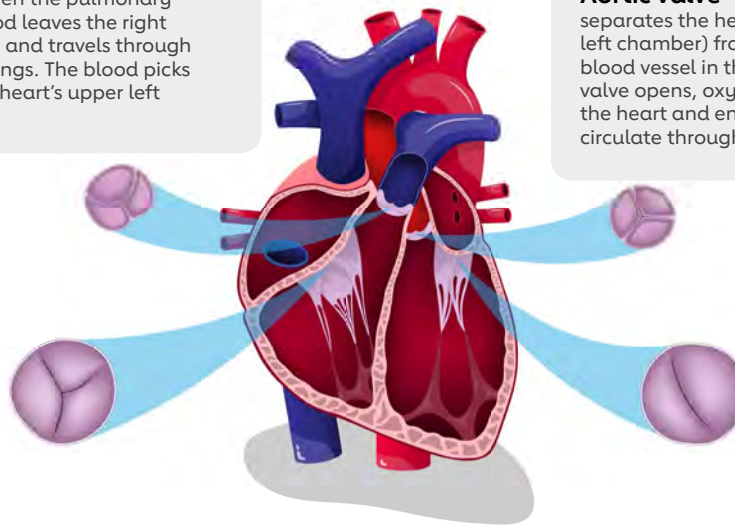
separates the heart's left ventricle (lower left chamber) from the aorta, the largest blood vessel in the body. When the aortic valve opens, oxygen-rich blood leaves the heart and enters the aorta to circulate throughout the body.

### Tricuspid valve

is located between the upper and lower right heart chambers. When the tricuspid valve opens, it lets oxygen-poor blood within the right atrium (upper right chamber) move to the right ventricle (lower right chamber).

### Mitral valve

is located between the upper and lower left heart chambers. When the mitral valve opens, the oxygen-rich blood from the left atrium (upper left chamber) moves to the left ventricle (lower left chamber).

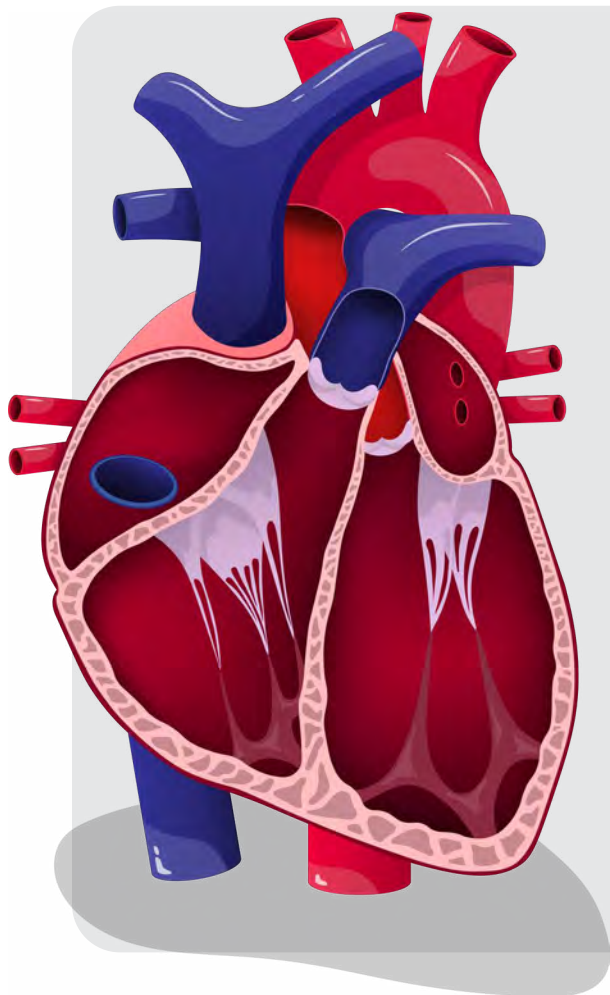


## How is heart valve disease diagnosed?

Health care professionals may discover signs of heart valve disease during a physical exam. When they listen to the heart with a stethoscope, they may hear an **abnormal heart sound (murmur)**, like whooshing or clicking.

**When health care professionals suspect heart valve disease, they offer tests to diagnose the condition, including:**

- Echocardiogram
- Imaging tests, like X-ray or CT scan
- An exercise test
- Electrocardiogram



## What causes heart valve disease and who's at risk?

**Heart valve disease becomes more common as people age.** Calcium deposits in the bloodstream may attach to a heart valve, making it thicker and stiffer, so it doesn't open or close properly.

**Years of wear and tear can prevent a heart valve from shutting tightly, causing leakage.**

**Heart valve disease can also occur earlier in life.** Some babies are born with malfunctioning heart valves. Uncommon illnesses like rheumatic fever or infective endocarditis can damage heart valves, causing disease.

**Other conditions may increase the risk, including:**

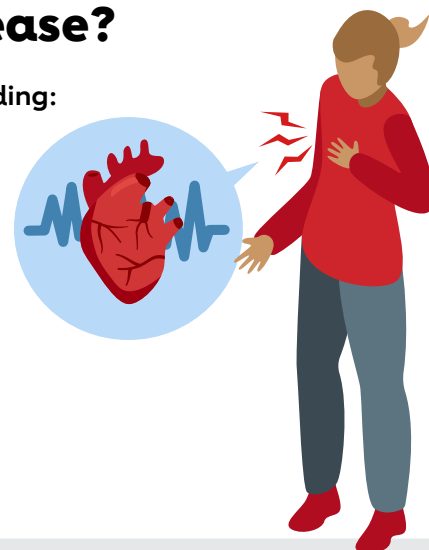
- A history of radiation therapy treatments
- Heart failure
- Heart attack
- Arrhythmia

## What are the symptoms of heart valve disease?

**People with heart valve disease may experience one or more symptoms, including:**

- ✓ Chest pain
- ✓ Heart palpitations
- ✓ Shortness of breath
- ✓ Fatigue
- ✓ Weakness
- ✓ Difficulty keeping up with everyday activities
- ✓ Lightheadedness
- ✓ Fainting
- ✓ Swollen ankles, feet or abdomen

**Heart valve disease doesn't always cause symptoms,** but it can still increase your risk of health problems. It's important to have a health care professional listen to your heart regularly to check for silent heart valve disease.



## What are the treatment options?

**Some heart valve disease is mild and may not require treatment.** But it often needs to be addressed.

The most **common treatments** for heart valve disease are **valve repair** and **valve replacement**.

Some medications can alleviate symptoms of heart valve disease, but health care professionals don't prescribe medication as a substitute for valve repair or replacement.

**Repairing or replacing the heart valve may reduce symptoms, eliminate complications and improve quality of life.**

For more information, visit  
[heart.org/heartvalves](https://heart.org/heartvalves)