

# Heart Block

## What is heart block?

Heart block is a problem with the electrical system in your heart that causes a change in the rate or rhythm of your heartbeat.

An electrical signal in your heart starts each heartbeat, causing the heart muscle to squeeze (contract). Normally, this signal starts in the upper right chamber of the heart (the right atrium) at a place called the sinus node. The signal then follows pathways to the upper left atrium and to the lower chambers of the heart (the ventricles). If you have heart block, the electrical signals are slowed going from the upper chambers of the heart to the lower chambers.

There are various degrees of heart block:

- **First-degree heart block:** The electrical signals are only slightly slowed. You may not have symptoms. First-degree heart block is common.
- **Second-degree heart block:** Some of the electrical signals do not reach your heart's lower chambers. Your heart rate gets slow or irregular.
- **Third-degree block (complete heart block):** The electrical signal from the upper chambers does not reach the lower chambers. The upper and lower chambers do not work together. Your heart may not be able to pump enough blood and oxygen to your brain and the rest of your body.

A block that has existed for a long time may not be a problem. A block that starts suddenly may be a sign of a heart problem that is new or getting worse. Sometimes heart block can come and go, or it may happen once and then never again.

## What is the cause?

Heart blocks may be caused by:

- Disease of the heart arteries
- Disease of the heart muscle
- Heart attack
- Some kinds of surgery
- Some medicines
- Aging
- Birth defects
- Heart disease
- Rheumatic fever
- Overdose of some heart medicines
- Heart infection

## **What are the symptoms?**

First-degree and second-degree heart block may not cause any symptoms. When heart block does cause symptoms, they may include:

- Dizziness, especially when you quickly change positions
- Fainting
- Shortness of breath
- Feeling more tired than normal when you exert yourself, like when you climb stairs or even make a bed, or feeling tired all the time
- Chest pain

Third-degree heart block can cause severe chest pain, severe trouble breathing, or a sudden irregular heartbeat with nausea, vomiting, or passing out. Third-degree heart block is life threatening and require emergency medical care.

## **How is it diagnosed?**

Your healthcare provider will ask about your symptoms and medical history and examine you. Tests may include:

- An electrophysiology study, which uses tiny wires put into your heart through a vein to look at the electrical paths in your heart
- An ECG (also called an EKG or electrocardiogram), which measures and records your heartbeat. You may have an ECG while you are resting or while you exercise on a treadmill. You may also be asked to wear a small portable ECG monitor for a few days or longer.

## **How is it treated?**

Treatment depends on the type of heart block you have and the cause. Often heart block does not need to be treated.

If the block is caused by medicine that you are taking, your healthcare provider may want you to stop taking the medicine. You may be given other medicines to replace the medicine that caused the block.

If the block is severe, you may need surgery to put a pacemaker under the skin of your chest. A pacemaker is a battery-powered device that helps your heart beat in a healthy rhythm.

## **How can I take care of myself?**

Follow your treatment plan. Be sure to take all medicines as prescribed by your healthcare provider.

Try to have a heart-healthy lifestyle:

- Eat a healthy diet.
- Try to keep a healthy weight. If you are overweight, lose weight.
- Stay fit with the right kind of exercise for you.
- Learn ways to manage stress.

- If you smoke, try to quit. Talk to your healthcare provider about ways to quit smoking.
- If you want to drink alcohol, ask your healthcare provider how much is safe for you to drink.
- Try to get at least 7 to 9 hours of sleep each night.

Ask your provider:

- How and when you will hear your test results
- How long it will take to recover
- What activities you should avoid and when you can return to your normal activities
- How to take care of yourself at home
- What symptoms or problems you should watch for and what to do if you have them

Make sure you know when you should come back for a checkup.

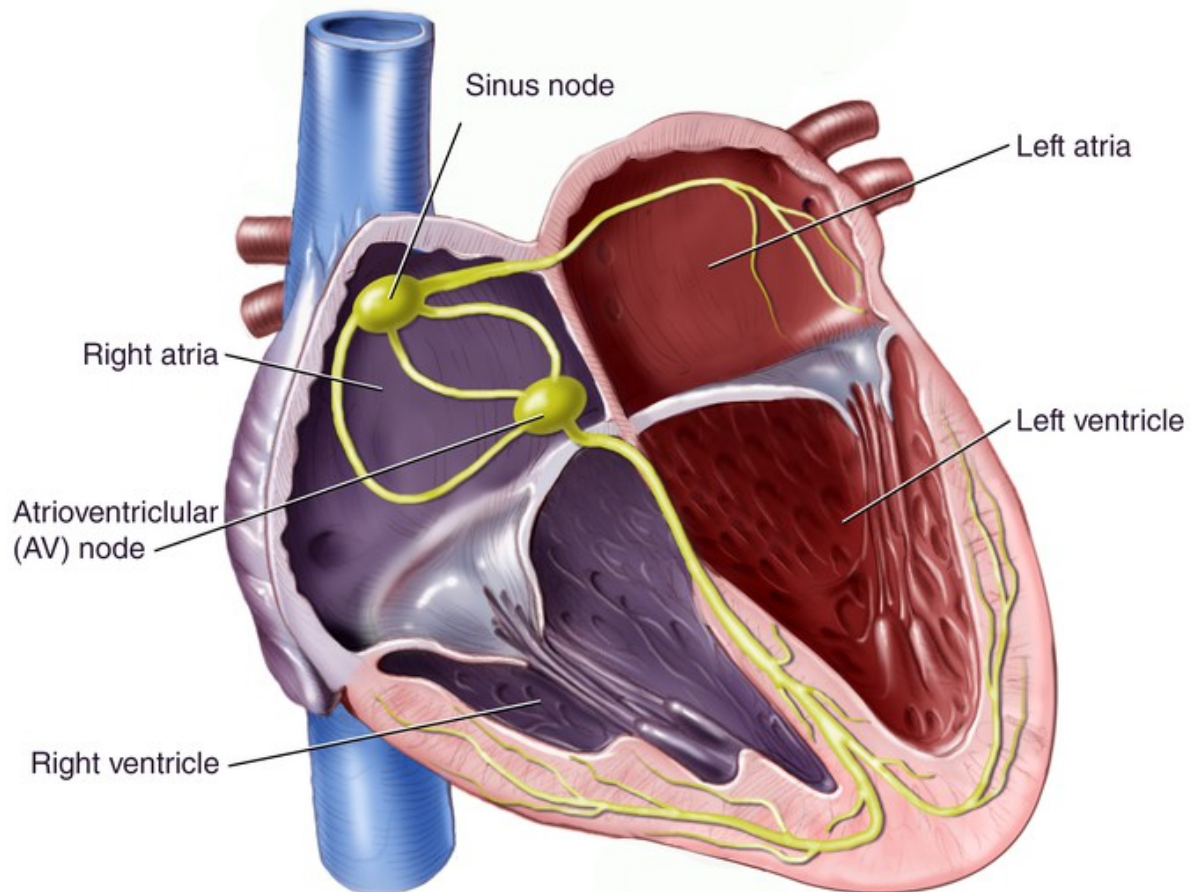
## **How can I help prevent heart block?**

There is no specific way to prevent heart block, but a healthy lifestyle can help prevent heart disease, which can cause heart block.

Developed by RelayHealth.

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## Nodes Responsible for Cardiac Rhythm



The electrical impulse starts in the sinus node. It travels to both atria, causing them to contract, and triggers the AV node. The impulse travels from the AV node, stimulating contraction of the ventricles.

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