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**REVIEWED***By Chris at 2:20 pm, Sep 03, 2020*

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## Sinus Bradycardia

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ABOUT

CAUSES

DIAGNOSIS

TREATMENT

### What is sinus bradycardia?

Sinus bradycardia is a type of slow heartbeat. A special group of cells begin the signal to start your heartbeat. These cells are in the sinoatrial (SA) node. Normally, the SA node fires the signal at about 60 to 100 times per minute at rest. In sinus bradycardia, the node fires less than 60 times per minute. Bradycardia means a slow heartbeat. In sinus bradycardia, the heartbeat is starting in the normal part of the electrical system, the SA node, but the beat is slow.

Many adults and children have sinus bradycardia that does not cause symptoms. In these cases, the bradycardia is a normal event and does not mean there is a heart problem. This is very common in young people, in athletes, and in some older adults, especially during sleep.

Sometimes, this sinus bradycardia is called physiologic sinus bradycardia. Many people with sinus bradycardia don't know that they have it. Sinus bradycardia can be a sign of a problem with the heart or another medical condition.

Sinus bradycardia can happen off and on in response to specific situations. Other times, it can be permanent. Sinus bradycardia is more likely to happen during deep sleep. Sinus bradycardia can happen with or without any other heart rhythm problems. In some people, sinus bradycardia switches back and forth with a heart rhythm that is too fast. This fast heart rhythm is called tachycardia. You might hear this called tachycardia-bradycardia syndrome or tachy-brady syndrome for short.

## What causes sinus bradycardia?

A number of conditions can cause sinus bradycardia. In some cases, the cause is not known. When sinus bradycardia causes problems, it is called pathophysiologic sinus bradycardia. Causes of this type include:

- Advanced age

- Problems with the SA node (sick sinus syndrome)

- Inflammatory heart conditions such as pericarditis or myocarditis

- Heart conditions that exist at birth (congenital)

- Increased pressure inside the head. For example, in an injury to the brain.

- Heart attack (myocardial infarction)

- Obstructive sleep apnea

- Medicines that affect the SA node and heart rate such as beta-blockers or calcium channel blockers

- Hypothyroidism

- Certain rare genetic conditions such as myotonic dystrophy

If sinus bradycardia is a normal event and doesn't cause symptoms, it is called physiologic sinus bradycardia. Causes of this type include:

- High-endurance athletic training

- Pressure on the carotid sinus. For example, from a very tight collar.

- Vomiting or coughing

- Bearing down when having a bowel movement

Sudden contact with cold water

Hypothermia

## Who is at risk for sinus bradycardia?

Certain factors may increase the risk of bradycardia, such as:

Coronary artery disease

Diabetes

High blood pressure

Heart valve disease

Cardiomyopathy

## What are the symptoms of sinus bradycardia?

Sinus bradycardia often causes no symptoms at all. When it does, they may include:

Lightheadedness or dizziness

Fainting

Tiredness (fatigue)

Dizziness

Shortness of breath

Reduced exercise tolerance

Worsened chest pain (if already present)

Worsened heart failure (if already present)

In very rare cases, sinus bradycardia can lead to cardiac arrest.

## How is sinus bradycardia diagnosed?

Your healthcare provider will take a medical history and give you a physical exam. You will need test called an electrocardiogram (ECG). This gives a picture of your heart rhythm. This test alone is often enough to make the diagnosis. Continuous electrocardiogram, such as Holter or event monitoring, may be used to check the heart for a longer period.

Other tests to diagnose the condition may include:

Blood tests to rule out hypothyroidism or other abnormalities

Tests to diagnose sleep apnea

Exercise stress testing, to check the heart rate's response to exercise

Tests to check the your heart's electrical activity and (electrophysiological testing) heart rhythm in more detail

Tests to study the autonomic nervous system (the nervous system that automatically controls different body functions)

## How is sinus bradycardia treated?

If you don't have symptoms, you likely won't need any treatment. But if you have symptoms, you may need treatment. This may include treating a cause such as an underactive thyroid. You may need to lower or stop medicines that may be causing the slow heart rate. These can include beta blockers and calcium channel blockers. Some people may need a temporary or permanent pacemaker. This uses a small electrical impulse to increase the heart rate

## How to manage sinus bradycardia

Lifestyle changes may be needed to help manage sinus bradycardia. These include:

Eating a low-salt, heart-healthy diet

Getting enough exercise

Taking medicines to treat unhealthy cholesterol levels or diabetes

Maintaining a normal body weight

## When should I call my healthcare provider?

Call the healthcare provider right away if you have severe symptoms, such as dizziness or fainting. If you notice your symptoms getting worse, plan to see your healthcare provider as soon as possible.

## Key points about sinus bradycardia

Sinus bradycardia is a kind of slow heartbeat. It happens when the sinoatrial node fires less than 60 times per minute. In some cases, sinus bradycardia is normal, but other times it ca

mean an underlying problem.

Sinus bradycardia can be caused by some health conditions. But in some people, such as athletes and older adults, it's normal.

Most people with sinus bradycardia don't have any symptoms.

If you do have symptoms, your healthcare provider may lower the dose of or reduce any medicines that might be triggering it. Some people need a pacemaker.

It is important to follow all of your healthcare provider's instructions carefully.

## Next steps

Tips to help you get the most from a visit to your healthcare provider:

Know the reason for your visit and what you want to happen.

Before your visit, write down questions you want answered.

Bring someone with you to help you ask questions and remember what your provider tells you.

At the visit, write down the name of a new diagnosis, and any new medicines, treatments, or tests. Also write down any new instructions your provider gives you.

Know why a new medicine or treatment is prescribed, and how it will help you. Also know what the side effects are.

Ask if your condition can be treated in other ways.

Know why a test or procedure is recommended and what the results could mean.

Know what to expect if you do not take the medicine or have the test or procedure.

If you have a follow-up appointment, write down the date, time, and purpose for that visit.

Know how you can contact your provider if you have questions.

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## Want More Information?

Cedars-Sinai has a range of comprehensive treatment options.

**SEE OUR PROGRAMS ([HTTP://CEDARS-SINAI.EDU/PATIENTS /PROGRAMS-AND-SERVICES/](http://cedars-sinai.edu/patients/programs-and-services/))**



## Looking for a Physician?

Choose a doctor and schedule an appointment.

**FIND A DOCTOR ([HTTPS://FIND-A-DOCTOR.CEDARS-SINAI.EDU/](https://find-a-doctor.cedars-sinai.edu/))**

## Need Help?

1-800-CEDARS-1

(1-800-233-2771)

Available 24 Hours A Day

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