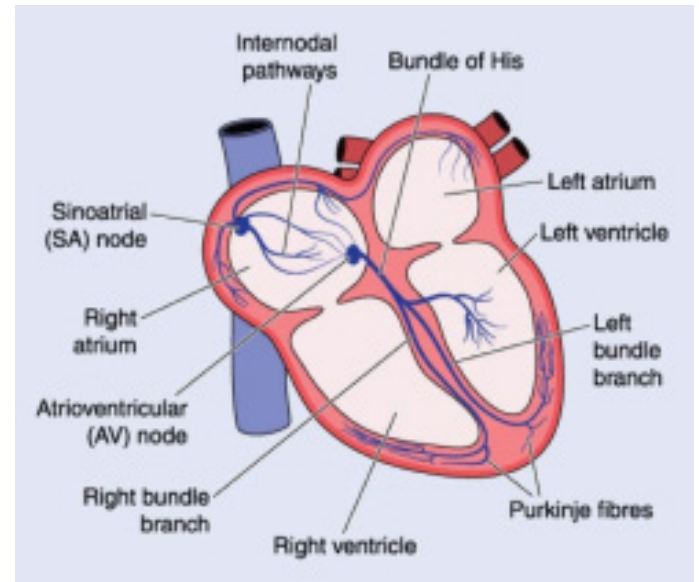


SICK SINUS SYNDROME (SSS)

A normal heartbeat starts when a small bundle of tissue located in the right atrium called the sinoatrial (SA) node sends out an electrical impulse that causes the atria to contract (squeeze) and move blood into the ventricles. The electrical current passes through the atrioventricular (AV) node (the electrical bridge between the upper and lower chambers of the heart), causing the ventricles to squeeze and release in a steady, rhythmic sequence. As the chambers squeeze and release, they draw blood into the heart and push it back out to the rest of the body and lungs. This is what causes the pulse we feel on our wrist or neck.



What is Sick Sinus Syndrome?

Sick sinus syndrome (SSS) is not a specific disease, but rather a group of signs or symptoms that indicate that the sinus node, the heart's natural pacemaker, is not functioning properly. The sinus node becomes damaged and is no longer able to generate heartbeats at the normal rate.

A person with SSS may have a heart rhythm that is too slow (bradycardia), too fast (tachycardia), or one that alternates between fast and slow (tachycardia/bradycardia).

Symptoms of Sick Sinus Syndrome

Some people with sick sinus syndrome have few or no symptoms. In others, symptoms may come and go. These symptoms can include:

- Slower than normal heartrate (bradycardia)
- Faster than normal heartrate (tachycardia)
- Fainting (syncope)
- Feeling tired all the time (fatigue)
- Weakness
- Shortness of breath (dyspnea)
- Chest pain
- Disturbed sleep
- Confusion
- Heart palpitations (feeling like your heart is racing, pounding, or fluttering)

Risk Factors for Sick Sinus Syndrome

While the exact cause of SSS is unknown, some factors, however, often are associated with the condition, such as:

- Age
- Previous heart attack (myocardial infarction)
- Medications to treat High Blood Pressure and other heart diseases
- Hyperkalemia (too much potassium in the blood)
- Thyroid disease
- Sleep apnea
- Heart surgery

In rare cases, SSS may be associated with conditions such as:

- Diphtheria (an infection that can damage the heart muscle)
- Hemochromatosis (excess iron in the blood)
- Muscular dystrophy (an inherited condition in which the body's muscles are damaged and weak)
- Amyloidosis (a condition in which a protein called amyloid is deposited in tissues or organs)

Diagnosis

To determine if your symptoms are related to a problem with your sinus node function, your doctor will assess your heart rhythm in one of three ways:

- ECG: electrocardiogram-This is a brief recording of your heart rhythm done when you see the doctor in the office.
- Heart monitor: This is either a 24-48-hour Holter monitor or 2-4-week event monitor that is worn to record your heart rhythm.
- Implantable Loop recorder: This is a small implantable device that is implanted just under your skin that can record your heart rhythm.

Treatment

- The goal of treatment is the reduction of symptoms and to manage any conditions that may be contributing to the cause of your SSS.
- If you have no symptoms, your doctor will likely monitor your rhythm at regularly scheduled follow ups.
- Your doctor will likely check your medications to see if any of them could be interfering with the function of your sinus node.
- If you are experiencing symptoms from your SSS, your doctor may advise placement of a pacemaker.
- Treatment is individualized and you and your doctor will discuss with you the treatment plan that is appropriate for you.