

INAPPROPRIATE SINUS TACHYCARDIA (IST)



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WHAT IS INAPPROPRIATE SINUS TACHYCARDIA (IST)?

IST is a syndrome that is characterized by unusually fast heart rates at rest and/or with very minimal exertion. It is defined as a sinus heart rate averaging over 100 beats per minute (bpm) over 24 hours.

What are the symptoms of IST?

- Palpitations
- Weakness
- Dizziness
- Shortness of breath
- Chest pain
- Near syncope (almost passing out)
- Anxiety

What causes IST?

The exact cause of IST is not perfectly understood, but we know several things that may lead to it. It is much more common in women typically in their 20's. The cause of a patient's IST may be a result of one of these or a combination of any number of these things:

- Dysfunction of the autonomic nervous system
- Hypersensitivity to adrenaline
- May be triggered by stimulants such as caffeine, nicotine, alcohol or illegal drugs
- Structural problem with the sinus node

How is IST diagnosed?

Diagnosis is by exclusion:

- Secondary causes of tachycardia need to be considered and ruled out such as infection fever, myocardial infarction (heart attack), heart failure, pulmonary issues, medications, illegal drugs, structural heart disease and/or thyroid disease.
- Electrocardiogram (ECG) and/or 24-48-hour Holter monitor is done to rule out other cardiac arrhythmias
- An exercise stress test may be done to evaluate the heart rate response to exercise
- An echocardiogram to evaluate the structure and function of the heart
- An Electrophysiology Study is rarely needed but may be done to further evaluate the tachycardia if your doctor has done all other testing and the cause remains unclear

In someone with IST the results of the above tests will demonstrate a resting heart rate of over 100 bpm, an exaggerated heart rate response to minimal activity (like going from laying to standing), while the heart rhythm is normal (sinus rhythm). The echocardiogram should reveal a structurally normal heart, and a treadmill exercise test (if used) should document an exaggerated tachycardic response to exercise.

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WHAT IS THE TREATMENT OF IST?

Eliminate potential triggers:

Eliminate potential triggers or stimulants in your diet

- Caffeine
- Nicotine
- Alcohol
- Illegal drugs
- Some prescription medication (Wellbutrin/Effexor)

Medication:

Medication may be prescribed to slow your heart rate:

- Ivabradine (corlanor)
- Beta-blockers: Metoprolol, Atenolol, carvedilol, bisoprolol
- Calcium channel blockers: verapamil, diltiazem

Exercise:

Once dangerous arrhythmias are ruled out and exercise is safe, a regular exercise program is the best way to lower the heart rate naturally and improve symptoms over time

Exercise also improves quality of life and maintains a healthy heart

No treatment:

Typically, IST symptoms improve over time as people get older. For this reason, for patients with mild symptoms, a reasonable non-pharmacologic approach to managing IST is to do nothing. Many of these individuals can tolerate their symptoms once they are assured that they do not have a life-threatening cardiac disorder. While this may seem very frustrating, it is likely that IST will improve over time in most people.

Treatment can vary from one patient to another and is very individualized based on the severity of your symptoms. Talk to your doctor about what treatment is right for you

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