



Elevated Heart Rate Most Likely Caused by Medical Condition

DEAR MAYO CLINIC: What is sinus tachycardia? What causes it? How is it treated?

ANSWER: Sinus tachycardia is the term used to describe a faster-than-normal heartbeat - a rate of more than 100 beats per minute vs. the typical normal of 60 to 70 beats per minute. Well over 99 percent of the time, sinus tachycardia is perfectly normal. The increased heart rate doesn't harm the heart and doesn't require medical treatment.

The term sinus tachycardia has nothing to do with sinuses around the nose and cheeks. Rather, it comes from the sinus node, a thumb-nail-sized structure in the upper right chamber of the heart. This structure controls the heart rate and is called the heart's natural pacemaker.

The sinus node signals the heart to speed up during exercise or in situations that are stressful, frightening or exciting. For example, a 10- to 15-minute brisk walk typically elevates the heart rate to 110 to 120 beats per minute. Also, the sinus node increases the heart rate when the body is stressed because of illness. In all of these circumstances, the heart rate increase is a normal response.

Likewise, the sinus node signals the heart to slow down during rest or relaxation.

We see patients who are concerned because their heart

rate stays elevated in the range of 100 to 130 beats per minute. Almost always, there's a medical reason that the sinus node keeps signaling for the faster rate. Possibilities include anemia, an underlying infection, elevated thyroid hormone, or reaction to medication. Addressing those conditions would likely bring the heart rate back to a normal rate. Other factors may be involved, too, such as overdoing caffeine. For example, I saw one patient who was eating several chocolate bars a day. The caffeine in the chocolate was elevating her heart rate.

Rarely, the sinus node can jump-start the heart rate with no apparent cause - no stress, illness or high activity level. This is termed inappropriate sinus tachycardia. About half of the time, this phenomenon occurs after recovery from a serious illness, usually a viral illness. And most often, those affected are women in their 20s and 30s.

Inappropriate sinus tachycardia doesn't cause heart damage, though patients may feel uncomfortable with the elevated heart rate. Some patients may have other associated symptoms, such as fatigue, headache, chest discomfort, shortness of breath or light-headedness. When symptoms are problematic, treatment can include beta blockers that block the action of adrenaline and help slow the heart rate. Very rarely, the heart may maintain very high rates of 160 to 180 beats per minute. More involved treatment options are available

to control this condition.

For some patients, the elevated heart rate is the only symptom. Some have a lifelong history of sinus tachycardia in the 110 beats per minute range, and they lead a normal, healthy life. And often the inappropriate sinus tachycardia will improve in time without treatment.

We encourage patients with prolonged sinus tachycardia to improve their overall fitness level. The more fit you are, the lower your resting heart rate. The elevated heart rate could slow with improved conditioning.

Patients who have concerns about an elevated heart rate should check with their physician. Other conditions, such as atrial fibrillation, can cause a racing heart. Atrial fibrillation should be treated, as it increases the risk of stroke and can damage the heart. - Stephen Hammill, M.D., Cardiology, Mayo Clinic, Rochester, Minn.

(Medical Edge from Mayo Clinic is an educational resource and doesn't replace regular medical care. E-mail a question to medicale@at.sigmajournal.com or write: Medical Edge from Mayo Clinic, c/o TMS, 2225 Kenmore Ave., Suite 114, Buffalo, N.Y., 14207. For more information, visit www.mayoclinic.org.) (c) 2011 Mayo Foundation for Medical Education and Research. DISTRIBUTED BY TRIBUNE MEDIA SERVICES INC. ALL RIGHTS RESERVED.

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