

## **Tachycardia**

The opposite of bradycardia, tachycardia is classified as an arrhythmia, in this case, a heart rate that is too fast. “Too fast” is usually rated at 100 BPM or higher. This is a life-threatening condition which requires immediate diagnosis and treatment. Symptoms include:

- Dizziness
- Lightheadedness
- Unconsciousness
- Cardiac arrest in extreme cases

## **Causes**

There are many things that can disrupt the normal electrical pulses in your heart’s system, both internal and external:

- Damage to heart tissues
- Congenital heart defects
- Anemia
- Exercise
- Stress, usually sudden
- High blood pressure
- Smoking
- Fever
- Overuse of alcohol
- Overuse of caffeine
- Side effects from medications
- Abuse of recreational drugs, such as cocaine
- Electrolyte imbalance
- Hyperthyroidism

## **Types of Tachycardia**

There are several types of tachycardia, each with their own set of treatment:

- **Atrial or Supraventricular Tachycardia (SVT)** refers to a fast heart beat where the abnormal heart rate begins in the upper chambers of the heart. The upper chamber is misfiring and does not have enough time to fill before the heart pushes blood out to the body. This occurs most frequently in women.
  - Other forms of SVT include Paroxysmal Atrial Tachycardia (PAT) or Paroxysmal Supraventricular Tachycardia (PSVT).
  - Not everyone will have symptoms with SVT, but those that do have indicated dizziness, lightheadedness, palpitations, chest pain and shortness of breath.
  - All forms of SVT are considered benign unless left untreated or episodes become more frequent. If this occurs, other symptoms such as dizziness and chest pain could begin and in extreme cases, unconsciousness or cardiac arrest.
  - Treatment is not always needed on a medical level, but your doctor may recommend things like:
    - Carotid Sinus Massage should only be done by a professional and at a doctor's recommendation. It requires constant monitoring of the heart and the patient.
    - Pressing gently on your eyes while closed
    - Valsalva maneuver is performed by holding your nose and covering your mouth, and then attempting to forcefully blow air out. This impacts both your inner ear equilibrium as well as your blood pressure.
    - Dive reflex whereby you go underwater and hold your breath until you simply cannot anymore. Triggering this reflex results in a chain reaction within the body where your systems rush to conserve blood for the heart and nervous while keeping blood pressure at safe levels.
    - Sedation under a doctor's supervision.
    - Cutting back on coffee, alcohol and tobacco and any other stimulants you may indulge in.
    - A recommendation to get more rest.
- **Sinus Tachycardia** occurs when you encounter an outside stimulus that cause your heart to start pounding, such as: in fear or trepidation, sometimes from drugs or medications, emotional distress or exercise.
  - The only symptom is a faster than usual heart rate
  - This tachycardia is both benign and normal unless it begins to happen on a more consistent basis. This uncommon occurrence may then be pointing to something

else such as anemia, increased thyroid activity, damage from a heart attack or severe bleeding.

- Treatment is typically geared towards the cause of sinus tachycardia, rather than the condition itself. If, for example, high anxiety is seems to be the underlying cause, then the doctor will most likely recommend treating the anxiety, with the tachycardia subsiding naturally on its own as a result.
- **Ventricular Tachycardia (VT)** starts in the lower chambers of the heart. This is the most dangerous type of fast heart rates. The condition can go from benign to malignant very quickly. If there are other cardiac issues diagnosed and the speed of the heart rate is very high, it would require immediate medical attention.
  - Some disorders of the heart that interfere with the electrical pulses system may cause VT and may include: lack of oxygen to the heart, cardiomyopathy, medication and the inflammatory skin and tissue disease, sarcoidosis.
  - Symptoms include: dizziness, lightheadedness, unconsciousness or cardiac arrest.
  - Treatment depend on the severity but may include immediate electrical defibrillation, medication, radiofrequency ablation or even surgery.
- **Atrial Fibrillation** is often referred to as “a quivering heart,” and is a heart beat that originates in the atria, which are the upper chambers of the heart. When the contractions of the upper chambers are irregular, blood is often not transferred effectively from the upper to the lower chambers, which can lead to blood clots, stroke, heart failure and other complications.
  - Some causes of this form of tachycardia, according the Mayo Clinic, include structural abnormalities of the heart as a result of heart disease or high blood pressure, heart valve disorder, hyperthyroidism, or overuse of alcohol.
  - Treatments include electrical cardioversion, cardioversion with drugs, catheter ablation, surgical maze procedure, and atrioventricular node ablation.

Patients diagnosed with a form of tachycardia can live a full and healthy life if treated early and often, by following the doctor’s orders and living a healthy lifestyle.