



## **PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIA (PSVT)**

### **■ WHAT IS PAROXYSMAL SUPRAVENTRICULAR TACHYCARDIA (PSVT)?**

A heart rate over 100 beats per minute is called tachycardia. In most cases an increased heart rate is a normal response to situations when the body needs more blood and oxygen, such as exercise, anxiety, fear or fever. Paroxysmal Supraventricular Tachycardia (PSVT) is an abnormally fast heart rate that seems to be occurring for no reason. During an episode of PSVT the heart rate is between 150 and 250 beats per minute. Episodes of PSVT come on spontaneously and usually last a few seconds to a few minutes. Most of the time PSVT will stop by itself.

PSVT is most common in people in their 20's and 30's and is rarely life-threatening. If the attacks happen often, last for longer than a few minutes, or cause major symptoms, they need treatment. Common symptoms include: palpitations, anxiety, shortness of breath, chest tightness, dizziness and fainting.

### **■ HOW DOES PSVT OCCUR?**

Normally there is one electrical pathway between the upper and lower chambers of the heart. As the electrical current travels down the pathway, it causes the heart to beat. People with PSVT almost always have an extra electrical pathway.

When electrical impulses go down both pathways from the upper to the lower chambers, the heart can beat normally. If the electrical signal goes down the normal pathway and then immediately back up the extra pathway a "short circuit" occurs. This makes the heart beat very fast. This is PSVT. The conditions that cause the short circuit are not well understood.

### **■ HOW IS IT DIAGNOSED?**

Tests that help diagnose PSVT include:

- Electrocardiogram (ECG) –measures the electrical activity of the heart
- Holter recorder – a recording of the heart rhythm for 24 hours
- Event recorder – intermittent recording of the heart rhythm over a month
- Electrophysiologic study (EPS) – a test to locate the heart's electrical pathways and determine if there are problems with these pathways

If the episodes of PSVT occur infrequently, it may be difficult to diagnose.

## ■ HOW IS PSVT TREATED?

Treatment for PSVT usually depends on the severity of the symptoms. The following approaches may be taken:

- Valsalva maneuver – This is done by taking a deep breath, holding it and straining for 3-5 seconds. This technique sends a signal to the nerves to slow the impulse enough to convert the fast heart rate to normal. This may be the only treatment needed for people with mild symptoms. Your doctor can show you how to do the Valsalva maneuver so that you can do it on your own.
- Medications – Some medicines can slow the rate of conduction between the upper and lower chambers of the heart.
- Radiofrequency ablation – This procedure is used for people who have very frequent PSVT or PSVT that greatly interferes with daily activities. Ablation uses high frequency radio waves delivered through a tiny tube threaded up to the heart through an artery. The radio waves are used to destroy the small part of the conduction system causing the PSVT. Permanent relief from PSVT usually results. For this reason, radiofrequency ablation often is the treatment of choice for people with frequent or severe PSVT.

In addition, most doctors recommend cutting back on alcohol and caffeine. Avoiding stressful situations and excitement can also help reduce the number of episodes of PSVT.

If you have an episode of PSVT and the recommended treatments are not effective after 15 to 30 minutes, call your doctor. If you have severe weakness or faintness, call right away.