

Abnormal heart rhythm

Written by PHILIP S. CHUA, M.D., FACS, FPCS
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WHEN you suddenly feel your heart is pounding and beating faster than usual, and you have an uncomfortable feeling within your chest, it could be SVT (Supraventricular Tachycardia), an abnormal heart rhythm.

This condition, which is tolerable and usually not serious, has an incidence of about 35 cases per 100,000 people per year.

The episode could be the first and not happen again, or it may recur after several months or years.

The SVT could be paroxysmal, meaning the occasional unexplained rapid heart rate happens from time to time.

- What are the risk factors for PSVT?

The following could increase the risk for PSVT and even trigger an episode in a person who is otherwise healthy and feeling well:

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Alcohol use, smoking, caffeine, illicit drug, digitalis toxicity, any stimulant medication or even anti-allergy drugs among some people.

Majority of people are not susceptible to develop PSVT.

- Can a cup of coffee or a cigarette trigger it?

Yes, a cup of coffee, especially a strong one, or a cigarette, can trigger PSVT, in a person whose physiology at that precise moment makes him/her prone to this heart irregularity.

Unfortunately, we do not know who these susceptible people are, except those who had previous episodes of the same arrhythmia.

- What are the symptoms of PSVT?

The episode usually happens suddenly and spontaneously, most often the person afflicted could not associate the incident with any possible trigger food or drugs, or activity.

The heart beats faster than usual, palpitation (pounding heart beat) may accompany it, and a sensation of discomfort behind the breastbone or chest pain follows.

The person becomes anxious, have shortness of breath, and suspect the condition as a heart attack.

If the heart beats more than 150, which is double the normal rate, the individual might be dizzy or feel faint, or, in a more severe case, might even pass out.

- How long do the symptoms last?

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The symptoms may start suddenly, last briefly, and stop spontaneously, or last for a few minutes, and in some cases, several hours.

If they persist for more than half a day, it is called incessant PSVT.

This condition is more common among young adult and children, but not rare in older people either.

If the heart rate settles down and reverts back to normal and there are no more symptoms whatsoever, medical consultation may not be needed.

But if the symptoms persist or recurs, it is best to seek medical attention promptly.

- Is this condition serious?

In general no, especially those which happen only once or twice a year, or less often, and associated with a known trigger, like smoking or coffee, or alcohol.

As long as the PSVT is not caused by an organic disease of the heart or thyroid, etc., the condition is really more of a nuisance and an inconvenience than anything else.

However, to be sure of the diagnosis, medical consultation is advised.

- What tests is used for diagnosis?

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If the patient seeks immediate medical attention and the symptoms are still present during medical examination, a rapid heart rate (150 to 250 beat per minute with some irregularity in the rhythm) will be detected.

In children, the heart rate tends to be higher.

The pulse will also be a bit weaker than normal.

When the EKG is taken in the presence of the symptoms, the typical PSVT rhythm will be obvious on the electrocardiographic tracings.

If the symptoms have subsided, the EKG will not show the arrhythmia.

EKG is important to distinguish this heart irregularity from other more serious arrhythmias.

- What will confirm the diagnosis?

If the symptoms come on and off, and the arrhythmia is not caught by a regular EKG, a Holter Monitor (a loop EKG recorder with computer memory) may be used for 24 hours, hoping to catch the PSVT.

This portable device is carried or worn by the patient, with electrodes attached to the chest, and continuously (non-stop) take the EKG of the individual, for one full day and night.

The more decisive and more precise test is called Electrophysiology Study or EPS.

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For arrhythmias, EPS is usually needed to make an accurate diagnosis and to recommend the appropriate treatment.

- Is there an urgent measure one can take?

When PSVT happens at home or anywhere, one can do a Valsalva maneuver, which can be done by taking a deep breath and holding it, and straining as if trying to have a bowel movement.

Coughing repeatedly with your body bent forward, and/or washing the face with ice cold water can also help stop this abnormal rhythm of the heart.

Physicians can do carotid sinus massage to stimulate the vagus nerve (via the recurrent laryngeal nerve in the neck by the carotid artery), which is aimed at slowing the heart rate.

If the home remedy does not work, a trip to the emergency room is strongly recommended.

- What are the emergency treatments?

For recurrent or persistent PSVT, the emergency physician or cardiologist may give adenosine or verapamil intravenously.

Other drugs used include procainamide, beta blockers, other anti-arrhythmic drugs, and propafenone.

If needed, cardioversion (use of electric defibrillator) under sedation may be utilized in the emergency room.

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Daily maintenance pills to “tame” the heart may be necessary for long term treatment.

Weight reduction for those who are overweight, abstinence from cigarette, and disciplined alcohol intake are most helpful.

Sometimes, a pacemaker is required to override the rapid heart rate among those who do not respond to the simpler treatment.

For persistent symptomatic PSVT, radiofrequency ablation may be an option, but cryoablation is now the treatment of choice.

This cuts the irritable abnormal conductive pathway causing the PSVT.

For those who need heart surgery, like coronary bypass, heart valve replacement or repair, etc., surgery to change the pathways in the heart that sends electrical signal may be done during the heart surgery.

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