

WPW: WOLFF-PARKINSON-WHITE Syndrome

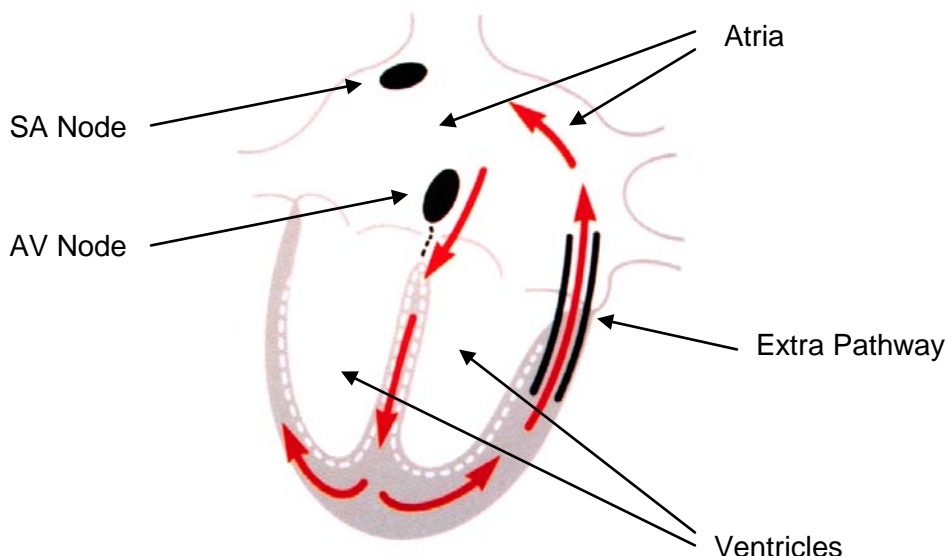
What is Wolff-Parkinson-White Syndrome?

Wolff-Parkinson-White Syndrome, or WPW, is named for three physicians who described a syndrome in 1930 in young people with episodes of heart racing and an abnormal pattern on their electrocardiogram (ECG or EKG). Over the next few decades, it was discovered that this ECG pattern and the heart racing was due to an extra electrical pathway in the heart. Thus, WPW is a syndrome associated with an abnormal heart rhythm, or “arrhythmia”. Most people with WPW do not have any other problems with their heart.

Normally, the electrical impulses in the heart originate in the atria or top chambers of the heart and spread across the atria. The electrical impulses are then conducted to the ventricles (the pumping/bottom chambers of the heart) through a group of specialized cells called the atrioventricular node or AV node. This is usually the only electrical pathway between the atria and ventricles. In WPW, there is an additional pathway made up of a few extra cells left over from when the heart formed. The conduction of electricity through the heart causes the contractions which are the “heartbeat”.

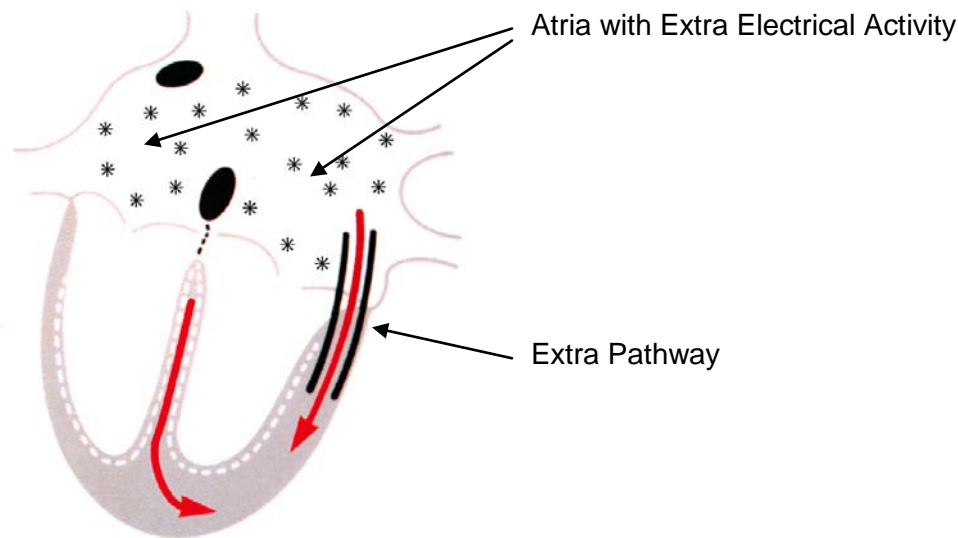
What is WPW Syndrome as opposed to a WPW ECG?

A person has WPW Syndrome if they experience symptoms from abnormal conduction through the heart by the WPW pathway. Most commonly, the symptom is heart racing, or “palpitations”. The particular type of arrhythmia in WPW is called “supraventricular tachycardia” or SVT. “Tachycardia” means fast heart rate; “supraventricular” means the arrhythmia requires the cells above the ventricles to be part of the abnormal circuit. SVT may be accompanied by dizziness, difficulty breathing, chest pain or fainting. Some people have the WPW pattern on their ECG without having symptoms or SVT. These asymptomatic patients may become symptomatic over time. For more information about SVT, see the SVT handout.



How is WPW different from other types of SVT?

In WPW, the ECG at rest is abnormal and the existence of the pathway can be seen even if there are no episodes of SVT. The other important difference is that about 1 in 5 people with WPW develop a rapid arrhythmia in the atria called atrial fibrillation (AF). AF is different from the usual episodes of SVT in young people with WPW. AF consists of very rapid electrical activity in the atria (over 300 beats per minute). However, because there is an extra electrical pathway from the atria to ventricles, the electrical activity from the AF can be transmitted rapidly to the ventricles. If this occurs, the ventricles do not pump blood effectively and this can lead to collapse or even death. There is a risk of 1 in 1000 of having this dangerous ventricular arrhythmia in WPW. People with WPW who faint should be evaluated urgently by their physician.



Can WPW be treated?

You will need to discuss with your physician which of these treatment options is appropriate for you:

1. Medications: Several medications are available that can help reduce the number of episodes of WPW. If you present at a hospital with a fast heart rate, they may start an intravenous line and give a medicine to try to stop the heart racing.
2. Radiofrequency Catheter Ablation: This procedure is done in the heart catheterization lab and delivers energy in a very specific way to destroy (“ablate”) the abnormal cells or pathway causing your WPW.
3. Not treating WPW may be an option if the episodes that you feel your heart racing are infrequent, don't last very long, and cause few symptoms.