

**ALDERFER & TRAVIS CARDIOLOGY, PC**  
*670 Lawn Ave., Suite 3A Sellersville, PA 18960*  
*Tel (215)257-9500 FAX (215) 257-9500*

**Heart Block**

**Other Names:** A-V Block

The heart is a muscular pump divided into four chambers--two atria located on the top and two ventricles located on the bottom.

Normally each heartbeat starts in the right atrium. Here, a specialized group of cells called the sinus node, or natural pacemaker, sends an electrical signal. The signal spreads throughout the atria to the area between the atria called the atrioventricular (AV) node.

The AV node connects to a group of special pathways that conduct the signal to the ventricles below. As the signal travels through the heart, the heart contracts. First the atria contract, pumping blood into the ventricles. A fraction of a second later, the ventricles contract, sending blood throughout the body.

Usually the whole heart contracts between 60 and 100 times per minute. Each contraction equals one heartbeat.

**What is heart block?**

Heart block is a condition in which the electrical signal that causes the chambers of the heart to work together to make the heart beat is disrupted. The synchronization between the upper and lower chambers of the heart is impaired.

Heart block can range in severity from a minor complication caused by some medications to a very serious condition. Heart block is broken into three classes: first-, second- and third-degree.

First-degree heart block refers to a slowing of the signal as it passes through the AV node. It is commonly caused by drugs like digitalis. Individuals with first-degree heart block may experience no obvious symptoms.

Second-degree heart block indicates a condition when some of the signals sent to the ventricles are "dropped"; they never actually reach the ventricles.

Third-degree heart block is known as "complete heart block". It indicates a situation when the electrical signal from the upper chambers does not make it to the lower chambers. An independent signal from the lower chambers will cause the ventricles to beat, but their beating is uncoordinated with the upper chambers, and can be much slower than the beating of the upper chambers.

### **What are the symptoms of heart block?**

Mild forms of heart block can produce no obvious symptoms. Heart block can cause an irregular or abnormally slow heartbeat, fainting (also known as syncope), and dizziness.

### **What causes heart block?**

Heart block can be due to a congenital (present at birth) abnormality. It can be caused by coronary heart disease. Some medications, including digitalis, can cause heart block. Heart block can be related to previous surgeries performed on the heart.

### **Who is at risk for heart block?**

Heart block is most common in older adults. Other risk factors include heart disease, obesity, smoking, stress, diabetes, hypertension (high blood pressure).

Certain drugs can increase the risk of heart block, including digitalis, quinidine or beta-adrenergic blockers

### **How is heart block diagnosed?**

Your doctor may request a diagnostic test, called an ECG (electrocardiogram), which measures the electrical signals of your heart.

### **How is heart block treated?**

Some mild forms of heart block require no treatment.

More severe forms might require the implantation of an artificial pacemaker.

Your doctor may prescribe medication to help with the symptoms in the short term.

You should avoid the risk factors listed above when possible. You should also avoid medications for allergies or nasal congestion. If you have a question about a medication (either prescription or "over-the-counter"), please ask the doctor or your pharmacist.

Please ask us any questions you have.