

ALDERFER & TRAVIS CARDIOLOGY, PC

670 Lawn Ave., Suite 3A Sellersville, PA 18960

Tel (215)257-9500 FAX (215) 257-9500

Atrial Tachycardia

Atrial tachycardia refers to a rapid heart rate caused by stimuli to the heart from multiple locations within the atria. It is a type of heart **arrhythmia**, which refers to a general change in the regular beat of the heart.

What causes atrial tachycardia?

Many times, there is no recognizable cause of an arrhythmia. Heart disease may cause arrhythmias. Other causes include: stress, caffeine, tobacco, alcohol, diet pills, and cough and cold medicines.

The "sinoatrial node" is the natural pacemaker for the heart. It sends signals that tell heart to contract. In multifocal atrial tachycardia (MAT), multiple locations within the atria send signals telling the heart to contract. Most of these stimuli are conducted to the ventricles, leading to a rapid heart rate, often as high as 100 to 180 beats per minute. This very rapid rate greatly increases the heart's workload. Very rapid rates can also decrease the amount of time the heart has to fill with blood, which reduces heart function.

M.A.T. may be associated with COPD, congenital bacterial pneumonia, congestive heart failure, lung cancer, pulmonary embolus, coronary heart disease, any condition that reduces the amount of oxygen in the blood, surgery within the last 6 weeks, overdose of theophylline or digitalis, diabetes mellitus, bacterial infections, and other conditions.

M.A.T. occurs in approximately 1 out of 1,000 people. It is most common in those over 50 years old.

Are arrhythmias serious?

The vast majority of people with arrhythmias have nothing to fear. They do not need extensive exams or special treatments for their condition. In some people, arrhythmias are associated with heart disease. In these cases, heart disease, not the arrhythmia, poses the greatest risk to the patient.

In general, ventricular arrhythmias caused by heart disease are the most serious.

In a very small number of people with serious symptoms, arrhythmias themselves are dangerous. These arrhythmias require medical treatment to keep the heartbeat regular. For example, a few people have a very slow heartbeat

(bradycardia), causing them to feel lightheaded or faint. Some people may have very rapid heart rhythms from the bottom part of the heart (ventricular tachycardia). If left untreated, this dangerous heart rhythm could lead to death.

What are the symptoms of atrial tachycardia?

Most people have felt their heart beat very fast, experienced a fluttering in their chest, or noticed that their heart skipped a beat. Almost everyone has also felt dizzy, faint, or out of breath or had chest pains at one time or another. Experiencing irregular heart beats may cause anxiety, but for the majority of people, they are completely harmless.

You should not panic if you experience a few flutters or your heart races occasionally. But if you have questions about your heart rhythm or symptoms, check with your doctor.

How is atrial tachycardia diagnosed?

An arrhythmia may not occur at the time of the exam even though symptoms are present at other times. In such cases, tests will be done if necessary to find out whether an arrhythmia is causing the symptoms.

First the doctor will take a medical history and do a thorough physical exam. Then one or more tests may be used to check for an arrhythmia and to decide whether it is caused by heart disease.

Tests for Detecting Arrhythmias:

Electrocardiogram (ECG or EKG). A record of the electrical activity of the heart. Disks are placed on the chest and connected by wires to a recording machine. The heart's electrical signals cause a pen to draw lines across a strip of graph paper in the ECG machine. The doctor studies the shapes of these lines to check for any changes in the normal rhythm. The types of ECGs are:

Resting ECG. The patient lies down for a few minutes while a record is made. In this type of ECG, disks are attached to the patient's arms and legs as well as to the chest.

Exercise ECG (stress test). The patient exercises either on a treadmill machine or bicycle while connected to the ECG machine. This test tells whether exercise causes arrhythmias or makes them worse or whether there is evidence of inadequate blood flow to the heart muscle ("ischemia").

24-hour ECG (Holter) monitoring. The patient goes about his or her usual daily activities while wearing a small, portable tape recorder that connects to the disks on the patient's chest. Over time, this test shows changes in rhythm (or "ischemia") that may not be detected during a resting or exercise ECG.

Transtelephonic monitoring. The patient wears the tape recorder and disks over a period of a few days to several weeks. When the patient feels an arrhythmia, he or she telephones a monitoring station where the record is made. If access to a telephone is not possible, the patient has the option of activating the monitor's memory function. Later, when a telephone is accessible, the patient can transmit the recorded information from the memory to the monitoring station.

Transtelephonic monitoring can reveal arrhythmias that occur only once every few days or weeks.

Electrophysiologic study (EPS). A test for arrhythmias that involves cardiac catheterization. Very thin, flexible tubes (catheters) are placed in a vein of an arm or leg and advanced to the right atrium and ventricle. This procedure allows doctors to find the site and type of arrhythmia and how it responds to treatment.

How is atrial tachycardia treated?

Many arrhythmias require no treatment whatsoever. Serious arrhythmias are treated in several ways depending on what is causing the arrhythmia. Sometimes the heart disease is treated to control the arrhythmia. Or, the arrhythmia itself may be treated using one or more of the following treatments.

Drugs

There are several kinds of drugs used to treat arrhythmias. One or more drugs may be used. Drugs are carefully chosen because they can cause side effects. In some cases, they can cause arrhythmias or make arrhythmias worse. For this reason, the benefits of the drug are carefully weighed against any risks associated with taking it. It is important not to change the dose or type of your medication unless you check with your doctor first.

If you are taking drugs for an arrhythmia, one of the following tests will probably be used to see whether treatment is working: a 24-hour electrocardiogram (ECG) while you are on drug therapy, an exercise ECG, or a special technique to see how easily the arrhythmia can be caused. Blood levels of antiarrhythmic drugs may also be checked.

Cardioversion

To quickly restore a heart to its normal rhythm, the doctor may apply an electrical shock to the chest wall. Called cardioversion, this treatment is most often used in emergency situations. After cardioversion, drugs are usually prescribed to prevent the arrhythmia from recurring.

Automatic implantable defibrillators

These devices are used to correct serious ventricular arrhythmias that can lead to sudden death. The defibrillator is surgically placed inside the patient's chest.

There, it monitors the heart's rhythm and quickly identifies serious arrhythmias. With an electrical shock, it immediately disrupts a deadly arrhythmia.

Artificial pacemaker

An artificial pacemaker can take charge of sending electrical signals to make the heart beat if the heart's natural pacemaker is not working properly or its electrical pathway is blocked. During a simple operation, this electrical device is placed under the skin. Insulated electrical wires are placed into the heart through a vein under the collar bone. The pacemaker monitors the heart's electrical activity and provides electrical impulses to the heart as needed.

Ablation

When an arrhythmia cannot be controlled by other treatments, doctors may perform ablation therapy by inserting catheters into the heart, localizing areas responsible for the arrhythmia, then destroying those areas using radiofrequency waves.

How can arrhythmias be prevented?

If heart disease is not causing the arrhythmia, the doctor may suggest that you avoid what is causing it. For example, if caffeine or alcohol is the cause, the doctor may ask you not to drink coffee, tea, colas, or alcoholic beverages.