**Sudden Cardiac Arrest**

A new test can now detect this dangerous condition before it strikes

A Q&A with David Kavesteen, M.D.

It was rumored that a young college basketball player was a potential top pick in the professional basketball draft. During a game midseason, he experienced arrhythmias (irregular heartbeat). After the symptoms occurred, he was immediately removed from the game and was treated. Tragically, three months later during a tournament, he collapsed and died. The cause of death was sudden cardiac arrest.

Dr. David Kavesteen sheds some light on this frightening condition that can affect almost anyone, even unsuspecting youthful athletes who seem healthy and in optimum physical condition.

Image: What is sudden cardiac arrest? And why has it taken the lives of such strong, fit athletes?

Dr. Kavesteen: Sudden cardiac arrest will usually result from an abrupt loss of heart function. Sudden cardiac arrest can occur in anyone, and especially athletes with preexisting heart conditions. The athlete may or may not have diagnosed heart disease. The time and mode of death are unexpected, usually occurring minutes after symptoms happen.

IM: What causes sudden cardiac death?

Dr. K: All known heart diseases can lead to cardiac arrest and sudden cardiac death. During intense physical or athletic activity, adrenaline is released and it often acts as the trigger for sudden cardiac death, but only when these conditions are present. There are many causes of sudden cardiac death in young athletes, but the most common is undetected hypertrophic cardiomyopathy (a condition where the heart muscle thickens). Athletes with a thin, compliant chest wall are at risk of common cordis (sudden cardiac arrest from a blunt, non-penetrating blow to the chest), even when there is no cardiovascular disorder present. The blow could result

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from sports with baseballs, softballs, lacrosse balls, hockey pucks, or even a direct blow in boxing.

IM: Are younger athletes at greater risk of cardiac arrest?

Dr. K:Since the diseases that do cause the condition are expressed earlier in life, younger athletes do have a greater chance of experiencing sudden cardiac arrest. For instance, high school students are at much greater risk than collegiate athletes, who are at greater risk than professional athletes.

IM: Can anything be done to prevent sudden cardiac arrest?

Dr. K: A simple EKG as part of a high school athlete's physical examination could locate between fifty to seventy percent of athletes at risk. Also, people could be screened more effectively with a more simple and inexpensive test known as an echocardiogram. It is important to teach athletes good conditioning techniques. Educating athletes about the significance of cooling down after working out is extremely important. When you are active you will generate more wastes that need to be removed from the tissues. Schools, colleges, and professional teams should at least have personnel trained in CPR and a portable defibrillator nearby in case an arrest strikes. At the very least, all athletes should receive pre-participation exams.

IM: What are the new discoveries and advances?

Dr. K: Now there's a test that's better than the traditional stress test -- pinpointing dangerous heart problems once considered too small to see. The Microvolt T-wave Alterans test detects microscopic electrical changes in the heart that increase the risk of sudden cardiac death. The T-Wave Alternans Test is performed using a treadmill. The cardiologist applies electrodes to the patient's chest and back, and the patient walks on the treadmill for 8-10 minutes to gradually raise the heart rate. This test can be very useful in identifying and treating patients who could be at risk for sudden cardiac death. If the test is negative for the microscopic changes, then the risk of sudden cardiac death is almost zero!

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*Dr. Kavesteen utilizes the T-Wave Alternans test at his offices at Heart and Health PLLC, located at 1350 Deer Park Avenue in North Babylon (631) 482-1355 and 281 Middle Country Road, Middle Island (631) 345-6670. Further information is available on the website HeartandHealth.com.*