



**Medical
Blueprints**

SUDDEN CARDIAC ARREST IN STUDENT ATHLETES: KNOW THE RISK FACTORS REPORT #2982

BACKGROUND: Sudden cardiac arrest, or SCA, is a condition where the heart suddenly stops beating and the blood stops flowing to the brain and other vital organs. This usually causes death within minutes if it is not treated right away. However, treatment with a defibrillator can be lifesaving. An SCA can happen when the heart's electrical system is not working right and causes irregular heartbeats, called arrhythmias. There are different types of arrhythmias that may cause the heart to beat too fast, too slow, or with an irregular rhythm. An SCA can happen without warning and requires immediate treatment. They are rarely diagnosed with medical tests as it's happening. Instead, it is usually diagnosed after it happens. Doctors will rule out other causes of a person's attack and may refer you to a cardiologist, or doctor who specializes in heart diseases. The cardiologist will run various tests to see how well your heart is working, then decide whether you need treatment to prevent SCA.

(Source: <https://medlineplus.gov/suddencardiocarrest.html>)

KNOWING SCA DANGERS IN ATHLETES: SCA is the number one cause of sudden death for young athletes. If not treated within minutes, the athlete will die or be left with serious brain damage. About 1 or 2 in every 100,000 young athletes experience SCA each year, and males are at greater risk than females. In fact, African American athletes are at greater risk than Caucasian athletes, and the risk seems to be higher in football and men's basketball. It is required to have a comprehensive medical history and physical exam for all young athletes before they participate in sports. However, this evaluation has shown limited effectiveness to detect at-risk conditions. Some experts are adding a screening electrocardiogram (EKG) to the standard pre-participation physical evaluation with hopes to improve detection of heart abnormalities that may increase an athlete's risk of SCA. Some signs to be aware of include fainting or passing out during exercise; chest pain with exercise; excessive shortness of breath with exercise; palpitations (heart racing) for no reason; and unexplained seizures.

(Source: <https://thesportsinstitute.com/sudden-cardiac-arrest-know-the-danger/>)

GAME CHANGER FOR ATHLETES: Physicians are realizing that cardiac issues can be managed to help patients continue playing sports. Research from Elijah Behr, MD, a cardiologist at Mayo Clinic Healthcare in London has assessed the actual risks of cardiac arrest in young athletes with heart conditions, which includes discoveries about long QT syndrome, a heart rhythm disorder that can cause fast, chaotic heartbeats. One device that can help athletes return to play after cardiac arrest is an implantable cardioverter-defibrillator. It takes electronic readings from the heart and determines whether a life-threatening rhythm is occurring, then delivers an electrical shock to return the heart rhythm to normal. "It is possible, if there has only been minor damage to the heart or no damage at all, for an athlete to return to normal functioning and performance. It very much depends on the condition and its severity," Dr. Behr says. Research into sudden death in young athletes and nonathletes has suggested that it may be twice as frequent in athletes and is thought to be because of extreme exertion in people with underlying heart conditions.

(Source: <https://newsnetwork.mayoclinic.org/discussion/new-game-mayo-clinic-healthcare-expert-explains-changing-approach-to-heart-issues-in-athletes/>)

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