

Student-Athlete Screening Guidance

Sparrow's Pediatric Cardiologists are extensively trained in diagnosing and treating children's cardiac problems.

We use state-of-the-art equipment specially designed for younger Patients, are experienced with heart conditions unique to children and perform tests on children in the most caring and least stressful way.

Sudden cardiac death in student-athletes

The incidence of sudden cardiac death (SCD) among high school athletes is unknown. Estimates range from one in 23,000 to one in 300,000. It typically results from either a congenital or acquired heart abnormality. Intense exercise can trigger SCD in susceptible individuals although there is no evidence that SCD is more common in athletes than in the general population. Activity restriction is advised for some heart conditions. Although not reviewed here, preparedness for a sudden cardiac arrest (SCA) at practices and games (secondary prevention) is an important consideration in addition to the screening (primary prevention) measures outlined below.

Screening

The goal of screening for cardiac abnormalities is to improve detection and to minimize sports-associated cardiac risk. Few young athletes have heart conditions, which statistically limits the benefit of screening. False positive and false negative findings are a concern. With this in mind, the American Heart Association recommends performing a targeted personal and family history and physical examination.

This screening approach includes 14 key elements designed to detect cardiac abnormalities that could increase risk. Cardiac evaluation is considered if one or more suggests an abnormality:

Personal History

- » Chest pain or discomfort with exertion
- » Unexplained fainting or near-fainting
- » Excessive and unexplained fatigue with exertion
- » Significant heart murmur
- » High blood pressure
- » Prior restriction from sports participation or prior heart testing ordered by a healthcare provider (if abnormal or if results are unavailable)

Family History

- » Close relative with heart disease before age 50
- » Certain cardiac conditions in family member(s): such as cardiomyopathy, long QT, Marfan syndrome, significant arrhythmias.

Physical Exam

- » Blood pressure
- » Physical appearance of Marfan syndrome
- » Pathologic heart murmur
- » Femoral pulses (to exclude narrowing of the aorta)

AHA Recommendations

For information about SCA screening or preparedness, contact:

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The AHA recommends screening with a targeted personal and family history and physical examination. The key elements above are designed to raise the suspicion for cardiac abnormalities that may place student-athletes at risk. Those with positive findings or red flags are referred for further evaluation.

The AHA does not recommend routine testing (e.g., ECG, echocardiogram). Rather, tests are considered when screening suggests cardiovascular abnormalities.

If local organizations offer cardiovascular screening, the program should be accessible to all children, regardless of financial means, and have adequate resources and medical personnel support, including pediatric cardiology providers. The program's performance and outcomes should be tracked to monitor the proportion of positive screens, the number of children restricted or delayed from participating, and what follow-up took place. The practical aspects of referrals and the utility of additional studies should be systematically reviewed.

Expansion of screening programs should have a scientific basis and/or be evidence-based.

Training and continuing education to standardize provider knowledge of screening guidelines should be available.

Source

American Heart Association

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