

Delays Can Be Deadly in Young Athletes With SCA

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ATLANTA — Automated external defibrillators can be a lifesaver in sudden cardiac arrest, the No. 1 cause of death in young athletes, but planning, preparation, and education are essential.

“The single most important determinant of survival is the time from cardiac arrest to defibrillation,” Dr. Jonathan A. Drezner said at a press conference held

during a meeting of the National Athletic Trainers’ Association.

Without CPR, survival decreases by 10% with every minute that passes without defibrillation, according to Dr. Drezner of the University of Washington in Seattle.

Between 40% and 70% of people with sudden cardiac arrest (SCA) survive if treated with CPR and an automated external defibrillator (AED). In contrast, survival rates after SCA in young athletes are much lower, around 10%-15%. Possible

explanations for this discrepancy include a delayed recognition of SCA and delayed defibrillation; only 25%-50% of schools have an AED.

To improve these outcomes, an interassociation task force, cochaired by Dr. Drezner and Ron Courson, director of sports medicine at the University of Georgia, Athens, has developed formal guidelines to help schools and other organizations prepare for SCA and to manage it should it occur.

The guidelines suggest that all collapsed and unresponsive athletes should be treated as if they have SCA until they demonstrate otherwise. The collapsed person should receive CPR until the AED arrives, though this wait should be as short as possible. The first shock from an AED should be applied within 3-5 minutes of the collapse.

This rapid response requires that the AED is easily accessible from every venue; that individuals know where it is and can retrieve it quickly; and that someone is trained in using the device.

“Our recommendation, consistent with the American Heart Association, supports an AED program in any school where the time from activating the emergency response system to the delivery of a shock will be greater than 5 minutes,” Dr. Drezner said.

The guidelines state that all schools and institutions that sponsor athletic activities should have a written and structured

emergency action plan specific to each venue. Components of the plan should include communication, personnel, equipment, and transportation to an emergency facility. Education is another component of the plan; all first responders should be trained in AED and CPR.

It is important that EMS personnel, school officials, and first responders are involved in the development of the plan, and that, just as with fire drills, these procedures are practiced by the individuals who would be involved in an actual incident.

The first responder should resume chest compressions immediately after the first shock. The guidelines recommend repeat rhythm analysis after 2 minutes or five cycles of CPR until advanced life support arrives or until the person begins moving.

SCA is relatively uncommon in the United States, with incidence rates between 1:50,000 and 1:200,000. However, when a child dies from SCA the impact can be catastrophic, affecting not only the child’s family, but the entire school and community.

Complete prevention is difficult because in many cases, occult heart disease goes undetected with no signs or symptoms until the SCA occurs. Preparticipation screening is not likely to detect hypertrophic cardiomyopathy, the abnormality usually associated with SCA.

Moreover, SCA also can occur after a blow to the chest above the heart (commotio cordis). Although proper equipment can minimize the chance of this developing, a small risk remains. Since 1998, 70 children aged 4-18 years have died from commotio cordis, according to a national registry.

THINK **COPD** FIRST: Factors to consider

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Chronic obstructive pulmonary disease (COPD) is a prevalent and important health concern.¹ Patients can benefit if physicians diagnose and treat this progressive disease, but COPD is usually not identified in patients until it has advanced to moderate severity levels.²

► Smoking: The most common cause of COPD¹

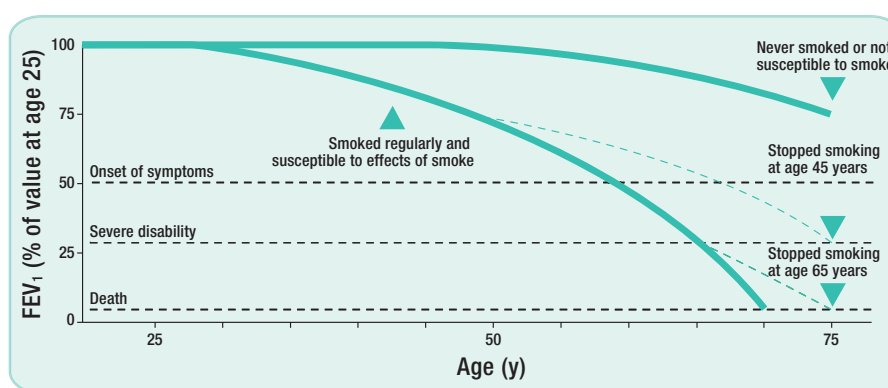
When you see a patient with breathing problems who is also a smoker, think COPD first. That’s because smoking causes approximately 80% to 90% of COPD cases.³

► Identifying COPD

Due to the prominent role smoking plays in the development of COPD, physicians should consider COPD in patients 45 years of age or older⁴ with a history of smoking and respiratory symptoms.¹ These include chronic cough,¹ sputum production,¹ dyspnea,^{1,2} and wheezing.² Patients with COPD may also report that they are unable to perform daily activities.² Sometimes, COPD is misdiagnosed as asthma—but COPD is actually more common than asthma in patients 45 years of age or older.⁴ When diagnosing COPD, it’s important to keep in mind that it can present as chronic bronchitis or emphysema^{5,6}; in fact, most COPD patients have both.^{5,6} Diagnosis should be confirmed with spirometry.^{1,2}

► Proper COPD diagnosis leads to appropriate intervention

Patients diagnosed with COPD should be advised to stop smoking. Since airway narrowing is a component of chronic bronchitis and emphysema, effective bronchodilation is required for both.^{2,7} Evidence-based guidelines state that bronchodilators are central to the treatment of COPD.^{1,2}



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By “thinking COPD first,” physicians can intervene earlier and treat patients with COPD appropriately.

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