

Sports Shorts

For Parents

Update On Lindsay's Law

Sudden Cardiac Arrest in Athletes

Steven Cuff, MD, FAAP

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Ohio Senate Bill 252, known more commonly as Lindsay's Law, went into effect in Ohio in 2017. It is named for national heart health advocate and former Miss Ohio Lindsay Davis and aims to protect young athletes from sudden cardiac arrest (SCA). It applies to middle school and high school athletes, in both public and private schools, as well as those involved in youth sports organizations.

There are 3 main components to the law:

- 1) It mandates education for athletes, parents and coaches regarding the common signs, symptoms and risk factors of SCA
- 2) It describes a protocol for the assessment, clearance, and return to sports for athletes who have passed out prior to, during, or following athletic activity.
- 3) It defines which healthcare providers can evaluate and make clearance decisions related to SCA.

According to the law, any athlete who passes out in relation to sports or activity should be removed from play and not allowed to return until evaluated and cleared in writing by an authorized provider. In addition, any athlete whose biological parent, sibling, or child has experienced SCA should be held from play if the athlete has not been previously evaluated.

Other symptoms concerning for heart disease which should be evaluated by a trained health care provider include:

- Chest pain or discomfort with exercise
- Unusual or Unexplained fatigue with exercise
- Excessive shortness of breath with exercise
- Feeling like heart is beating irregularly or a racing heart

Coaches must complete Ohio Department of Health approved training, which includes a video and written handout, on an annual basis. Parents and athletes are required to perform similar training and submit a signed information sheet each year.

Since its implementation, Lindsay's Law has increased awareness regarding SCA throughout Ohio. This is important because while rare, SCA can be difficult to both prevent and to treat.

In Ohio, any athlete participating in school sponsored sports is required to have a Pre Participation Physical Evaluation (PPE or sports physical) each year. The PPE should ideally be performed by the athlete's primary care provider, as they are most likely to be fa-

miliar with the athlete's medical history. Unfortunately, even with a detailed personal and family history and physical exam, underlying cardiac issues can be difficult to detect. Often an athlete has no signs or symptoms prior to SCA. Some groups advocate for advanced cardiac screening (for example with ECG or cardiac echocardiogram) as part of the PPE process. While advanced screening can be helpful, there are downsides as well (such as disqualification of healthy athletes, cost) that have to this point kept it from becoming universally adopted.

Other risk factors for SCA (taken from the ODH fact sheet on Lindsay's Law SCA) include:

- Prior history of a heart murmur
- High blood pressure
- Family history of a relative with early or premature death that is sudden and unexplained, before age 50 because of heart disease. This may present as sudden death due to a single car accident or drowning which are suspicious for heart disease.
- Disability from heart disease in a close relative younger than 50
- Specific knowledge of certain heart conditions in family members: Hypertrophic or dilated cardiomyopathy, Long QT Syndrome, Brugada syndrome, Marfan's syndrome or significant rhythm problems

The key to treatment of SCA is rapid response time. The single greatest factor in determining survival in out of hospital cardiac arrest is the time from arrest to defibrillation. Therefore it is crucial that schools and youth sports organizations establish and post an Emergency Action Plan (EAP). All facilities should be equipped with an Automated External Defibrillator (AED) that can be quickly accessed. The EAP should be practiced by coaches, athletes and medical staff so that everyone is familiar with what to do in the case of an emergency. If SCA occurs, proper protocol is to call 911, begin CPR and immediately retrieve the AED and follow prompts as soon as possible.

For more information on Lindsay's Law and SCA, access the ODH website at:

odh.ohio.gov/wps/portal/gov/odh/know-our-programs/Lindsays-Law/welcome/



Sports Shorts *For Pediatricians*

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There are 3 main components to the law:

- 1) It mandates education for athletes, parents and coaches regarding the common signs, symptoms and risk factors of SCA
- 2) It describes a protocol for the assessment, clearance, and return to sports for athletes who have syncope prior to, during, or following athletic activity.
- 3) It defines which healthcare providers (physicians, certified nurse practitioners, clinical nurse specialists, certified nurse-midwives, licensed physician assistants, and licensed athletic trainers) can evaluate and make clearance decisions related to SCA.

According to the law, any athlete who exhibits syncope related to sports or activity should be removed from participation and not allowed to return until evaluated and cleared in writ-

ing by an authorized provider. In addition, any athlete whose biological parent, sibling, or child has experienced SCA should be held from participation if the athlete has not been previously evaluated.

Coaches must complete Ohio Department of Health approved training, which includes a video and written handout, on an annual basis. Parents and athletes are required to perform similar training and submit a signed information sheet each year.

Since its implementation, Lindsay's Law has increased awareness regarding SCA throughout Ohio. This is important because while rare, SCA can be difficult to both prevent and to treat.

Any athlete participating in school sponsored sports is required by the Ohio High School Athletic Association to have a Pre Participation Physical Evaluation (PPE or sports physical) each year. The PPE should ideally be performed by the athlete's primary care provider. Unfortunately, even with a detailed personal and family history and physical exam, underlying cardiac issues can be difficult to detect. Often an athlete has no signs or symptoms prior to SCA. Some groups advocate for advanced cardiac screening (for example with

ECG or cardiac echo) as part of the PPE process. While advanced screening can increase sensitivity, there are downsides as well (false positives, cost) that have to this point precluded it from becoming universally adopted.

The key to treatment of SCA is rapid response time. The single greatest factor in determining survival in out of hospital cardiac arrest is the time from arrest to defibrillation. Therefore it is crucial that schools and youth sports organizations establish and post an Emergency Action Plan (EAP). All facilities should be equipped with an AED that can be quickly accessed. The EAP should be practiced by coaches, athletes and medical staff so that everyone is familiar with what to do in the case of an emergency. If SCA occurs, proper protocol is to call 911, begin CPR and immediately retrieve the AED and follow prompts as soon as possible.

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