

# Experts Alarmed Over 13 High School Football Deaths This Season

Dr. Robert Cantu, who researches catastrophic sports deaths, tells PEOPLE, "Even one death is too many"



*This story is part two of a three-part PEOPLE series on high school football deaths. The mother of late football player Tyrell Cameron also [spoke to PEOPLE](#) about losing her son – and forgiving the player involved in the fatal collision on the field.*

For freshman [Tyrell Cameron](#), it was a fractured neck after being hit during a punt return. [Ben Hamm](#) took a hit to the head. The same was true for [Kenny Bui](#) and [Andre Smith](#).

Cam’Ron Matthews felt [woozy](#) before he collapsed on the sidelines. Evan Murray also felt woozy, this following a hit to his stomach, while [Luke Schemm](#) collapsed on the sidelines soon after he got hit [a final time](#).

Within hours or days of their respective collisions or tackles, all seven of these high school football players were dead.

In all, 13 high school and one youth football players have died since July 1, to according to Doug Casa, Ph.D., the chief executive officer of the [Korey Stringer Institute](#) at the University of Connecticut, which researches sudden death in sport.

Seven of the deaths have been linked indirectly to the sport, with causes including cardiac conditions, heat stroke and exertional sickling (a medical emergency occurring in athletes carrying the sickle cell trait), says Casa, director of athletic training education, department of kinesiology at the University of Connecticut.

“Nearly all non-traumatic deaths in sport,” says Casa, “are preventable.”

On July 7, for example, 14-year-old Collin Kelly, a sophomore at Pike High School in Indiana [died one day](#) after passing out at a conditioning practice. The Marion County Coroner’s Office determined that Kelly died of heatstroke suffered at the practice.

“You can’t think of a bigger tragedy than a heatstroke death because all you need is ice water and a tub,” Casa says. “Imagine parents finding out their child dies and it was a \$150 tub and ice and water that the school had, it’s the difference between their child living and dying.”

The deaths related to on-field injuries make Robert Cantu, M.D., medical director for the [National Center for Catastrophic Sport Injury Research](#) at the University of North Carolina-Chapel Hill “very concerned personally,” he says.

## How a Second Concussion Can Prove Fatal

Cantu, a professor of neurosurgery at the Boston University School of Medicine, thinks that several of the direct deaths – those related to on-field play – sound like they may be second impact syndrome: acute, sometimes fatal brain swelling that occurs when a second concussion is sustained before complete recovery from a previous concussion.

It is “a preventable condition and it would be a real tragedy if that were really the situation,” Cantu says.

An astounding 70% of high school athletes with concussions played despite their symptoms, and 40% reported that their coaches didn’t know of the injury, according to a 2014 study in the American Journal of Sports Medicine. Many players don’t reveal injuries, says Cantu, since they know it may keep them from playing or disappoint their teammates.

However, “it’s only as important as life and death,” Cantu says of a football player participating with the symptoms of concussion. (A [concussion](#) is an injury to the brain that produces a temporary loss of brain function with symptoms including dizziness, lightheadedness, confusion, headache and vision changes. Usually, nothing will be seen from an imaging test.)

“You are setting yourself up for the second impact syndrome, which has a 50 percent mortality rate if it happens,” Cantu says. “And, unfortunately, it has an almost 100 percent morbidity rate meaning even if you survive, you survive with neurologic deficits.”

Senior wide receiver Kenney Bui of Evergreen High School in Burien, Washington, had suffered a concussion [one month](#) before a game on October 2, for which a doctor cleared him to play. In the fourth quarter, when Bui seemed dazed, an ambulance took him to the hospital, where he died three days later. [An autopsy](#) found that he died of blunt force trauma to his head.

With great concern about concussions and the safety of football, one school board in Missouri [disbanded its football program](#) earlier this year.

As shocking as these deaths are, however, the rate is far lower than its peak in 1968, when 26 high school players died from on-field play, according to a recent [NCCSIR](#) report.

The past ten years have had between zero and 8 deaths per year directly attributable to playing the game, per the NCCSIR report. In 2013, for example, eight players died from injuries sustained on the field, a rate of .73 deaths per 100,000, while last year five high school and one college player died, a rate of 0.45 per 100,000.

## Why Is This Happening to High School Players?

Some 1.1 million high school students are playing football as compared to 100,000 playing at the college and pro levels, according to the NCCSIR. Yet even with those huge numbers of players in high school, a 2007 study in [The American Journal of Sports Medicine](#) found that the incidence of catastrophic head injuries in football is dramatically higher at the high school level than at the college level. The researchers concluded that, “an unacceptably high percentage of high school players were playing with residual symptoms from a prior head injury.”

Cantu, an author of the 2007 study and who published 2012’s [Concussion and Our Kids](#), says the still-developing brains of high school athletes makes them more vulnerable to catastrophic head injuries as compared to players in the NFL.

Yet he notes that it’s the younger players who hit the most, “which is crazy,” he says.

“The coaches of those younger players say ‘you have to teach them,’ but you don’t have to teach them by bashing heads. The way practice is conducted and how frequently you hit needs to change.”

Another factor contributing to these deaths is the lack of athletic trainers (highly-trained medical personnel) at all practices and games, says Casa.

## The Importance of First Responders

Despite high school football accounting for the vast majority of catastrophic injuries, just 37 percent of high school have a fulltime athletic trainer, and only 50 percent have a trainer at all practices and games, according to a [recent study](#) in the Journal of Athletic Training.

“What you do in the first 5 or 10 minutes will dictate if the athlete lives or dies,” says Casa, of the study’s authors. “We can’t just call an ambulance and put our hopes on EMS or an EMT, we can’t put our hopes on the ER doc. The initial care needs to be resolved on the field.”

The most common causes of death in high school athletes, according to the Korey Stringer Institute, include heat stroke, cardiac arrest and head, neck and spinal injuries.

“If you look at indirect deaths, the deaths are almost always preventable,” Casa says. “If an AED [automated external defibrillator] is placed within a minute, 90 percent of cardiac cases survive. With heat stroke, if you cool a person down properly, 100 percent survive.”

Casa, an author of the NCCSIR study, notes that while direct deaths have seen a decrease since the 1960s, “we are in the middle of a four decade rise in indirect deaths.

“When it comes to cardiac, heat stroke and sickling death, it is without question getting more dangerous to play football,” he says.

“But those are preventable, it’s not necessarily the sport of football, it’s not because two people run into someone on a field, it’s what we’re doing in terms of conditioning and not having proper education for coaches, they’re not doing smart things in their training.”

## **Pre-Existing Conditions**

“Any death of a young athlete is a tragedy, it is emotionally heart rending and absolutely horrible,” says Dr. Doug Zipes, a cardiologist and distinguished professor, Indiana University School of Medicine, who helped write the American Heart Association’s recently updated [guidelines](#) for athletes with heart problems.

There has been a debate among experts on the extent of screening athletes for cardiac problems, on top of their required physical examinations, he says.

“Some places add an electrocardiogram or other things but adding those things has not been cost-efficient and they lead to false negative and false positive diagnosis,” he says.

“The electrocardiogram can look normal and someone can still have heart problems, or the electrocardiogram can look abnormal and someone doesn’t have heart problems. The issues are complex.”

Zipes calls for AEDs at all practices and athletic events. “Knowing we have difficulty identifying the athlete at risk, let us be prepared to respond to that athlete who does have sudden cardiac death and the best response is a defibrillator,” he says. “And if that is applied to an athlete within minutes, we can save that life.”

Cantu bemoans the current system of finding the cause of death with football players who die after on-field play, as it is up to a medical examiner, not a neuropathologist, who is highly trained in determining causes of death on the field.

In light of the high school football deaths this year, two congressmen last week introduced [legislation](#) that would require the Centers for Disease Control and Prevention to take some action.

“We desperately need a mechanism that would allow experts to examine each of these fatalities so we could be absolutely about what caused them,” Cantu says, adding that even one death, “is too many.”