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Getting to the Heart of the Matter: Should NCAA Require EKG Testing?

New research shows that sudden cardiac death strikes one in 5,200 males in Division I basketball



PHOTO: ASSOCIATED PRESS

By **SHARON TERLEP**

Updated May 27, 2015 6:27 p.m. ET

New research showing that sudden cardiac death strikes one in 5,200 males in Division I basketball is likely to intensify one of the hottest debates in college sports: Should NCAA athletes undergo electrical cardiac screening?

The research, from a study published this month in *Circulation*, a journal of the

American Heart Association, supports the position that the NCAA's top doctor, Brian Hainline, took in March, when he announced plans to recommend that colleges require EKG testing for college basketball players. The wrinkle for Hainline is that a month later—in a concession to physicians opposed to EKG screening of athletes—he reversed course, saying he wouldn't make such a recommendation.

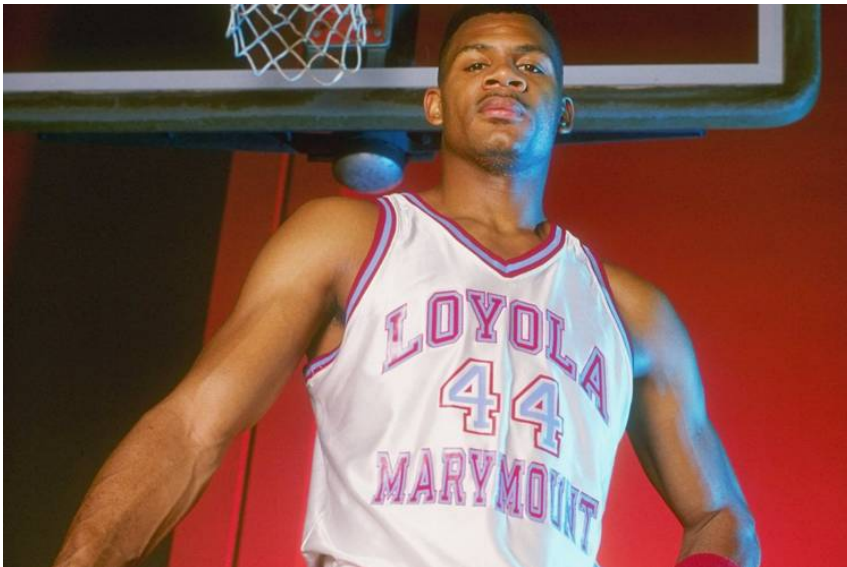


Now, Hainline says the new study confirms his belief that the issue deserves attention. “My contention—backed by data—is that we can no longer choose to call sudden cardiac death a rare NCAA student-athlete event,” said Dr. Hainline, a neurologist who became the NCAA's first chief medical officer in 2013.

Even opponents of mandatory EKG screening of college athletes acknowledged that the rate of basketball-player death reported in the new study is alarming. “The death rate of one in 5,200 basketball players per year continues to astound me,” says Paul Thompson, chief of cardiology at Hartford Hospital in Connecticut. At that rate, he notes, “a varsity basketball player has a (one in 1,300) chance of dying before graduation.”

The new study is based on autopsies, death certificates and other research on 79 cases of sudden cardiac death in NCAA athletes over the last decade. Ten of the 79 were male basketball players. “As we keep looking at this we are going to find more and more evidence that will support what we are saying,” said lead author Kimberly Harmon, a University of Washington sports-medicine physician who advocates EK screening for some or all college athletes. EKG, or electrocardiogram, is a noninvasive test that can detect many of the causes of sudden cardiac death.

But other physicians remain unconvinced, arguing that widespread screening could lead to unnecessary and possibly risky medical interventions that could sideline athletes for conditions that might never have caused problems. Some also questioned whether the new study, despite winning publication in a peer-reviewed American Heart Association journal, might employ science in the service of its authors' pro-screening sympathies.



Loyola Marymount's Hank Gathers died of a heart ailment in 1990. PHOTO: TIM DE FRISCO/ALLSPORT/GETTY IMAGES

“Even in science there can be agendas that drive and influence the debate,” said Barry Maron, a Minneapolis cardiologist and chief author of a recent AHA statement that argues against mandatory EKG screening in favor of a standard physical and 14-point questionnaire.

The debate over EKG screening of athletes includes widespread disagreement over how many young athletes fall prey to sudden cardiac death. Some published research has put the rate at one in 200,000. Other studies have pointed to rates twice that high. No credible tracking system has existed, although NCAA numbers have been somewhat easier to track because these deaths are higher profile and because the pool of college athletes is much smaller than in high school. Some research has suggested that the rate of sudden cardiac death in NCAA athletes is about one in 100,000. But in 2011 Harmon and her fellow authors made a splash with a study, also published in *Circulation*, finding a rate of death in NCAA athletes of one in 44,000. The study also provided new evidence that the problem is less common in some sports than others, particularly basketball.

But

MORE ON NCAA HEALTH REFORM

- In the NCAA, a Push to Reform Health Standards (<http://www.wsj.com/articles/in-the-ncaa-a-push-to-reform-health-standards-1425414886?tesla=y>)
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- The NCAA's Drug Problem (<http://www.wsj.com/articles/the-ncaas-drug-problem-1426792929>)

critics of that study called it seriously flawed. The research didn't include forensic evidence from medical examiners and lacked the expertise of cardiologists, they said, noting that Harmon and fellow author Jonathan Drezner are sports-medicine physicians, not heart specialists. Asserting that the Harmon paper failed to incorporate autopsy results, Maron said he suspected that Harmon's data erroneously counted as cardiac deaths incidents due to drug overdoses and other causes. "They overestimated the rates and it took off like a projectile," Maron said in a recent interview.

This time, Harmon and Drezner made certain to include several cardiologists among their fellow authors. They also based the new study on autopsy results that were reviewed by a panel of experts, which included a cardiovascular pathologist. The latest study, which covers data from 2003 to 2013, produced rates slightly lower though similar to her earlier work, which included data from 2004 to 2008. The new figures say sudden cardiac death strikes about one in 54,000 athletes.

"I knew the original article was solid and the methodology was solid, but this does address some of the criticisms," said Harmon.

Harmon's earlier research was a big factor in Hainline's desire to press for testing. He said he became convinced after seeing the numbers that sudden cardiac death wasn't nearly as rare a phenomenon in athletes as the anti-screening camp believed. He said he has no plan to recommend mandatory screening in light of the new data.

He told The Wall Street Journal earlier this year that he was preparing to recommend that male basketball players, and possibly other high-risk groups, be required to undergo an EKG to search for cardiac defects. Schools wouldn't be obligated to follow such a recommendation, but legal experts and school officials said that declining to do so could place a school at risk of legal exposure if an athlete fell dead.

The Journal story about Hainline's plan led some 100 university team physicians to sign a petition calling on him to change his mind. Though he did so, he remains determined to keep pressing for more attention to the issue. On his watch, the NCAA last August began requiring its member schools to report athlete deaths. Hainline, who is close to putting out new guidelines on addressing cardiac death in athletes, said the debate underscores the need for better research around the issue.

EKG testing, which tests the electrical soundness of the heart, already is performed by America's professional sports leagues. It is also endorsed by various sports and

medicine groups, including the International Olympic Committee and European Society of Cardiology.

NCAA schools in growing numbers already are conducting such tests. A Wall Street Journal survey of the 65 schools that comprise the NCAA's so-called power-five conferences found that more than half now require athletes to undergo either an EKG or an echocardiogram, which studies the structural soundness of the heart.

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