

# NCAA mandatory sickle cell screening program not enough to save athletes' lives

December 12 2011

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In response to a lawsuit after a college football player died from complications due to sickle cell trait (SCT) during a workout, the NCAA implemented mandatory SCT screening of all Division I student-athletes.

A new study evaluated the impact of that policy and found that testing alone will help identify more than 2,000 [athletes](#) with SCT, but warns that [screening](#) alone will not prevent death.

"Although the policy is well-intentioned, screening is just the first step," says Beth A. Tarini, M.D., M.S., lead author of the study and assistant professor in the Department of [Pediatrics](#) and [Communicable Diseases](#) at the University of Michigan. "In addition to educating athletes and staff, precautionary measures need to be strictly enforced."

Tarini and her co-authors, M. Alison Brooks, M.D., a pediatric [sports medicine](#) physician at the University of Wisconsin, and David G. Bundy, M.D., an assistant professor of pediatrics with expertise in sickle cell disease at Johns Hopkins University, found that without a strictly enforced intervention, approximately seven NCAA Division I athletes would die suddenly as a complication of SCT during a 10-year period.

"In the end, enforcing safe training measures to protect all NCAA student-athletes—not just those in Division I—from sudden death related to SCT will benefit all athletes," says Tarini. "That's a win-win situation from a policy perspective."

The association between SCT and overexertion was first identified by the U.S. military in the 1970s. Instead of implementing a universal screening policy, the military enforced a universal intervention program and was successful in preventing all subsequent sudden death in recruits with SCT.

Tarini, Brooks, and Bundy found that the NCAA screening program requires that 144,181 student-athletes from a four-year cohort would need to be screened to prevent one death—assuming 100 percent intervention—and would cost somewhere between \$1.4 and \$3 million. A universal intervention policy like the one implemented in the U.S. military could prevent all deaths associated with SCT and overexertion as well as death among other athletes from other life-threatening complications like cardiovascular conditions.

"The culture in sports to push ourselves dangerously beyond our limits is powerful," says Tarini. "Implementing policies to identify those at risk provides a false sense of security if we aren't diligent about monitoring and protecting the health and safety of our student-athletes."

Tarini and colleagues analyzed NCAA reports, population-based SCT prevalence estimates, and published risks for exercise-related sudden deaths. They used these to estimate the number of sickle cell carriers and the number of potentially preventable deaths with mandatory SCT screening of NCAA Division I athletes. Using the most recently published, publicly available [NCAA](#) participation rates from academic year 2007-2008, they estimated the number of Division I athletes in a four-year cohort to be 81,073 males and 63,108 females.

Provided by University of Michigan Health System

Citation: NCAA mandatory sickle cell screening program not enough to save athletes' lives

(2011, December 12) retrieved 2 May 2024 from <https://medicalxpress.com/news/2011-12-ncaa-mandatory-sickle-cell-screening.html>

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