National Athletic Trainers' Association

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FACT SHEET:
"SICKLE CELL TRAIT AND THE ATHLETE" CONSENSUS STATEMENT RELEASED BY NATIONAL ATHLETIC TRAINERS' ASSOCIATION (NATA)

Background: Leading national and local health care professionals have released an inter-association task force consensus statement with recommendations for athletes with sickle cell trait. The task force was spearheaded by the National Athletic Trainers' Association (NATA).

An electronic version of the statement is available at http://www.nata.org/statements/consensus/sicklecell.pdf.

In the past seven years alone, collapse during exercise due to sickling has killed nine athletes. Of 136 sudden, nontraumatic sports deaths in high school and college athletes over a decade, 5 percent were due to exertional sickling.

Purpose: The purpose of the consensus statement is to raise awareness of this condition and provide measures to reduce the risk of exertional collapse related to sickle cell trait.

Background: Sickle cell trait is the inheritance of one gene for sickle hemoglobin and one for normal hemoglobin. During intense or extensive exertion, the sickle hemoglobin can change the shape of red blood cells from round to quarter-moon, or "sickle." This change, exertional sickling, can pose a grave risk for some athletes.

The sickle gene is common in people whose origin is from areas where malaria is widespread. Over the millennia, carrying one sickle gene fended off death from malaria, leaving one in 12 African-Americans with sickle cell trait. The sickle gene is also present in those of Mediterranean, Middle Eastern, Indian, Caribbean and South and Central American ancestry, one reason for the required screening of all newborns in the United States.

Task Force Consensus: The consensus of the task force is as follows:

1. Athletes with sickle cell trait can participate in all sports.
2. Red blood cells can sickle during intense exertion, blocking blood vessels and posing a grave risk for athletes with sickle cell trait.

3. Screening and simple precautions may prevent deaths and help the athlete with sickle cell trait thrive in his or her chosen sport.
4. Efforts to document newborn screening results should be made during the pre-participation exam.
5. In the absence of newborn screening results, institutions should carefully weigh the decision to screen based on the potential to provide key clinical information and targeted education that may save lives.
6. Irrespective of screening, institutions should educate staff, coaches and athletes on the potentially lethal nature of this condition.
7. Education and precautions work best when targeted at those athletes who need it most; therefore, institutions should carefully weigh this factor in deciding whether to screen. All told, the case for screening is strong.

Speakers:

Scott Anderson, ATC, co-chair of the task force, is head athletic trainer at the University of Oklahoma.

E. Randy Eichner, MD, co-chair of the task force, is Professor Emeritus of Medicine at the University of Oklahoma Health Sciences Center and team internist for the university's intercollegiate athletics.

James "Scott" Galloway, ATC, has served DeSoto High School (DeSoto, Texas) as the head athletic trainer since 1999 and is an inter-association task force member. In 2002, a 14-year-old female African-American basketball player at the school died from sudden cardiac arrest during the first week of practice and conditioning drills due to widespread sickle thrombi associated with physical exertion and the sickle cell trait.

Devard Darling is a wide receiver for the NFL's Baltimore Ravens. He lost his twin brother, Devaughn, to complications of sickle cell trait in 2001 and also carries the trait.

About NATA:

Athletic trainers are unique health care providers who specialize in the prevention, assessment, treatment and rehabilitation of injuries and illnesses. The National Athletic Trainers' Association represents and supports 30,000 members of the athletic training profession through education and research. NATA advocates for equal access to athletic trainers for athletes and patients of all ages, and supports H.R. 1846. www.nata.org. NATA is participating in the Bone and Joint Decade (www.usbjd.org), the global initiative in the years 2002-2011 to raise awareness of musculoskeletal health to stimulate research and improve people's quality of life. President Bush has declared the years 2002-2011 National Bone and Joint Decade in support of these objectives. NATA, 2952 Stemmons Freeway, Ste. 200, Dallas, TX 75247, 214.637.6282; 214.637.2206 (fax).

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