

Special Populations in Athletics: Mental Health and Sickle Cell Trait

ADD / ADHD Management and Policy Development

ADHD is . . .

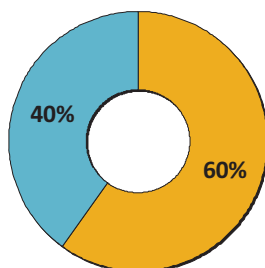
- . . . a neurobehavioral developmental disorder.
- It is the most commonly diagnosed psychiatric disorder in children affecting about 3 to 5% of children globally with symptoms starting before seven years of age.
- ADHD is characterized by a persistent pattern of impulsiveness and inattention, with or without a component of hyperactivity.
- ADHD is diagnosed twice as frequently in boys as in girls, though studies suggest this discrepancy may be due to subjective bias.

Signs and Symptoms

- Impulsiveness: acting before thinking of consequences, jumping from one activity to another, disorganization, tendency to interrupt other peoples' conversations.
- Hyperactivity: restlessness, often characterized by an inability to sit still, fidgeting, squirminess, climbing on things, restless sleep.
- Attention Issues: easily distracted, day-dreaming, not finishing work, difficulty listening, and motor clumsiness.

I am experiencing some of those S/S currently.

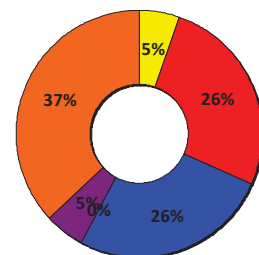
1. Yes
2. No



Yes No

We have "approximately" _____ student athletes Dx with ADHD

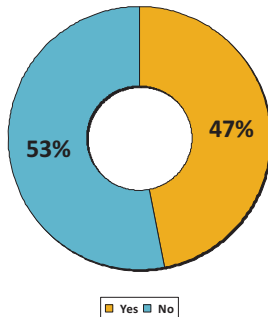
1. 0-5
2. 6-9
3. 10-15
4. 16-19
5. 20 or higher
6. Have no clue . . .



0-5 6-9 10-15 16-19 20 or high... Have no cl..

Did anyone have a positive drug test due to ADD / ADHD?

1. Yes
2. No



Procedures for Exceptions

- Alternative non-banned medications for the treatment of various conditions exist and should be considered before an exception is pursued.
- The use of an anabolic agent or peptide hormone must be approved by the NCAA before the student-athlete is allowed to participate in competition while taking these medications.

Requesting Medical Exemption

- The institution, through its director of athletics, may request an exception for use of an anabolic agent or peptide hormone by submitting to the NCAA medical documentation from the prescribing physician supporting the diagnosis and treatment.

Documentation Requirements / Medical Exception Procedure

- Evidence of comprehensive clinical evaluation
 - Recording Observations
 - Results from standardized ratings scales
 - Results from neuropsychological testing
 - Physical
 - Lab Results
- Simple statement from prescribing physician is not adequate documentation

Documentation Requirements / Medical Exception Procedure Continued

- Statement of diagnosis including confirmation date
- History of ADHS, ADD and / or like conditions
- Recommended treatment history including current prescription
- Statement that a non-banned ADHD alternative has been considered and why banned stimulant was prescribed
- Annual follow-up with prescribing physician and updated copy of medical record required in each year of eligibility

Medical Exception Process

- Unless requesting a review for the medical use of an anabolic agent or peptide hormone, a student-athlete's medical records or physicians' letters should not be sent to the NCAA unless requested by the NCAA.
- The use of any substance need not be reported to the drug-testing crew at the time of NCAA drug testing

Reporting

- In the event that a student-athlete is tested by the NCAA and tests positive for a substance for which the institution desires an exception, normal procedures for reporting positive test results will be followed .

Exception Process

- The institution, through its director of athletics, may request an exception at the time of notification of the positive drug test (A sample) by submitting to The National Center for Drug Free Sport the prescribing physician's letter and any other medical documentation demonstrating the need for regular use of the drug which the institution wishes to have the NCAA consider.

"Timely Filing"

- A medical exception will be considered by the NCAA and the student-athlete will remain eligible during this time if the institution has provided medical documentation to Drug Free Sport before the "B" sample is reported as positive, confirming the positive finding.

Medical Documentation

- Failure to provide medical documentation to Drug Free Sport before the "B" sample is reported as positive to the institution, the student-athlete will be withheld from competition until such time the documentation is received, reviewed and the medical exception granted.

Review Process

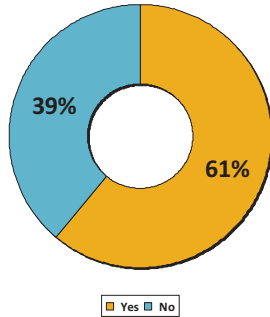
- Requests for exceptions will be reviewed by the chair of the drug-testing and drug-education subcommittee and the physicians of the NCAA Committee on Competitive Safeguards and Medical Aspects of Sports.

Reporting Decision

- Drug Free Sport will inform the director of athletics regarding the outcome of the exception request.

Are you prepared in the event that you need to provide information for the medical exception?

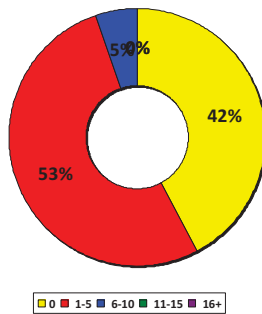
1. Yes
2. No



SCT Considerations and Policy Development

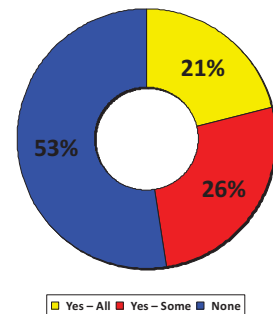
How many athletes do you know are SCT positive?

1. 0
2. 1-5
3. 6-10
4. 11-15
5. 16+



Do you currently screen for SCT?

1. Yes – All
2. Yes – Some
3. None



Background

- The Rice football student-athlete died in 2006 following practice at the university.
- Testing indicated his status as a carrier of the Sickle Cell Trait contributed to his death.
- The resolution settles a lawsuit the family filed against Rice and the NCAA.
- The NCAA's testing recommendation follows the latest guidelines from the National Athletic Trainers Association and the College of American Pathologists.
- Both NATA and CAP recommend screening for the Sickle Cell Trait if a student-athlete's status is not known.

Settlement



- Amend its Sports Medicine Handbook Guideline 3c to state that while Sickle Cell Trait screening is normally performed on all U.S. babies at birth, some student-athletes may not know if they have the trait.
- Following recommendations from NATA and CAP, the NCAA recommends athletics departments confirm Sickle Cell Trait status in all student-athletes, if it is not already known, during their required medical examinations.

Settlement Continued

- Donate \$50,000 to the Sickle Cell Disease Association of America in the name of Dale Lloyd II, which the family requested.
 - The association will use the funds to provide awareness, education and screening for Sickle Cell Trait in the athletics population.
- Contribute \$10,000 to the Dale Lloyd II Scholarship Fund.


Settlement Continued

- Prepare an educational video about Sickle Cell Trait to appear on the NCAA Web site and make it available to member schools.
- Stress Sports Medicine Handbook Guideline 3c as a point of emphasis in regular preseason communication with media before the 2009 football season and in the football rules book.

Sickle Cell Trait Preparticipation Screening Practices


Background



- Sickle cell trait (SCT) has been implicated in exercise associated morbidity/mortality in certain conditions
 - Rhabdomyolysis, renal failure, splenic infarction, sudden death
 - Elevation, high temperature/humidity
 - Athlete dehydration, lack of fitness, illness
- Many advocate screening
 - Early identification and interventions could prevent bad outcomes
 - No evidence based data exist to support better outcomes from screening athletes
 - Controversial (discriminatory? costly? liability?)

Eichner ER. Sickle cell trait, exercise, and altitude. *Physician Sports Med* 1986; 14 (11): 144-57
 Eichner ER. Sickle cell trait, heroic exercise, and fatal collapse. *Physician Sports Med* 1993; 21 (7): 51-64.


Background (Pre Lloyd Law Case)




- NCAA does **not** recommend screening
- Guideline 3c of the NCAA Sports Med Handbook
 - Points of consideration for SCT athletes
 - No restrictions on participation
 - Staff/athlete education, risk/genetic counseling
 - Avoid dehydration
 - Acclimatization to heat/humidity/altitude
 - Careful and gradual conditioning before exhaustive regimens
 - No exercise during illness, especially febrile
 - If screening is done, **must be voluntary** with informed consent, and should be **offered to ALL** athletes

Guideline 3c, NCAA Sports Medicine Handbook. Aug 2005. Guidelines developed by the Committee on Competitive Safeguards and Medical Aspects of Sports.

Results




- Final response rate: **77% (N=92)**
- **93.5%** of respondents said they are the one responsible for screening decisions or policy
- Good distribution of respondents across conferences
 - Sun Belt only conference with <50% participation





Results

- **64%** of responders screen for SCT
- Screening criteria
 - **21%** screen ALL athletes
 - 2 schools screen all athletes in specific sports
 - Football, basketball, track, soccer, cross country
 - Race/ethnicity
 - **76%** screen athletes of African descent
 - **33%** screen athletes of Mediterranean descent



Results


- Screening Criteria
 - Past Medical Hx
 - 61% rhabdomyolysis
 - 37% heat illness
 - 26% frequent cramping
 - Family history
 - **91%** screen with family hx of SCT/SCD

Results

- Reasons selected for screening
Instructed to pick 2 only

1. Sickie cell trait screening has always been done at my institution.	12%
2. To initiate preventive measures for sickie cell trait athletes.	80%
3. To aid early diagnosis of potential sickie cell trait related complications.	64%
4. The environmental conditions (high elevation, temperature, humidity, etc) at my institution could put those athletes at an increased risk for sickie cell trait related complications.	39%
5. Medical/legal liability reasons.	3%
6. Other	0%



Results


- Reasons selected for **not** screening
Instructed to pick 2 only

1. Lack of evidence based data supporting such screening.	72%
2. The NCAA considers it a generally benign condition.	13%
3. Cost prohibitive.	38%
4. The environmental conditions (elevation, temperature, humidity, etc) at my institution do not put sickie cell trait athletes at an increased risk for sickie cell trait related complications.	16%
5. Institutional concern that screening can be viewed as a "racist" practice, as African Americans are most commonly screened.	13%
6. Other.	27%





Results

- "Other" answers
 - Four said "We treat all athletes the same (as if SCT +)".
 - Two said, "Why screen if play status is not affected by results?"
 - One said, "No clear guidelines."
 - Another said, "Where do you draw the line?"




Results

- How is this information used by schools?
 - Staff notification (with consent)
 - Team physicians: 99%
 - Sport specific ATCs: 95%
 - Strength and conditioning coaches: 56%
 - Coaches: 48%
 - Other: 2% (parents, and hematologist)




Results

- How is this information used by schools?
 - Athlete risk counseling: **97%**
 - Genetic counseling: **60%**
 - Modify preseason workouts: **38%**




Results

- How is this information used by schools?
 - "Have you removed a sickle cell trait athlete from competition, practice, or workout because you were concerned they may be developing a dangerous condition secondary to their sickle cell trait status?"
 - **25%** answered "yes".
 - No sig. difference in the two groups.



Results

- Is previous experience a factor?
 - "Have you directly treated or diagnosed a serious condition that was likely secondary to an athlete's sickle cell trait status?"
 - **20** (22%) respondents answered "yes".
 - **95%** of these screen for SCT
 - P=0.001




Results

- Is community prevalence of SCT a factor?

Percent Distribution of the Black or African American Population by Region: 2000


Region	Percentage
South	55%
Northeast	19%
Midwest	17%
West	9%

Source: U.S. Census Bureau, Census 2000 Redistricting Data (Public Law 94-171) Summary File, Table PL1. <http://www.census.gov/prod/2003pubs/c2kbr01-5.pdf>





Results


- Is community prevalence of SCT a factor?
 - Southern states screen at a rate of **72.5%** compared to **57.7%** of others.
 - Trend did not reach significance
 - P=0.14



Results




- Is the environment a factor?
 - Schools with elevation **>4000 ft** screen at an increased rate of **78%** compared to **63%**.
 - Trend was not significant, P=0.37
 - N=9





Results

- Is the environment a factor?
 - Schools with average August heat index >95° F screen at rate of **76%** compared to **56%** of others
 - Trend approached significance
 - P=0.058



Results

- "...has your sports medicine staff had an in-service to discuss this topic in the last 5 years"
 - **47%** answered "yes"
 - 57% of those screening
 - 33% of those not screening
 - P=0.05



Conclusions

- Sickle cell trait screening during preparticipation with blood testing is common: **64% of respondents**
- Regional screening trends are possibly a combination of environmental factors and SCT prevalence.
- Personal exposure to SCT morbidity / mortality is the best predictor for physician screening.

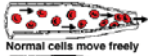
Conclusions

- SCT patients are being informed about their risks in the athletic setting (97%)
- Genetic counseling is less frequent (60%)
- Staff at many levels are being notified
 - ATCs 95%
 - S&C coaches 56%
 - Coaches 48%

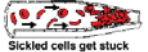



High Risk



- Data and trends suggest we are screening theoretically "high risk" athletes.
 - African Americans (76%)
 - Family history (91%)
 - Pertinent PMHx (rhabdo, heat illness)
 - At high elevation
 - With high heat/humidity



Normal cells move freely

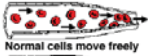


Sickled cells get stuck

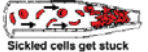



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Normal cells move freely



Sickled cells get stuck

Rule Changes

- The Division I Legislative Council decided that all Division I student-athletes must be:
 - tested for sickle cell trait,
 - show proof of a prior test or
 - sign a waiver releasing an institution from liability if they decline to be tested.
- The new rule will be in effect for the 2010-11 academic year.

Acknowledgement and Understanding

- Student Athlete aware of his / her condition
- Risk associated with his / her condition
- S / S associated with condition
- Importance of informing medical staff of S / S
- "Without fear of repercussion"

Just a thought

- If this is good for a college student-athlete, should it not be required at the secondary school level????????????????????

Thoughts / Questions / Comments