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High Point University Sickle Cell Policy

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The NCAA is mandating that all student-athletes must be tested for sickle cell trait, show proof of a prior test or sign a waiver releasing High Point University of liability if they decline to be tested. In accordance with this legislation, High Point University Athletic Training Department is mandating that all student-athletes must be tested for sickle cell trait, show proof of a prior test or sign a waiver releasing High Point University, its officers, employees and agents from any and all costs, liability, expense claims, demands or causes of action on account of any loss or personal injury that might result from non-compliance with the mandate of the NCAA and the High Point University Athletic Training Department.

Protocol for Athletes with Sickle Cell Trait

All athletes will be screened for hemoglobin S with the sickledex test, and positive results confirmed with hemoglobin electrophoresis. Any positive results will be managed with the following steps.

1) The athlete's sickle cell status will be communicated to all relevant parties:
- •The athlete
- •Parent/guardian if athlete a minor or if athlete desires them notified
- •Athletic trainers
- •Team physicians
- •Coaches

2) The athlete will have a counseling session with the team physician regarding the implications of his/her sickle cell status.

3) There is no contraindication to participation in sport for the athlete with sickle cell trait.

4) Appropriate precautions for athletes with sickle cell trait will require a combined effort involving the athlete, coaches and sports medicine staff.

Signs and Symptoms of Sickle Cell

1. Fatigue
2. Leg or low back muscle cramping
3. Leg or low back pain and weakness
4. Difficulty breathing
5. Dizziness
6. Nausea
7. Soft, flaccid muscle tone
8. Collapse early in exercise
9. Abdominal pain
10. Fever
11. Rapid heartbeat
12. Chest pain
13. Excessive thirst
14. Frequent urination
15. immediate symptoms with no early warning signs

The following precautions should be taken for athletes with sickle cell trait:

1) Build up slowly in training with paced progressions, allowing longer periods of rest and recovery between repetitions.

2) Encourage participation in preseason strength and conditioning programs to enhance the preparedness of athletes for performance testing which should be sports-specific. Athletes with sickle cell trait should be excluded from participation in performance tests such as mile runs, serial sprints, etc., as several deaths have occurred from participation in this setting.
3) Cessation of activity with onset of symptoms [muscle ‘cramping’, pain, swelling, weakness, tenderness; inability to "catch breath", fatigue].
4) If sickle-trait athletes can set their own pace, they seem to do fine.
5) All athletes should participate in a year-round, periodized strength and conditioning program that is consistent with individual needs, goals, abilities and sport-specific demands. Athletes with sickle cell trait who perform repetitive high speed sprints and/or interval training that induces high levels of lactic acid should be allowed extended recovery between repetitions since this type of conditioning poses special risk to these athletes.
6) Ambient heat stress, dehydration, asthma, illness, and altitude predispose the athlete with sickle trait to an onset of crisis in physical exertion.

- •Adjust work/rest cycles for environmental heat stress
- •Emphasize hydration
- •Control asthma
- •No workout if an athlete with sickle trait is ill
- •Watch closely the athlete with sickle cell trait who is new to altitude. Modify training and have supplemental oxygen available for competitions

7) Educate to create an environment that encourages athletes with sickle cell trait to report any symptoms immediately; any signs or symptoms such as fatigue, difficulty breathing, leg or low back pain, or leg or low back cramping in an athlete with sickle cell trait should be assumed to be sickling.

In the event of a sickling collapse, treat it as a medical emergency by doing the following:
1) Check vital signs.
2) Administer high-flow oxygen, 15 lpm (if available), with a non-rebreather face mask.
3) Cool the athlete, if necessary.
4) If the athlete is obtunded or as vital signs decline, call 911, attach an AED, start an IV (physician or EMS required), and get the athlete to the hospital fast.
5) Tell the doctors to expect explosive rhabdomyolysis and grave metabolic complications.
6) Proactively prepare by having an Emergency Action Plan and appropriate emergency equipment for all practices and competitions.

References:
1. NATA Consensus Statement: Sickle Cell Trait and the Athlete. 2007.