**Sickle Cell Trait (SCT) Education, Prevention, and Activity Modification**

Some people with SCT have been shown to be more likely than those without SCT to experience heat stroke and muscle breakdown when doing intense exercise, such as competitive sports or military training under unfavorable temperatures (very high or low) or conditions. Education and precautions can prevent sickle crises in athletes with sickle cell trait. Presence of the trait is an inherited condition, not a disease. It will not turn into Sickle Cell Anemia.

Studies have shown that the chance of this problem can be reduced by gradually increasing preseason training and conditioning, avoiding dehydration, and getting too hot during training. Student-Athletes with SCT should be careful when doing training or conditioning activities. Coaches need to be aware of athletes with this condition and be willing to monitor the student-athlete, and modify the activity to prevent a “Sickling episode”.

Student-Athletes with the SCT should never be disqualified from activity. Precautions can eliminate any potential problems. Below are guidelines to follow.

- Engage in a slow and gradual preseason conditioning regimen.
- Build up your intensity slowly while training.
- Encourage participation in preseason strength and conditioning programs to enhance preparedness for athletic practice and competition.
- Set your own pace. Use adequate rest and recovery between repetitions, especially during “gassers” and intense station or “mat” drills. Rest often.
- Avoid pushing with all-out exertion longer than two to three minutes without a rest interval or a breather.
- If you experience symptoms such as muscle pain, abnormal weakness, undue fatigue or breathlessness, stop the activity immediately and notify your athletic trainer and/or coach.
- Stay well hydrated at all times, especially in hot and humid conditions.
- Keep the body temperature cool when exercising in hot and humid temperatures by misting the body with water or going to an air conditioned area during breaks or rest periods.
- Avoid using high-caffeine energy drinks or supplements, or other stimulants, as they may contribute to dehydration.
- Maintain proper asthma management.
- Refrain from extreme exercise during acute illness, if feeling ill, or while experiencing a fever.
- Beware when adjusting to a change in altitude, e.g., a rise in altitude of as little as 2,000 feet. Modify your training and request that supplemental oxygen be available to you.
- Refrain from extreme exercise during acute illness, especially one involving fever.
- Seek prompt medical care when experiencing unusual physical distress.

**Individuals with the SCT also need to keep in mind the need for family counseling when he/she is considering planning to have children.**

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 L/m (if available), with a non-rebreather face mask
3. Cool the athlete.
4. Call 911 and get athlete to the hospital.
5. Tell the doctors of the presence of the SCT and to expect rhabdomyolysis.

For more information on Sickle Cell Trait and Athletics please visit:

- [www.nata.org/statements/consensus/sicklecell.pdf](http://www.nata.org/statements/consensus/sicklecell.pdf)
- [www.scinfo.org/sicklept.htm](http://www.scinfo.org/sicklept.htm)
- [www.ncaa.org/health-safety](http://www.ncaa.org/health-safety)
- [www.acsm.org](http://www.acsm.org)
- [www.cap.org](http://www.cap.org)
- [www.cdc.org](http://www.cdc.org)