NYACK COLLEGE SPORTS MEDICINE DEPARTMENT

SICKLE CELL TRAIT POLICY

As of August 2012, the NCAA requires all Division II student-athletes be tested for the Sickle Cell Trait as part of their pre-participation physical exam, prior to any intercollegiate athletic events, including strength and conditioning, practices, competitions, or try-outs (*by-law 17.1.5.1). Nyack College is in compliance with this mandate and requests that each prospective, incoming, and returning student-athlete provide the Office of Sports Medicine with documentation of their sickle cell trait status prior to any participation including try-outs. This is a once in a lifetime test, so documentation only needs to be obtained once. To help you understand this issue, some basic information is provided below, as well as a link to additional resources.

What is Sickle Cell Trait (SCT)?
Sickle Cell Trait is not a disease, but the inherited condition of the oxygen-carrying protein, hemoglobin, in the red blood cells. It is the inheritance of one gene for normal hemoglobin (hemoglobin A) and one gene for sickle hemoglobin (hemoglobin S). SCT IS NOT Sickle Cell Anemia, in which two abnormal genes are inherited (both hemoglobin S). SCT will not turn into Sickle Cell Anemia. SCT is considered generally benign and consistent with a long, healthy, active life.

Why test for SCT?
As stated above, SCT is usually benign, but during intense, sustained exercise, hypoxia (lack of oxygen) in the muscles may cause sickling of red blood cells (red blood cells changing from a normal disc shape to a crescent or “sickle” shape), which can accumulate in the bloodstream and “log-jam” blood vessels, leading to collapse and even death due to the rapid breakdown of muscles starved of blood and/or blocking blood flow to the tissues and muscles, including the heart.

During intense exercise, athletes with SCT have sometimes experienced significant physical distress (exertional sickling) and collapsed during rigorous exercise. Sickling can begin in 2-3 minutes of sustained, maximal exertion, such as wind sprints or running laps. The harder and faster the student-athlete goes, the earlier and greater the sickling. Exertional sickling is a medical emergency and should not be mistaken for heatstroke or heat cramping. Student-athletes experiencing any distress or unusual symptoms during training, should report them immediately to the Nyack College Sports Medicine Staff and coach. Heat, dehydration, high altitude, and asthma can increase the risk for and worsen complications associated with SCT, even when exercise is not intense.

Can Student-Athletes With SCT Participate in Intercollegiate Athletics?
Sickle cell trait does not preclude any student-athletes from participation. However, carrying the trait increases the health risk to the student-athlete during athletic participation. Therefore, that individual should be monitored carefully during activity. Student-athletes with SCT should not be excluded from participation, as precautions can be put in place, but most student-athletes with SCT don’t know they have it.


Who may have SCT?
Sickle cell trait is a common condition, affecting more than 3 million Americans. Although SCT is most predominant in African-Americans and those of Mediterranean, Middle Eastern, Indian, Caribbean, and South and Central American ancestry, persons of all races and ancestry may test positive for SCT.

How can I be tested for SCT?
SCT is diagnosed by a simple blood test. Also, today all 50 states have newborn screening programs that identify sickle cell trait status at birth, however not all states adopted screening in the same year (New York State started testing in 1975). If the student-athlete does not know their SCT status, they need to get a SCT test done over the summer.

Testing options include:
1. If you have already been tested, during neonatal care, obtain a copy of the test results from your health care provider.
   - If you were born in the United States after 1984 (states differ), you have most likely been tested at birth. To verify testing at birth the student-athlete can contact his or her primary care physician, their pediatrician at birth, or the hospital where he or she was born.
   - A written note from the doctor or marking their status on a physical form are not acceptable forms of documentation, you must bring a copy of the official results to the Nyack College Sports Medicine Staff.

2. Get tested through your primary physician. If your insurance covers it, go get tested as part of your pre-participation physical as prescribed by your doctor. A written note from the doctor or marking their status on a physical form are not acceptable forms of documentation, you must bring a copy of the official results to the Nyack College Sports Medicine Staff.

3. Using the online Medivo website (cost is $32.50 and you MUST be at least 18 years old). A new agreement with Quest Diagnostics’ national laboratories will give NCAA member institutions and their student-athletes access to affordable blood tests for SCT through its 2,000 patient-service centers (PSC). This is an online patient-centered laboratory test ordering service.
   - The student-athlete will go to the following website https://sicklecelltesting.medivo.com/order/am
   - Through the easy to use and secure online system, the student-athlete will:
     - Sign-up and order the SCT test.
     - Find the nearest Quest Diagnostic PSC location to them.
     - Pay for the screening test and physician service with a single $32.50 fee.
     - Print the Quest Diagnostic test requisition form.

The examination or evaluation of student-athletes who are beginning their initial season of eligibility and students who are trying out for a team shall include a sickle cell solubility test (SST), unless documented results of

*By-Law 17.1.5.1 Sickle Cell Solubility Test

The following steps should be taken to help prevent sickling exertion, as well as other medical emergencies such as heat cramps, heat exhaustion, and heat stroke.

**Steps to Prevent Exertional Sickling**

**Students and coaches should consider any struggling, cramping, or collapse as a serious medical condition.**

1. **Build up slowly during training** - slow tempo, longer breathers, acclimate to weather conditions and altitude.
2. **Control asthma** - use prescribed medication and follow dosing instructions from your doctor. Report any breathing problems immediately to medical staff and coach.
3. **Modify drills** – avoid rigorous exercise of any type for 2-3 minutes without a breather, avoid wind sprints or suicides early in practice, after 40-50 minutes of conditioning or at the end of practice, avoid timed sprints or miles, sprints 500M, adjust work/rest cycles for heat.
4. **Hydrate** - drink plenty of fluids before, during, and after exercise. Take more water breaks during hot weather conditions. Drink only water, sports drinks and/or juices - stay away from coffee, tea, and energy drinks, which can cause dehydration. Check overnight urine (should be a pale yellow) to ensure kidneys are functioning and enough water was drunk.
5. **Communication** - athletes should report any unusual symptoms to the Nyack College Sports Medicine Staff and coach immediately. Never train when ill, particularly when running a fever. Report any illnesses to the Nyack College Sports Medicine Staff.

**SCT Yearly Education**

All coaches, student-athletes and any staff members involved in training student-athletes will be informed yearly of the specifics of SCT including risks, signs, symptoms, proper acclimation to training, and how to provide emergency care if needed. After the fall of 2012, all incoming student-athletes must provide the Nyack College Sports Medicine Staff with documented results of a sickle cell solubility test and sign the Yearly Sickle Cell Trait Policy stating they read and agree with the policy. All returning student-athletes will sign the Yearly Sickle Cell Trait Policy confirming they have documented results on file with the Nyack College Sports Medicine Staff and they’ve read and agree with the policy.

For the health and safety of their student-athletes, Nyack College mandates that all student-athletes and prospective student-athletes get SCT tested. However, not every situation is compatible. Therefore, the Nyack College SCT Policy will have an option for those prospective student-athletes for the purpose of try-outs to decline the mandate and sign a waiver choosing not to acquire and submit medical documentation or does not wish to undergo testing to determine his or her SCT status. For those incoming student-athletes that had problems getting a SCT test and contacted the Nyack College Sports Medicine Staff as mentioned above, will get tested the first chance they can upon arrival on campus and will choose to either sit out until results are obtained or sign the waiver choosing to participate until the results are given to the Nyack College Sports Medicine Staff.

*By-Law 17.1.5.1 Sickle Cell Solubility Test

The examination or evaluation of student-athletes who are beginning their initial season of eligibility and students who are trying out for a team shall include a sickle cell solubility test (SST), unless documented results of a prior test are provided to the institution or the student-athlete declines the test and signs a written release. (Adopted: 1/14/12 effective 8/1/12)

Nyack College

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The NCAA is requiring all Division-II athletes and prospects to obtain a Sickle Cell Solubility Test to screen student-athletes for sickle cell trait before any student-athlete is permitted to practice, compete, strength and conditioning training, or take part in out-of-season training or a try-out. This test will not be required if the student-athlete or prospect can provide the lab results documenting the results of a prior test. Several states now screen for sickle cell trait at birth, please contact your pediatrician to see if you can obtain test results.

Please read and initial the following statements, showing that the statement has been read, understood, agreed with, and approved by you.

Athlete's Initial

Sickle cell trait is not a disease, rather it is the inheritance of one gene for sickle hemoglobin vs. normal hemoglobin, which can cause my red blood cells to “sickle” (collapse) and accumulate in my bloodstream blocking the normal flow of blood to my muscles, organs, and other body tissues. If my muscles, organs, and other body tissues do not receive the oxygen which is transported by my red blood cells, then my muscles, organs, and other body tissues will shut down. This can lead to a collapse and possibly death.

Athlete’s Initial

I know that sickle cell trait symptoms can be induced by exercise and training, along with heat, dehydration, sickness, fever, high altitudes, and asthma can increase the risk for and worsened complications. Athletes with sickle cell trait are NOT excluded from sports participation, but precautions must be put into place for my safety. It is in my best interest to know whether I carry this trait or not and to know the precautions. I agree that I have read those precautions and have asked any and all questions I have related to SCT.

Athlete’s Initial

I understand that the NCAA mandates that I be tested for the sickle cell trait before ANY participation in collegiate athletics at Nyack College and I will provide the Nyack College Sports Medicine Department with the results of my sickle-cell solubility test.

Athlete’s Initial

I understand that if this condition is not diagnosed, it may cause significant physical distress, permanent damage, risk of life, and even death.

Athlete’s Initial

I understand if I am positive for the SCT, I will meet with the Nyack College Sports Medicine Staff, and any other personal active with my training to work within the guidelines to reduce complications that may occur with SCT and intercollegiate athletics. I also acknowledge and agree to the risk stated in the SCT policy regarding student-athletes who are SCT positive and willing choose to participate in intercollegiate athletics.

I have undergone sickle cell trait testing and have previously provided a copy of the laboratory results or it is attached to this form.

Date of testing: ____________________________

You must initial one of the boxes below.

- [ ] Yes, I have the sickle cell trait***
- [ ] No, I do not have sickle cell trait
- [ ] I need to be SCT tested +++

***If the yes box has been check, the student-athlete agrees to meet with the Nyack College Sports Medicine Staff to ensure all parties are educated on SCT and modifications are made to the training of this student-athlete.

+++If the "I need to be SCT tested" box is check, the student-athlete must immediately meet with the Nyack College Sports Medicine Staff to schedule a SCT test and sign the waiver.

Student-Athlete’s Signature: __________________________________________ Date: ____________________________

I, ____________________________ understand and acknowledge that the NCAA and Nyack College mandates that all student-athletes have knowledge of their sickle cell trait status, show proof of a prior test, or for those prospective student-athletes for the purpose of try-outs to decline the mandate and sign a waiver choosing not to acquire and submit medical documentation or does not wish to undergo testing to determine his or her SCT status. Additionally, I have read and fully understand the aforementioned facts about sickle cell trait and sickle cell trait testing. Recognizing that my true physical condition is dependent upon an accurate medical history and a full disclosure of any symptoms, complaints, prior injuries, ailments, and/or disabilities experienced, I hereby affirm that I have fully disclosed in writing any prior medical history and/or knowledge of sickle cell trait status to Nyack College Sports Medicine Department.

I have read both the Sickle Cell Trait Policy and Statement and sign this document with full knowledge of its significance.

Student-Athlete Print Name: ____________________________ Student-Athlete Signature: ____________________________ Date: ____________________________

Parent/Guardian Print Name: ____________________________ Parent/Guardian Signature: ____________________________ Date: ____________________________