Dear New Student Athlete and Parents,

As of August 1st 2010, the NCAA (per Bylaw 17.5.1) mandates that its member colleges and universities determine the sickle cell trait status of all new student-athletes. In accordance with this rule, Cal Sports Medicine has made the necessary changes to the existing sickle cell trait screening program. Under the current NCAA and Cal Athletics rules, all athletes must satisfy one of the following options at the time of the pre-participation physical (PPE) to be medically cleared for athletics:

1) Provide results of a prior sickle cell test
2) Take a blood test (sickle cell solubility test) and await the results BEFORE participating (may take several days to a week for results)
3) Sign a written release that declines submission of prior test results and blood testing

**How to Provide Results of Previous Testing:**

As of 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. In the state of California, if you were born after February 21, 1990, results may be available from your pediatrician by submitting this form (UHS Med Records Release) or from the State using the form at this link (CA Newborn Screening Homepage for Sickle Cell Info). We suggest calling your pediatrician prior to submitting any request to ask if they have results on file; if they are not available, contact the state as noted above.

If you were NOT born in California, please contact your pediatrician for results by using this release form (UHS Med Records Release). Alternatively, you may contact the newborn screening program in the state where you were born using this website:

[http://genes-r-us.uthscsa.edu/resources/consumer/stemap.htm](http://genes-r-us.uthscsa.edu/resources/consumer/stemap.htm)

As noted above, please call your pediatrician first to ask if they have results on file; if they are not available, contact the state.

Under NCAA rules, we must be aware of your sickle cell status at the time of your pre-participation physical exam (PPE) in order to ensure the highest level of safety. **Realizing that it may take up to 8 weeks to obtain results, please attempt to request information from your pediatrician or state as soon as possible.** If we do not have results available at the time of the physical you can be tested for approximately $20.

**How to Obtain a Blood Test:**

We highly recommend that you first attempt to collect results from your pediatrician or state of birth by following the above directions. If you were never tested, or for some reason you are unable to obtain results (e.g. foreign-born), sickle cell testing is available at the University Health Services-Tang Center; you must have a UHS for Sports Medicine clinician order this test.
prior to getting it done. The cost of the test is approximately $20. Alternatively, you may ask your pediatrician to perform the test and bring the results to the clearance physical.

**How to Decline Submission of Results and Testing:**

If you do not wish to submit results of a previous sickle cell test and decline a sickle cell blood test, you can acknowledge this decision by signing and submitting a form in lieu of results. This form is not listed online and must be completed in person at the pre-participation examination. If you are a minor (under 18 years old) at the time of your pre-participation exam, a parent/guardian will need to sign this form.

The goal of Cal Sports Medicine is to provide the highest level of safety for all student athletes; we very much appreciate your help in achieving this goal!

Sincerely,

Lindsay Huston MD  Ryan Cobb, MS ATC  Laura Dixon MS ATC
Head Team Physician  Sr. Associate Athletic Director  Assoc. Head Athletic Trainer
Performance, Health & Welfare

For questions or clarification please contact Cal Sports Medicine Administration at 510-642-4878, or via email at sportsmedicine@berkeley.edu

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SEE PAGES BELOW FOR EDUCATIONAL MATERIALS ON SICKLE CELL TRAIT
INFORMATION ON SICKLE CELL TRAIT

It is very important that you and your parents understand what sickle cell trait is, and how we use this information to protect the health of our Cal student-athlete population. The following FAQ section will provide details about sickle cell trait and our screening program.

What is sickle cell trait?

Sickle cell trait IS NOT A DISEASE, and furthermore sickle cell trait will not turn in to sickle cell disease, which is a different situation all together. Simply stated, sickle cell trait is the inheritance of one gene for normal hemoglobin (substance in red blood cells that carry oxygen) and one gene for sickle hemoglobin. Under conditions of intense or extensive exertion, normal round blood cells become “sickled” and can block blood vessels to vital organs and muscle, causing tissue damage and possible collapse.

Diagram showing normal round red blood cells flowing smoothly in a vessel (top) and “sickled” red blood cells sticking together and stopping the flow of blood (bottom)

Who gets sickle cell trait and how common is it?

ANYONE can have sickle cell trait. Approximately 1 in 12 African Americans, and 1 in 2,000-10,000 Caucasians have sickle cell trait. Also, the sickle cell gene is more common in those of African, Mediterranean, Middle Eastern, Indian, Caribbean, and South and Central American ancestry. In the state of California, from 1990 thru 2003, 1 out of every 122 newborns tested (all combined ethnicities) had sickle cell trait.

How do you test for sickle cell trait?

If you were born in the state of California after February 21, 1990, you have been tested by the state Newborn Screening Program. Results are either available from your pediatrician at the time of your birth, or from the State of California. If you were not born in California you still may have been tested, but must check with your pediatrician or state agency. If you were not tested, sickle cell trait is easily identified from a simple blood test. Please see the above letter for explanation on how to obtain results.
How does a positive test impact my sport participation?

Athletes with sickle cell trait cannot be “conditioned” out of the trait. However, sickle cell trait is not a barrier to outstanding athletic performance as it is present in athletes at all levels of competition from high school to professional or Olympic. Athletes are not singled out or disqualified because of a positive test, although they are made aware of potential complications and what can be done to avoid them.

What are sickle cell trait symptoms and how quickly can I develop symptoms?

Typical symptoms of sickle cell trait include, but are not limited to, muscle weakness, cramping, shortness of breath, pain, and fatigue. Additional signs and symptoms of sickle cell trait can be visible blood in the urine, chest or abdominal pain, nausea, and vomiting. A characteristic of collapse related to sickle cell is that the athlete can still talk, as opposed to athletes that collapse from heatstroke or cardiac causes.

Sickling of blood cells and onset of symptoms can occur very quickly in the first 2-3 minutes of any all-out exertion. Heat, dehydration, altitude, illness, and asthma can increase the risk for and worsen sickling, even when exercise is not all-out. It is important to note that complications from sickling are related to the INTENSITY of exercise, it is NOT purely related to overheating in hot climates.

What can I do to prevent problems associated with sickle cell trait?

The key to avoiding problems related to sickle cell trait is IMMEDIATELY stopping activity and alerting appropriate medical personnel if there is any concerning signs or symptoms. Athletes that run into problems often fully recover, especially if identified and treated as early as possible. Basic treatment includes rest, oxygen, and hydration. Also, if you have asthma, be sure to have your medications with you at all times and that you have proper asthma management.

Does having a positive test have any long-term consequences?

Sickle cell trait is generally benign and consistent with a long, healthy life. Most athletes complete their careers without complications. In fact, most people with sickle cell trait cannot tell that they have it. The most important implication that may arise in the future is that you can have a baby with sickle cell trait or even DISEASE (which is a serious condition) in the future. If a test is positive, the student athlete will be offered counseling on the implications of sickle cell trait, including health, athletics, and family planning.

For more information please see the following links:
NCAA Website:
www.ncaa.org
National Athletic Trainers’ Association Consensus Statement
NATA Consensus Link