

ATHLETIC TRAINING

Sports Injury Prevention and On-Site Sports Healthcare

Care Instructions for Exertional Sickling

While at practice/play, your child experienced a condition known as exertional sickling. Sickle cell trait is a genetic condition that affects a person's red blood cells. During intense exercise, those red blood cells change from their original round shape to a quarter-moon, or "sickle" shape. This is shown in the picture. These new sickle-shaped blood cells can become hooked on one another, blocking normal blood flow to the muscles and tissues.

Before your child is allowed to return to participation in athletic activity, he/she must be evaluated and cleared by a physician. A note from the physician is required for your child to return to athletic activity.

If your child experiences these symptoms following a period of exercising or intense physical work, call 911 or have your child evaluated by a physician immediately:

- Severe muscular pain similar to cramping
- Swelling in the extremeties
- Leg or low back pain or "cramping"
- Extreme feeling of fatigue
- 👌 Racing heartbeat
- extremeties
- Dark/discolored urine
- Blood in the urine
- Inability to "catch your breath"

A Normal red blood cells Normal red blood cell (RBC) Cross-section of RBC **RBCs** flow freely within blood vessel Normal hemoglobin Abnormal, sickled, red blood cells (sickle cells) Sickle cells blocking blood flow Cross-section of sickle cell Sticky sickle cells Abnorma hemoglobin form strands that cause sickle shape

These guidelines should be followed to help manage and prevent the athlete experiencing future episodes:

- Set own pace
- Gradual acclimatization to heat, humidity and altitude
- Use adequate rest and recovery between intense conditioning sessions
- Limit "all-out" exertion of any kind to less than 2-3 minutes
- Avoid performance tests that require extreme exertions (i.e. wind sprints, timed mile run)
- Stop activity immediately if you experience any signs or symptoms associated with exertional sickling
- Stay well hydrated at all times
- Maintain proper management of asthma
- Do not participate in exercise during acute illness, especially one involving fever

If you are concerned or your child is not improving, consider visiting the emergency department. If you have other questions or concerns, please contact your physician or the ECU Sports Medicine Clinic at 101 Heart Drive, Greenville, at 252-744-0181.