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## Facts About Sickle Cell Disease for: School Teachers & Nurses

### What is Sickle Cell Disease?

Sickle cell anemia is a genetic disorder that alters the shape of normal red blood cells (RBCs), which are soft and round, into the shape of a hard, sticky, sickle (moon or banana shape) shaped cells. These sickle shaped RBCs block the blood flow and the ability to carry oxygen to all parts of the body.

### Everyday needs of a child with SCD

**Give lots of fluids.** Make sure that your student has fluid readily available at all times in class. We recommend keeping a water bottle at their desk, and particularly nearby during physical education. Fluids assist red blood cells in moving more easily throughout the blood vessels, which ultimately decreases the number of pain crises your student may experience.

**Provide liberal bathroom privileges.** Children with SCD need to go to the restroom more often due to their high fluid intake and because their kidneys do not function as well as healthy children. Allow your student to use the restroom as needed.

**Avoid physical exhaustion.** Children with SCD tire more easily than other children. Allow your student time to rest when needed. If a parent prefers that a child be excused from any activity, permission should be granted.

**Avoid extreme temperatures.** Temperature extremes can trigger a pain crisis. Keep your student out of the cold for long periods. In hot weather, your student may need frequent breaks with lots of fluids to avoid dehydration. Temperatures in the classroom must also be regulated. Classrooms that are too cold or too hot may cause complications and possible hospitalizations of your student.

### Common manifestations of SCD

**Anemia:** Children with sickle cell may have symptoms of anemia including headaches, decreased energy, weakness, sleepiness, or pale color of lips, gums, or nail beds. This is due to shortened life span of a sickled red blood cell. A child with SCD should be allowed plenty of rest breaks especially during physical activity, and they should be allowed to do things at their own pace.

**Jaundice:** Jaundice, or yellow coloring of eyes or skin, is caused by bilirubin, a byproduct of red blood cells. Since children with SCD produce more red blood cells and they are rapidly being destroyed, they have an increased amount of bilirubin.

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## Common Medical Complications of SCD

**Pain:** The most common complication of Sickle cell disease. Has a gradual onset, frequently described as an excruciating, gnawing pain. Usually occurs in legs, arms, back, chest or stomach, but can occur anywhere in the body.

### Treatment/Prevention

Encourage fluids and rest, especially after physical activities

Try to recognize painful episodes early and treat with Tylenol alternating with Motrin. Student may be able to stay in school with mild episodes of pain; sometimes stronger oral narcotics are required for sickle cell pain. Student should be evaluated by a MD for frequent or severe pain not relieved by oral narcotics.

Warm compresses and messaging the painful area can sometime ease pain

Temperature extremes can trigger a pain crisis, student should avoid being out in the cold for long periods of time, and in hot weather, they need frequent breaks and lots of fluids to avoid dehydration. Regulate temperatures in the classrooms.

**Stroke:** Occurs in a small percentage of children with SCD, if you noticed subtle changes in your student, for example, less attentive than usual or changes in performance, these could be signs of silent strokes and should be discussed with parents as soon as possible.

A student with weakness or paralysis, confusion, difficulty swallowing, unsteady walk, inability to move one side of their body, seizure, slurred speech, or **severe** headache. You should contact 911 and child's parents immediately.

**Gallstones:** Are common in school age children with SCD. Rapid destruction of red blood cells in SCD, large amounts of bilirubin is released and accumulates in the gallbladder, this contributes to gallstones.

Child complains of nausea, vomiting, abdominal pain, and shoulder pain particularly after eating lunch.

You notice child's eyes to be more yellow or child appears jaundiced.

Child should be evaluated by MD if you suspect gallstones.

**Priapism:** A persistent, painful, unwanted erection of the penis caused by sickling of the RBC to the vessels in the penis. Encourage fluids, rest. Tylenol alternating with Motrin, warm compresses for pain; try distractions such as quiet activities, and listening to music, if erection last over 2 hours, child should immediately be evaluated by a MD.

**Fever:** A fever is defined as temperature of 101 F or higher. Fever is often the first sign of infection. If a child has a fever of 101 or higher, contact the parents immediately. He or she will need to be seen in clinic or the emergency room.

**Acute Chest Syndrome (ACS):** This is caused by sickled RBC clogging blood vessels in the lungs. Symptoms include, fever, congested, persistent cough, rapid breathing, chest pain, or trouble breathing. If your student has any of these symptoms, you should contact their parent immediately and child should be evaluated by a MD.

**For more information about sickle cell disease, contact the UAB Division of Hematology at Children's Hospital, Birmingham, Alabama. We can be reached Monday-Friday, from 8:00am to 4:30pm at (205) 939-9285. Or contact your local sickle cell foundation.**