

Sickle cell disease (SCD): aplastic crisis

What is sickle cell disease aplastic crisis?

Aplastic crisis happens when the body stops making red blood cells (RBCs) for a short time. This causes a drop in your child's hemoglobin level (red blood count) for a short time.

- The word aplastic means unable to form.
- In aplastic crisis, the RBCs are unable to form.

With sickle cell disease, many RBCs are broken down each day. This means that many more RBCs need to be made each day.

- Infections may cause the bone marrow to stop making RBCs for a few days. Most often, this is not a problem for people who do not have sickle cell disease.
- In children with sickle cell disease, severe anemia (very low hemoglobin) can happen if the bone marrow stops making RBCs, even for a few days.
- Your child may need a blood transfusion if the hemoglobin level is too low. A transfusion helps deliver oxygen to the body so it can keep working well.

What causes it?

Several types of infections can prevent bone marrow from making RBCs. Most happen when children are old enough to go to school.

Parvovirus B19 is one of the main causes. It spreads easily from person to person. If your child has parvovirus B19, they will need to be “isolated” from others to help prevent spreading the virus. They should stay away from:

- Children with sickle cell disease or children with other types of chronic illness.
- Pregnant women.
- People who have weak immune systems.

What are the symptoms?

Many of the symptoms come from a low RBC count. This may include:

- Pale color of lips, gums or nails
- Feeling weak all over
- Being very tired or sleepy
- Fever or history of a recent fever (temperature of 101°F or higher)
- Fast heartbeat
- Headache
- Feeling short of breath
- Being cranky

In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.

Sickle cell disease: aplastic crisis, continued

How do I know if my child has it?

Your child needs to see a doctor if they have any of the symptoms listed on page 1. Your child could have aplastic crisis if their:

- Hemoglobin falls below your child's baseline level.
- Reticulocyte count (newly made RBCs) is low.

Your child may need these tests:

- Physical exam
- Blood tests (labs), such as:
 - Blood count
 - Parvovirus B19 test
 - Type and cross match in case they need a blood transfusion
 - Blood culture to check for any germs
- Chest X-ray to look for problems in the lungs

What is the treatment?

Treatment depends on how sick your child is. Often, the drop in hemoglobin lasts for only a short time. The doctor will watch your child's blood counts (hemoglobin and reticulocyte counts) closely.

Treatment may include:

- A blood transfusion to help raise the RBC count to a safe level.
- A hospital stay if they are very sick.
- I.V. fluids, oxygen, antibiotics or pain medicine.

If your child has parvovirus B19:

- They may not visit others or leave their hospital room.
- The care team and other staff will wear masks, gowns and gloves to help prevent the spread of the virus.

What follow-up care does my child need?

After your child goes home from the hospital, they will need:

- Frequent blood count checks to see if their blood counts are back to normal.
- A clinic visit as advised by your child's sickle cell provider.

If you have other children with sickle cell disease, be sure to check them for any symptoms. They will need to have their blood count checked for aplastic crisis.

In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.

Sickle cell disease: aplastic crisis, continued

How can I help prevent aplastic crisis?

It is rare for aplastic crisis to happen more than 1 time, but here are some tips to help prevent it:

- Avoid contact with people who have colds or other types of infection.
- Clean your hands often. Wash them well with soap and water for at least 20 seconds, or use an alcohol-based gel or foam. Teach your child and anyone who cares for them to clean their hands often.
- Talk with your child's doctor about whether a vaccine to prevent parvovirus B19 exists.

What should I do if my child is sick?

- Follow your child's sickle cell provider's advice.
- Call your child's provider and **get medical care right away** anytime your child has a fever of 101°F or higher.
- When the clinic is closed (between 5 p.m. and 8 a.m. during the week and on weekends and holidays), call the hematologist on call before going to the hospital. They will call the emergency department (ED) and help with your child's care.
- **ALWAYS** tell the ED doctors and staff that your child has sickle cell disease. Also tell them which sickle cell clinic they visit.

For more details on sickle cell disease and services, visit the Children's Healthcare of Atlanta website at choa.org/sicklecell.

This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.

In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.