

# Sickle cell disease (SCD): jaundice and gallstones

## What is jaundice?

Jaundice is when the white part of the eye and skin turn yellow.

- Bilirubin is a yellow substance normally found inside of red blood cells.
- When fragile, sickle red blood cells break open and bilirubin leaks out into the blood stream.
- As blood travels throughout the body, bilirubin pigment causes the eyes and skin to turn yellow (jaundice).

## What are gallstones?

Gallstones are small stones that form when bile hardens into a solid form.

- Bile is most often a liquid and is used to help break down (digest) fats that we eat.
- Bile is made by the liver and stored in the gallbladder.

The gallbladder is a sack or pouch under the liver. It is in the right, upper part of the belly.

- Children with sickle cell disease have more bile than the gallbladder can hold.
- The extra bile forms a thick sludge and causes stones to form (gallstones).

Gallstones are most often not harmful. If they get stuck in the tube that leaves the gallbladder, pain may occur.

- Infection can occur if the tube gets blocked by stones.
- This can affect other organs nearby, like the pancreas.
- About 1 in every 3 children with sickle cell disease can have gallstones.

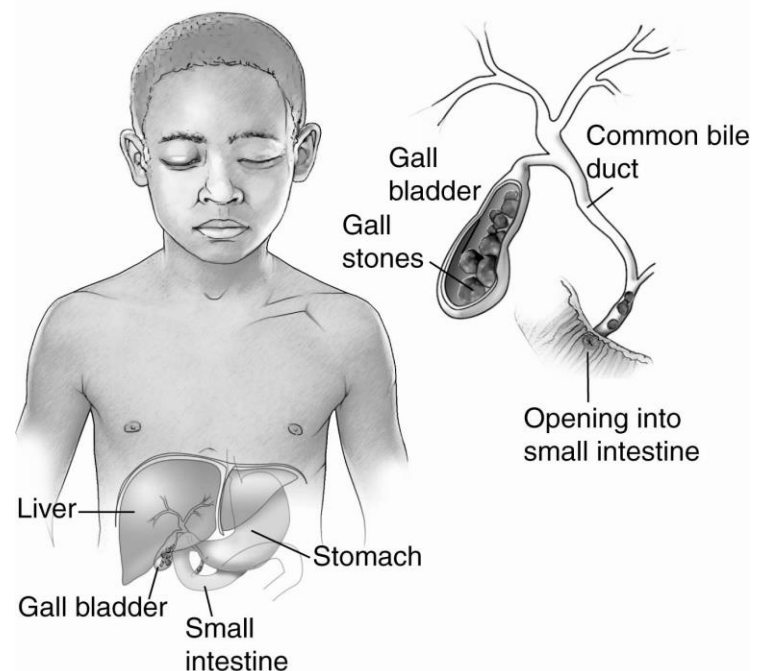
## What symptoms can gallstones cause?

Your child may have 1 or more of these:

- A yellow color of the skin or whites of the eyes
- Sudden, sharp belly pain mostly on the right, upper part of the belly. The pain get worse after eating fatty foods.
- Upset stomach or vomiting (throwing up)
- Fever (temperature higher than 101°F)

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

Gall Stones



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- Pale color of the lips, gums or nails
- Weakness
- More tired than normal
- Not wanting to play or take part in normal activity

## What do I do if my child has these symptoms?

Call your child's sickle cell provider if your child has any of these symptoms.

- Call your child's provider and **get medical care right away** anytime your child has a fever. **Fever is always a medical emergency for your child.**
- Be prepared to take your child to the sickle cell clinic or emergency department (ED).
- Give your child clear fluids to drink (like water, Powerade or Gatorade) if they can drink without vomiting.

## What is the treatment?

Your child will need to be seen in the sickle cell clinic or ED. They may need 1 or more of these treatments:

- A physical exam
- A vital sign check (temperature, blood pressure, pulse and breathing rate)
- Blood tests (labs) to check their blood count, bilirubin level and other body chemicals
- Pain medicine
- Intravenous (I.V.) fluids to keep them from getting dehydrated
- Antibiotics if they have a fever
- An ultrasound of the belly to check for gallstones or infection

If your child has gallstones, they may also need:

- Surgery to remove the gallbladder with gallstones. Surgery may be planned for a later time. This is one of the most common types of surgery in children and adults with sickle cell disease.
- A blood transfusion before surgery to avoid sickle cell problems like acute chest syndrome and vaso-occlusive episode (VOE) (called a pain crisis in the past).

## What follow-up care does my child need?

### After going home from the ED:

- Give your child plenty of fluids to drink.
- Avoid feeding your child fatty foods, such as pizza and fried foods, to help decrease your child's pain.
- Follow-up in the sickle cell clinic for a check-up and blood tests.
  - Your child may need an ultrasound of the belly if they did not have one in the ED.
  - Your child's provider will talk with you about surgery if your child has gallstones.

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# SCD: jaundice and gallstones, continued

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## After going home from surgery:

- Be sure to follow the instructions you are given when your child goes home from the hospital.
- Once your child goes home, they will need follow-up care in the sickle cell clinic.
- They will also need to follow-up with their surgeon.

## What should I do if my child is sick?

- Follow your child's sickle cell provider's advice for what you should do.
- Call your child's provider and **get medical care right away** anytime your child has a fever of 101°F (38.3°C) or higher.
- During the time when the sickle cell 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](http://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.**

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