# Let's Talk About ...

### **Pediatric gallstones**

#### What are gallstones?

Gallstones, also called cholelithiasis (KO-leh-li-THIGH-uh-sis), are hard, pebble-like objects made of bile that form in the gallbladder. The gallbladder is a small organ just below the liver in the top right of the belly.

Gallstones are stone-like objects made of hardened bile, the liquid in the gallbladder. Bile is made in the liver, but it is stored in the gallbladder between meals to help the body digest fats. It contains yellowish pigment called bilirubin, cholesterol, salts, fats, and proteins. Bile can form into crystals, which become gallstones.

Gallstones can block bile from leaving the gallbladder. When this happens, it can cause the gallbladder to swell and become sore. This is called cholecystitis (KO-leh-sis-TIE-tis).

#### What causes gallstones?

No one knows exactly what causes gallstones, but your child may get them if:

- Their gallbladder doesn't drain as it should. If their gallbladder doesn't empty the bile often enough, the bile can become thick and cause gallstones to grow.
- Their bile has too much bilirubin. This is a chemical that comes from red blood cells and can cause gallstones to form.
- Their bile has too much cholesterol. Cholesterol can form into crystals and eventually form stones if it isn't dissolved by the bile.



### Which children are at risk for gallstones?

Risk factors for gallstones may include:

- Being overweight or obese
- Crohn's disease
- · Sickle cell disease or other red blood cell disorders
- Family history of gallstones
- Nutrition through a feeding tube for a long time
- Abdominal surgery

#### What are the signs of gallstones?

Signs of gallstones may include:

- Pain in the upper right or upper middle part of the abdomen that spreads to the back
- Sharp, dull, or cramping pain in the abdomen right after eating a meal
- Pain that gets worse after they eat greasy or fatty foods
- Jaundice (yellow skin and eyes)
- Fever, sweats, or chills
- Nausea or vomiting

#### How are gallstones diagnosed?

Your child's healthcare provider will ask about your child's symptoms and where they are feeling pain. They may use an ultrasound to see whether your child has gallstones.

Your child may also need:

- Blood tests to see if your child has an infection
- An endoscopy (a small tube that goes down the digestive tract)
- An MRI (series of pictures) of the bile ducts and gallbladder

#### How are gallstones treated?

If your child doesn't have any symptoms of gallstones or other problems, they may not need any treatment. If they do have symptoms and the gallstones are blocking bile from leaving the gallbladder, they will need their gallbladder removed. This surgery is called a cholecystectomy (KO-leh-sist-ECK-toe-me).

Most of the time, a surgeon can remove your child's gallbladder through a minimally invasive surgery. They will make four small openings in your child's abdomen and insert a lighted tube with a camera. They will also insert their surgical instruments into their openings. The surgeon cuts the gallbladder free in the abdomen and removes it from the body through one of the openings.

Once your child's gallbladder is gone, the bile goes directly from the liver to the small intestine. Your child does not need their gallbladder, and it doesn't impact their digestion.

If your child can't have surgery, they may be able to take medicine to dissolve gallstones. However, gallstones can come back, especially if your child stops taking the medicine. It may also take months or years to dissolve the gallstones with medicine.

## What happens after my child has surgery?

Some children have diarrhea after the gallbladder is removed, but this doesn't last long. Your child should be able to eat normally and do their usual activities after their gallbladder is gone.

### How can I prevent my child from getting gallstones?

You can help your child avoid getting gallstones again by:

- Helping your child maintain a healthy weight
- Making sure they don't skip meals
- Helping them lose weight slowly (if they need to lose weight)

Q	uestions for my doctor

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