

## Intestinal Malrotation Surgery

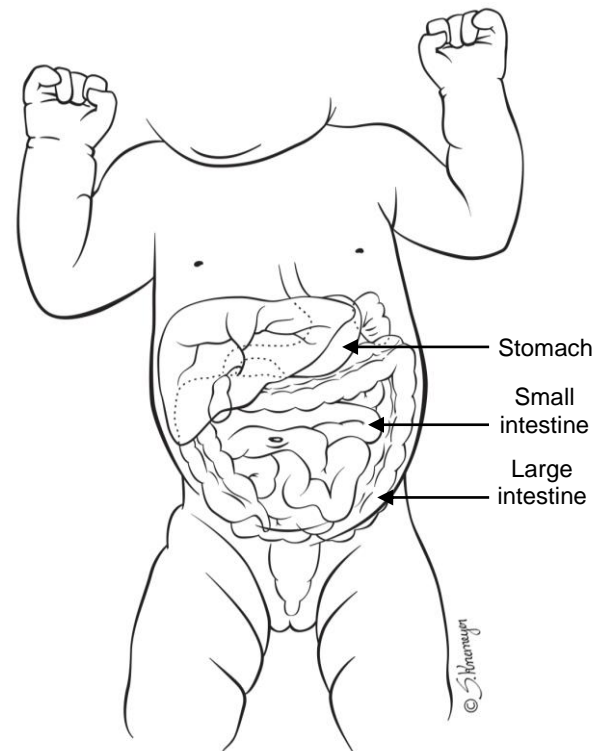
Normally, as a baby grows, the intestines start separating to become the small intestine, appendix, and large intestine (Picture 1). Malrotation of the intestines is when a baby's intestines do not move or rotate into the right place. The cause is not known. There may be other birth defects that involve the heart, liver, or spleen as well.

Children with malrotation are at high risk of their intestines twisting. This is called a volvulus. This may cut off blood to the intestines or cause a block in the intestine. A volvulus is a surgical emergency.

### Signs and Symptoms

Some children with malrotation never have symptoms. The most common sign of malrotation is throwing up (vomiting) yellow or green vomit one time or over and over (repeatedly). Other symptoms may be:

- Pain in the belly (abdomen)
- Dehydration
- Not passing gas or pooping
- Fast heart rate and breathing rate
- Bringing their legs up to their chest because of belly cramps



**Picture 1** The intestines inside of the body.

## Diagnosis

Malrotation is usually found (diagnosed) with X-rays called an upper GI series (UGI). X-ray images are taken of the esophagus, stomach, and intestines. This is done after the patient drinks a liquid called contrast medium. The contrast makes the intestines show up on the X-rays. Other tests, like a barium enema (BE), an ultrasound, or a CT scan, may also be done.

## Ladd's Procedure

The surgery to treat intestinal malrotation is called a Ladd's procedure. The surgery may be done through 1 large cut (incision) or 3 small cuts (laparoscopically). The bands of tissue that caused malrotation (Ladd's bands) are cut. The bowel will be untwisted if needed. When your child is admitted:

- An IV will be placed to give fluids and medicines.
- A nasogastric (NG) tube will be placed. This removes fluid and gas from the stomach and intestines. The NG tube also helps keep pressure off the bowels.

## Volvulus Surgery

If your child has a volvulus, their intestines are checked for blood flow and to see if they're healthy. **If the intestines do not look healthy, part of them may be removed, or your child may have another surgery within 48 hours.**

- If part of the intestine needs to be removed, the ends of the healthy intestines are typically reconnected. Sometimes the end of the intestine is brought out through an opening in the skin called an ileostomy or a colostomy. This gives the bowel time to rest and heal. The intestines will be reconnected after your child recovers.
- Your child will stay in the hospital for 3 to 14 days after surgery. They will initially have an NG tube and an IV. They may also have a urinary catheter.
  - The NG tube stays in place until your child passes gas or poops. After it's removed, they can have clear liquids. Solid food or formula will be added slowly. When they're eating solid foods or formula well and don't have a fever, they'll be ready to go home.
  - If your child has a urinary catheter, it will be removed once they're making enough pee (urine).

## Care at Home

Most children recover well after surgery. To help them heal, they:

- They may not be able to take part in rough play or sports. This will depend on the type of surgery they had and if their doctor or health provider says it's okay.
- Can take showers after leaving the hospital. They cannot take tub baths for 1 week after surgery.
- Will be able to return to school when the surgeon approves this, and it will depend on how well they're recovering and the type of surgery they had.
- May be prescribed pain medicine. Follow the directions on the label or in the discharge instructions.

## When to Call the Doctor

Call your child's doctor or health care provider or take them to an emergency department if they have:

- A fever over 101° Fahrenheit (F) or 38.3° Celsius (C).
- Redness or pain at the surgery site.
- Yellow or green drainage from the surgery site.
- Yellow or green vomit.
- A swollen abdomen.
- Bloody poop (stool).
- Gone 3 days or longer without pooping.