

Lower Gastrointestinal Bleeding (GI) in Kids

What is lower GI bleeding?

The gastrointestinal (GI) system consists of the GI tract and GI glands. The GI tract is essentially a tube that processes the foods and liquids we ingest. The GI tract is divided into different parts, beginning in the mouth, followed by the esophagus (food pipe), stomach, small intestine (small bowel), and large intestine (colon or large bowel), and ending in the anus.

The lower GI tract includes the second and third portions of the small intestine, called the jejunum and ileum, and the large intestine. Irritation or ulcer of the lining of the lower GI tract can cause lower GI bleeding.

What are the signs and symptoms of lower GI bleeding?

Signs and symptoms of lower GI bleeding depend on the location and quantity of bleeding. It can either be obvious or hidden.

If the bleeding is obvious, your child may have:

- Bright red blood from the anus. Bleeding can be streaks of blood or larger clots. It can be mixed in with the stool or form a coating outside the stool.
- If the bleeding starts further up in the lower GI tract, your child may have black sticky stool called “melena”, which can sometimes look like tar and smell foul.

If the bleeding is hidden, your child may have symptoms such as belly pain, light headedness, fainting, chest discomfort, nausea, and/or difficulty breathing. Your doctor may do some special testing on your child’s stool to detect the hidden blood.

The consistency of your child’s stool, including constipation or diarrhea, can be an important indicator of the cause of lower GI bleeding. Other important symptoms to discuss with your doctor are the frequency of stools, presence of abdominal pain,



accidents when stooling, night-time awakenings to stool, fever, or weight loss.

What causes lower GI bleeding?

Lower GI bleeding is a symptom of an underlying problem in the lower GI tract, which can vary by the age of your child. Some common causes are:

- Irritation by cuts or hemorrhoids, often caused by constipation
- Growths on the lining of the intestine, called polyps
- Viral, parasite, or bacterial infection
- Inflammatory bowel disease (IBD), including Crohn's disease or ulcerative colitis
- Meckel's diverticulum, which is an abnormal pouch in the lower part of the small intestine that is present at birth
- Allergic conditions, such as milk protein allergy in younger children or eosinophilic gastrointestinal disorder (EGID) in older children
- Intussusception, which is a serious condition in which part of the intestine slides into an adjacent part of intestine—this “telescoping” of the bowel can block passage of food through the intestine and can also cut-off blood supply to part of the intestine
- Necrotizing enterocolitis (NEC), a common and serious intestinal disease among premature babies that could be life-threatening if not treated immediately
- Vascular malformations, which are abnormal clusters of blood vessels that usually occur prior to birth

How is lower GI bleeding diagnosed?

A careful history and physical examination will be the first step for your doctor to determine what may be causing lower GI bleeding in your child.

Your doctor may perform an external examination, where the outside appearance of the anus is inspected for any tears or skin tags. A digital rectal examination also may be performed, in which the doctor will insert one finger into the rectum to assess muscle tone as well as the presence of any masses, such as hard stool, a polyp, or a dilated vessel.

Both blood tests and stool studies can be helpful to determine the reason for GI bleeding. Stool can be checked for the presence of bacteria, parasites, or viruses. Additional tests also can look for inflammation or microscopic (hidden) blood in the stool.

Other imaging studies can be useful to diagnose a lower GI bleed, depending on what your doctor suspects may be the cause. A technetium scan can be used to look for Meckel's diverticulum, in which a radioactive substance is injected into the body.

Depending on your child's clinical history and symptoms, your doctor may recommend a lower endoscopy (colonoscopy).

Small bowel video capsule endoscopy (VCE) is also useful to find sources of bleeding. For this test, the child may have to swallow a small pill-sized camera that moves through the GI tract and takes several pictures. This is useful to look for bleeding in the small intestine, where an endoscope cannot reach.

How is a lower GI bleeding treated?

Treatment of lower GI bleeding depends on the cause and location of the bleeding in your child. If the bleeding is severe, your doctor may recommend a blood transfusion. Local tears and hemorrhoids are managed by changing the diet, stool softeners, and topical creams. If a polyp is located, it can be removed during endoscopy with special instruments.

Bacterial infections can be treated with antibiotics; parasites can be treated with various medications; and viral infections usually resolve on their own.

Milk protein allergy is treated by removing milk protein from the baby's diet, either by a breastfeeding

mother removing milk protein from her diet or by feeding the baby a more broken-down formula.

Eosinophilic gastrointestinal disorders (EGIDs) are treated by removing specific foods or with medications.

Some causes of lower GI bleeding may require surgical intervention, such as for a bleeding

Meckel's diverticulum, intussusception that cannot be corrected with a special x-ray, or necrotizing enterocolitis (NEC). Management in the hospital by pediatric specialists will help provide optimal care.

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➔ **Locate a Pediatric Gastroenterologist**

IMPORTANT REMINDER: *This information from the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) is intended only to provide general educational information as a definitive basis for diagnosis or treatment in any particular case. It is very important that you consult your doctor about your specific condition.*



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