

# Upper Gastrointestinal Bleeding (GI) in Children

## What is upper GI bleeding?

The gastrointestinal (GI) system consists of the GI tract and GI glands. The GI tract is essentially a tube that processes the food and liquids we ingest. It 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 upper GI tract includes the mouth, esophagus, stomach, and first part of the small intestine called the duodenum. Irritation and ulcers of the lining of the upper GI tract can result in upper GI bleeding.

## What are the signs and symptoms of upper GI bleeding?

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

If the bleeding is obvious, your child may have:

- Vomiting of either bright red blood or dark flecks of blood that look like “coffee grounds”

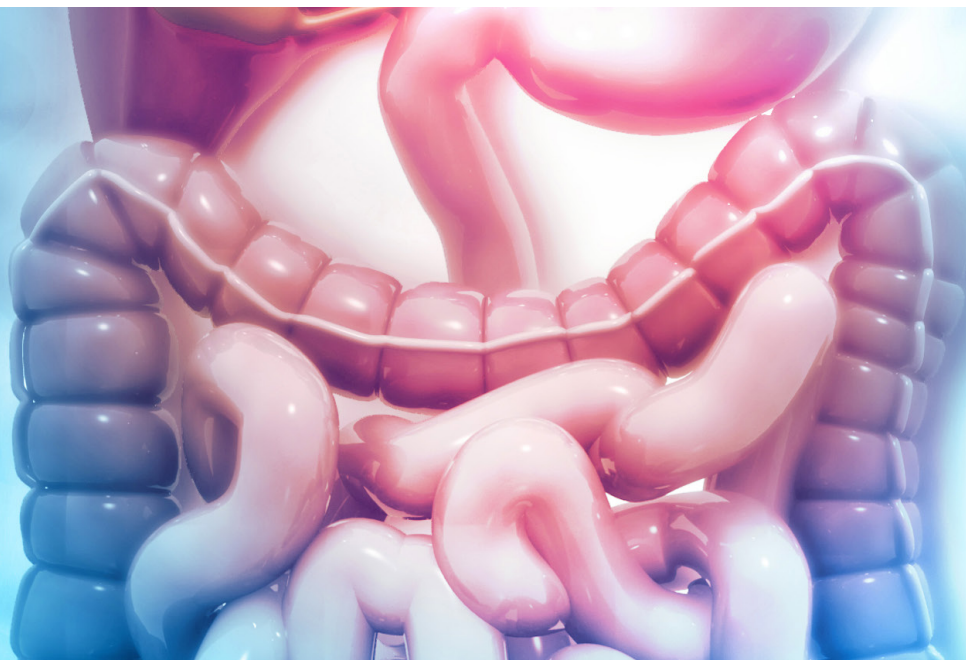
- Black sticky stools called “melena”, which can look like tar and smell foul
- Abdominal pain (“belly pain”)

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 have to do special testing on your child’s stool to detect the hidden blood.

## What causes upper GI bleeding?

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

- Swallowing blood from injury to the mouth or a nosebleed.
- Infections that can be viral, fungal, or bacterial that irritate the upper GI tract. Helicobacter pylori infection in the stomach also can result in bleeding ulcers in the stomach or small intestine.
- Longstanding reflux, or backflow, of stomach acid into the esophagus.



- Repeated vomiting or retching can also cause small bleeding tears in the lining of the lower esophagus, also known as a Mallory Weiss tear.
- Certain medications, such as non-steroidal anti-inflammatory drugs (ibuprofen, aspirin), can cause stomach irritation or ulcers that bleed.
- Abnormal blood vessels or growths from the esophagus, stomach, or small intestine can be less common sources of bleeding.
- Children with certain liver problems are also at risk of upper GI bleeding due to enlarged blood vessels in the esophagus or stomach called varices.

## How is an upper GI bleed diagnosed?

A careful history and physical examination will be the first step for your doctor to determine the cause of upper GI bleeding in your child.

Your child's vital signs (temperature, heart rate, blood pressure, etc.) will also help your doctor assess the degree of GI bleeding. A fever may indicate infection as a possible cause. An elevated heart rate or low blood pressure can be signs of a larger amount of blood loss.

Your doctor may run a complete blood count (CBC) to check your child's levels of hemoglobin, red blood cells, or markers of liver function. Your doctor may also check for the presence of blood in your child's vomit or stool.

Depending on your child's clinical history and symptoms, your doctor may recommend an upper endoscopy procedure.

## How is upper GI bleeding treated?

Your doctor's treatment plan will depend on the suspected cause of upper GI bleeding in your child. Depending on the degree of bleeding, vital signs, and hemoglobin level, your doctor may decide that a blood transfusion would be helpful.

If infection is the cause, antibiotics or antifungal medications may be prescribed. If your child has *Helicobacter pylori* infection, several antibiotics and anti-acid medications may need to be given. If reflux is suspected, anti-acid medications can be given. These medications do not prevent reflux from happening but make the stomach juice less acidic, so that it is less irritating to the esophagus lining and allows it to heal.

During an upper endoscopy, your gastroenterologist can use several methods to stop active bleeding if needed. This includes injection of special medicines, applying heat to sites of bleeding, placing metal clips on bleeding ulcers, or using specialized bands to decrease the size of enlarged blood vessels.

## What can we expect?

Most children with upper GI bleeding recover well. Those with special liver or blood clotting problems may have more serious and repeated bleeding episodes. Blood transfusions or surgery might be needed in more severe cases. Management in the hospital by pediatric specialists will help provide optimal care.

*Last reviewed and updated by:  
Keren Appel MD and Vrinda Bhardwaj MD FAAP, April 2018*

*Last edited by: Priya Raj MD, MS, June 2019*

## → 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.



714 N Bethlehem Pike, Suite 300, Ambler, PA 19002 Phone: 215-641-9800 Fax: 215-641-1995 [naspghan.org](http://naspghan.org)

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