Gastroesophageal reflux disease (GERD) in infants (0–24 months)

What is GERD?
GERD stands for gastroesophageal (gastro-uh-sof-uh-GEE-ul) reflux disease. When your child swallows food, it travels down a tube called the esophagus (ee-SOF-uh-gus). A round muscle at the end of the esophagus near the stomach is called the esophageal sphincter (ee-SOF-uh-GEE-ul SFINK-ter). If the sphincter cannot stay closed, some of the stomach contents go back up into the esophagus. This backward flow is called gastroesophageal reflux, or GER.

A small amount of reflux is normal in infants. It usually happens with a full stomach after eating. Many children outgrow this by the time they’re 18 months old. However, reflux can occur at other times and is not always related to a feeding or a full stomach. Sometimes reflux does not go away on its own.

When reflux causes pain or problems with swallowing, getting enough nutrition, or breathing, it is called GERD.

What are the symptoms of GERD?
- Lots of spitting up or vomiting
- Lots of fussiness, pain, back arching or head turning
- Coughing or wheezing
- Hoarseness
- Problems swallowing and gagging
- Refusing to eat or swallow
- Poor weight gain

What causes GERD?
The cause of GERD is not clear, but many factors may contribute to it. Your child may have one of the following symptoms:
- An esophageal sphincter that does not work well or did not fully form.
  - This may be due to a child’s age, development, control by the brain and nerves, or control by normal chemicals found in the blood.
• Abnormal swallowing
• Slow stomach emptying
• Eating too much, too fast

What are the risk factors for GERD?
Children are more likely to get GERD if they were born prematurely or have the following:
• Brain problems associated with developmental delay
• Long-lasting (chronic) obstructive respiratory disease, such as asthma or bronchopulmonary dysplasia
• Breathing difficulties
• Down syndrome
• Scoliosis (side-to-side curving of the spine)

How do healthcare providers know if my child has GERD?
Your child’s healthcare provider can try different tests to find out if your child has GERD. These include:

Barium swallow
Your child swallows a liquid with barium (an element that can be seen in x-rays) in it. The doctor watches how your child swallows through the esophagus with a fluoroscopy machine, which is like an x-ray video camera.

Upper GI test
Similar to a barium swallow, the healthcare provider looks at the esophagus, stomach, and the first part of the small intestine, or duodenum (dew-oh-DEN-um).

Esophagoscopy (ee-soff-uh-GOS-co-pee)
A healthcare provider will use a special tube with a sensor at the end (called a scope) to view the inside of your child’s esophagus.

pH probe study
A healthcare provider puts a probe through your child’s nose into their esophagus. It stops just above the opening into the stomach and continuously records how much acid is in the esophagus. When reflux happens, the esophagus becomes more acidic. A pH probe study helps diagnose GERD and see if treatment is working. It also helps healthcare providers notice other symptoms, like coughing, that happen with the GERD. The test usually takes 18–24 hours, so your child must stay overnight in the hospital.

Children 5 years old and older can have a small sensor put inside their esophagus for a Bravo pH study. The sensor monitors reflux for two days while your child is at home. Your child must have anesthesia and an esophagoscopy to place the sensor for a Bravo pH study.

How do I treat GERD at home?
Try the following to reduce your child’s reflux at home:
• Burp your child frequently during feedings.
• Keep your child upright as much as possible during the feeding. Have your child sit upright at least 30 minutes after you’re done feeding them.
• Feed your child frequently and with smaller amounts of food.
• If your child spits up, do not give the feeding again right away. Wait until the next feeding time.
• Place your child in a car seat only when riding in a vehicle. The car seat position increases reflux.
• Avoid tight waistbands for your child. Do not tape diapers too tightly around your child’s waist.
• Keep your child away from tobacco smoke.
• Ask your child’s healthcare provider about thickening your child’s feeding or trying a hypoallergenic formula.

**What medicines can help treat GERD?**
If the tips above do not help, several medicines are available. Some of the medicines help the food go through the stomach so the stomach empties properly. Medicine can also help the stomach make less acid. Ask your healthcare provider about what medicines would be best for your child.

Your child may need surgery if other treatments fail or your child has severe complications from GERD. A pediatric surgeon will discuss any recommended surgery with you.

**What are the possible complications of GERD?**
Complications may include:
- Pain or fussiness
- Choking spells
- Wheezing and worsening asthma
- Recurring pneumonia or respiratory infections
- Not growing
- Bloody vomit or stools
- Temporary lack of breathing (called apnea)
- Swallowing problems or pain when swallowing
- Refusing to eat

**When should I call the doctor?**
Call the doctor if your child has:
- A fever, trouble breathing or blood-stained saliva.
- Is wheezing or chronically coughing.
- Difficulty eating or swallowing.
- Severe choking episodes, turns blue or stops breathing for a time.
- Vomiting and you notice blood or green or yellow fluid in the vomit.
- Severe crying or irritability and are inconsolable
- Trouble gaining weight.
- Is not drinking at least 2 ounces per pound of body weight a day. For example, a 16-pound baby needs to drink at least 32 ounces of fluid (breast milk or formula) per day.

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<tr>
<th>Your child’s weight</th>
<th>Amount of fluid per day</th>
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<tbody>
<tr>
<td>8 pound child</td>
<td>16 ounces</td>
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<tr>
<td>16 pound child</td>
<td>32 ounces</td>
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<td>24 pound child</td>
<td>48 ounces</td>
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**Notes**