

Pediatric GERD (Gastro-Esophageal Reflux Disease)

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- *Patient Health Information*

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Everyone has gastroesophageal reflux (GER), the backward movement (reflux) of gastric contents into the esophagus. Extraesophageal Reflux (EER) is the reflux of gastric contents from the stomach into the esophagus with further extension into the throat and other upper aerodigestive regions. In infants, more than 50 percent of children three months or younger have at least one episode of regurgitation a day. This rate peaks at 67 percent at four months old. But an infant's improved muscle control and the ability to sit up will lead to a spontaneous resolution of significant GER in more than half of infants by 10 months old, and four out of five at age 18 months. Researchers have found that 10 percent of infants younger than 12 months with GER develop significant complications.

The diseases associated with reflux are known collectively as Gastro-Esophageal Reflux Disease (GERD). Physically, GERD occurs when a valve at the lower end of the esophagus malfunctions. Normally, this muscle closes to keep acid in the stomach and out of the esophagus. The continuous entry of acid or refluxed materials into areas outside the stomach can result in significant injury to those areas. It is estimated that some 5 to 8 percent of adolescent children have GERD.

WHAT SYMPTOMS ARE DISPLAYED BY A CHILD WITH GERD?

While GER and EER in children often cause relatively few symptoms, the most common initial symptom of GERD is heartburn. Heartburn is more common in adults, and children have a harder time describing this sensation. They usually will complain of a stomach ache or chest discomfort, particularly after meals.

More frequent or severe GER and EER can cause other problems in the stomach, esophagus, pharynx, larynx, lungs, sinuses, ears, and even the teeth. Consequently, other typical symptoms can include crying/irritability, poor appetite/feeding and swallowing difficulties, failure to thrive/weight loss, regurgitation ("wet burps" or outright vomiting), stomach aches (dyspepsia), abdominal/chest pain (heartburn), sore throat, hoarseness, apnea, laryngeal and tracheal stenosis, asthma/wheezing, chronic cough and throat clearing, chronic sinusitis, ear infections/fluid, and

dental caries. Effortless regurgitation is very suggestive of GER. However, recurrent vomiting (which is not the same) does not necessarily mean a child has GER.

If your child displays the typical symptoms of GERD, a visit to a pediatrician is warranted. However, in some circumstances, the disorder may cause significant ear, nose, and throat disorders. When this occurs, an evaluation by an otolaryngologist is recommended.

HOW IS GERD DIAGNOSED?

Most of the time, the physician can make a diagnosis by interviewing the caregiver and examining the child. There are occasions when testing is recommended, and each test has advantages and shortcomings. Those most commonly used to diagnose GERD include:

- *pH probe*: A small wire with an acid sensor is placed through the nose down to the bottom of the esophagus, and usually left in place between 12-24 hours. The sensor detects when acid from the stomach is "refluxed" into the esophagus.
- *Barium swallow or upper GI series*: The child is fed barium, a white, chalky, liquid. A video x-ray machine follows the barium through the upper intestinal tract and lets doctors see if there are any abnormal twists, kinks, or narrowing of the tract.
- *Technetium gastric emptying study*: The child is fed milk mixed with technetium, a very weak radioactive chemical, which is then followed through the intestinal tract using a special camera. This test helps determine whether some of the milk/technetium ends up in the lungs, and how long milk sits in the stomach.
- *Endoscopy with biopsies*: This most comprehensive test involves passing a flexible endoscope with lights and lenses through the mouth into the esophagus, stomach, and duodenum. This allows the doctor to see any irritation or inflammation present. In some children with GERD, repeated exposure of the esophagus to stomach acid causes some inflammation (esophagitis). Endoscopy in children usually requires a general anesthetic.

WHAT TREATMENTS ARE AVAILABLE FOR GERD?

Treatment of reflux in infants is intended to lessen symptoms, not to relieve the underlying problem, as this will often resolve on its own with time. A simple treatment is to thicken a baby's milk or formula with rice cereal, making it less likely to be refluxed.

Several steps can be taken to assist the older child with GERD:

- **Lifestyle changes**: Raise the head of the child's bed about 30 degrees and have the child eat smaller, more frequent meals instead of large amounts of food at one sitting. Avoid eating right before they go to bed or lie down; let two or three hours pass. Try a walk or warm bath or even a few minutes on the toilet. Some researchers believe that certain lifestyle changes such as losing weight or dressing in loose clothing may assist in alleviating GERD.
- **Dietary changes**: Avoid chocolate, carbonated drinks, caffeine, tomato products, peppermint, and other acidic foods like citrus juices. Fried foods and spicy foods are also known to aggravate symptoms. Pay attention to what your child eats.

- Medical treatment: Most medications prescribed to treat GERD break down or lessen intestinal gas, decrease or neutralize stomach acid, or improve intestinal coordination. Your physician will prescribe the most appropriate medication for your child. It is rare for children with GERD to require surgery.