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Reflux in Infants

Also called: GER in Infants, GERD in infants, Pediatric Gastroesophageal Reflux

What are reflux and GERD?

The esophagus is the tube that carries food from your mouth to your stomach. If your baby has reflux, his or her stomach contents come back up into the esophagus. Another name for reflux is gastroesophageal reflux (GER).

GERD stands for gastroesophageal reflux disease. It is a more serious and long-lasting type of reflux. Babies may have GERD if their symptoms prevent them from feeding or if the reflux lasts more than 12 to 14 months.

What causes reflux and GERD in infants?

There is a muscle (the lower esophageal sphincter) that acts as a valve between the esophagus and stomach. When your baby swallows, this muscle relaxes to let food pass from the esophagus to the stomach. This muscle normally stays closed, so the stomach contents don't flow back into the esophagus.

In babies who have reflux, the lower esophageal sphincter muscle is not fully developed and lets the stomach contents back up the esophagus. This causes your baby to spit up (regurgitate). Once his or her sphincter muscle fully develops, your baby should no longer spit up.

In babies who have GERD, the sphincter muscle becomes weak or relaxes when it shouldn't.

How common are reflux and GERD in infants?

Reflux is very common in babies. About half of all babies spit up many times a day in the first 3 months of their lives. They usually stop spitting up between the ages of 12 and 14 months.

GERD is also common in younger infants. Many 4-month-olds have it. But by their first birthday, only 10% of babies still have GERD.

What are the symptoms of reflux and GERD in infants?

In babies, the main symptom of reflux and GERD is spitting up. GERD may also cause symptoms such as:

- Arching of the back, often during or right after eating
- Colic - crying that lasts for more than 3 hours a day with no medical cause
- Coughing [<https://medlineplus.gov/cough.html>]
- Gagging or trouble swallowing [<https://medlineplus.gov/swallowingdisorders.html>]
- Irritability, especially after eating
- Poor eating or refusing to eat
- Poor weight gain, or weight loss
- Wheezing or trouble breathing [<https://medlineplus.gov/breathingproblems.html>]
- Forceful or frequent vomiting [<https://medlineplus.gov/nauseaandvomiting.html>]

How do doctors diagnose reflux and GERD in infants?

In most cases, a doctor diagnoses reflux by reviewing your baby's symptoms and medical history. If the symptoms do not get better with feeding changes and anti-reflux medicines, your baby may need testing.

Several tests can help a doctor diagnose GERD. Sometimes doctors order more than one test to get a diagnosis. Common tests include:

- **Upper GI series**, which looks at the shape of your baby's upper GI (gastrointestinal) tract. Your baby will drink or eat a contrast liquid called barium. The barium is mixed in with a bottle or other food. The health care professional will take several x-rays of your baby to track the barium as it goes through the esophagus and stomach.
- **Esophageal pH and impedance monitoring**, which measures the amount of acid or liquid in your baby's esophagus. A doctor or nurse places a thin flexible tube through your baby's nose into the stomach. The end of the tube in the esophagus measures when and how much acid comes up into the esophagus. The other end of the tube attaches to a monitor that records the measurements. Your baby will wear this for 24 hours, most likely in the hospital.
- **Upper gastrointestinal (GI) endoscopy and biopsy**, which uses an endoscope, a long, flexible tube with a light and camera at the end of it. The doctor runs the endoscope down your baby's esophagus, stomach, and first part of the small intestine. While looking at the pictures from the endoscope, the doctor may also take tissue samples (**biopsy** [<https://medlineplus.gov/biopsy.html>]).

What feeding changes can help treat my infant's reflux or GERD?

Feeding changes may help your baby's reflux and GERD:

- Add rice cereal to your baby's bottle of formula or breastmilk. Check with the doctor about how much to add. If the mixture is too thick, you can change the nipple size or cut a little "x" in the nipple to make the opening larger.
- Burp your baby after every 1 to 2 ounces of formula. If you breastfeed, burp your baby after nursing from each breast.
- Avoid overfeeding; give your baby the amount of formula or breast milk recommended.
- Hold your baby upright for 30 minutes after feedings.
- If you use formula and your doctor thinks that your baby may be sensitive to milk protein, your doctor may suggest switching to a different type of formula. Do not change formulas without talking to the doctor.

What treatments might the doctor give for my infant's GERD?

If feeding changes do not help enough, the doctor may recommend medicines to treat GERD. The medicines work by lowering the amount of acid in your baby's stomach. The doctor will only suggest medicine if your baby still has regular GERD symptoms and:

- You already tried some feeding changes
- Your baby has problems sleeping or feeding
- Your baby does not grow properly


The doctor will often prescribe a medicine on a trial basis and will explain any possible complications. You shouldn't give your baby any medicines unless the doctor tells you to.

Medicines for GERD in babies include:


- H2 blockers, which decrease acid production
- Proton pump inhibitors (PPIs), which lower the amount of acid the stomach makes

If these don't help and your baby still has severe symptoms, then surgery might be an option. Pediatric gastroenterologists only use surgery to treat GERD in babies in rare cases. They may suggest surgery when babies have severe breathing problems or have a physical problem that causes GERD symptoms.

Learn More

- Acid Reflux (GER & GERD) in Infants [<https://www.niddk.nih.gov/health-information/digestive-diseases/acid-reflux-ger-gerd-infants>]  (National Institute of Diabetes and Digestive and Kidney Diseases)
- Gastroesophageal Reflux (GER) in Babies [<https://kidshealth.org/en/parents/ger-babies.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/parents/ger-babies.html>]
- Gastroesophageal reflux in infants [<https://medlineplus.gov/ency/article/001134.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/001134.htm>]
- GERD and Reflux in Infants [<https://gikids.org/gerd/gerd-infants/>]
(North American Society for Pediatric Gastroenterology, Hepatology and Nutrition)
- Infant Reflux: Diagnosis and Treatment [<https://www.mayoclinic.org/diseases-conditions/infant-acid-reflux/diagnosis-treatment/drc-20351412?p=1>] (Mayo Foundation for Medical Education and Research)
- Infant Reflux: Symptoms and Causes [<https://www.mayoclinic.org/diseases-conditions/infant-acid-reflux/symptoms-causes/syc-20351408?p=1>] (Mayo Foundation for Medical Education and Research)
- Spitting Up in Babies [<https://familydoctor.org/spitting-up-in-babies/?adfree=true>] (American Academy of Family Physicians)
Also in Spanish [<https://es.familydoctor.org/regurgitacion-en-los-bebes/?adfree=true>]
- Spitting up in Babies: What's OK, What's Not [<https://www.mayoclinic.org/healthy-lifestyle/infant-and-toddler-health/in-depth/healthy-baby/art-20044329?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/healthy-lifestyle/infant-and-toddler-health/in-depth/healthy-baby/art-20044329?p=1>]

Clinical Trials

- ClinicalTrials.gov: GERD in Infants [<https://clinicaltrials.gov/search?cond=gerd&term=infant&aggFilters=status:not%20rec>]  (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Analysis of multichannel intraluminal impedance and pH monitoring values in children... [<https://www.ncbi.nlm.nih.gov/pubmed/40329476>]
- Article: Heavy metal exposures in aerodigestive clinic cohort of infants with reflux... [<https://www.ncbi.nlm.nih.gov/pubmed/40269050>]
- Article: Clinical yield of esophagogastroduodenoscopy and pH-impedance testing in esophageal atresia patients... [<https://www.ncbi.nlm.nih.gov/pubmed/40178207>]
- Reflux in Infants -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Gastroesophageal+Reflux%22%5Bmajr%3Anoexp%5D+AND+infant+%5Bmh%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+2+Years%22+%5Bedat%5D+NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

Patient Handouts

- Spitting up - self-care [<https://medlineplus.gov/ency/patientinstructions/000754.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000754.htm>]



National Institutes of Health

The primary NIH organization for research on *Reflux in Infants* is the National Institute of Diabetes and Digestive and Kidney Diseases [<https://www.niddk.nih.gov>]

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