

3. Your child's doctor or nurse can discuss GER with you and suggest treatment if needed. The potential complications of the medications will be explained. Fortunately, most infants don't need medications and most infants outgrow reflux by 1 or 2 years of age.
4. Specific Instructions for infants with GER:
 - If the baby is bottle fed, add up to one tablespoon of rice cereal to 2 ounces of infant milk (includes expressed breast milk). If it is too thick for your infant to take easily, you can change the nipple size or cross cut the nipple.
 - Burp your baby after they have 1 or 2 ounces of formula. For breastfed infants, burp after feeding on each side.
 - Do not overfeed. Talk to your child's doctor or nurse about the amounts of formula or breast milk that your baby is taking.
 - When possible, hold your infant upright in your arms for 30 minutes after feeding.
 - Infants with GER should usually sleep on their backs, as is suggested for all infants. Rarely, a physician may suggest other sleep positions.

Very rarely do infants have severe GER that prevents them from growing or breathing well. In some of these infants, surgery may be the best option.

Your child's doctor or nurse will discuss GER with you and suggest treatment if needed. The potential complications of all the medications will be explained. Thankfully, most infants don't need medications and most outgrow reflux by 2 years of age.

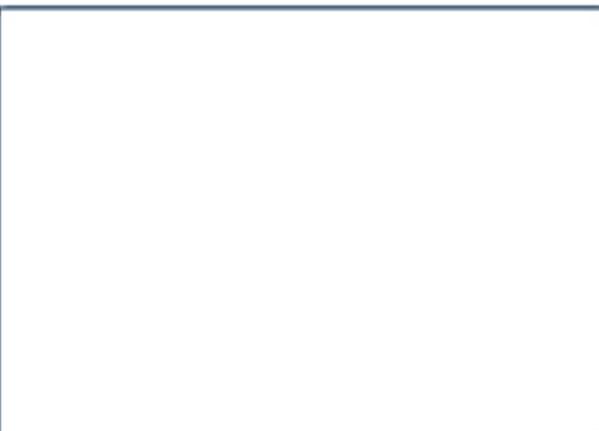
Speak with your child's healthcare provider if any of the following occur:

- Vomiting large amounts or persistent projectile (forceful) vomiting, particularly in infants under 2 months of age.
- Vomiting of fluid that is green or yellow in color, or appears like coffee grounds or blood.
- Difficulty breathing associated with the vomiting or spitting up.
- Excessive irritability related to feeding, or food refusal causing weight loss or poor weight gain.
- Trouble swallowing or painful swallowing.

For more information, please call us toll free at 1-800-461-8911 or visit our Web sites at: www.NASPGHAN.org, www.CDHNF.org, and www.KidsAcidReflux.org

IMPORTANT REMINDER: This information from the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) and the Children's Digestive Health and Nutrition Foundation (CDHNF) is intended only to provide general information and not 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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Gastroesophageal Reflux In Infants



NASPGHAN
NORTH AMERICAN SOCIETY FOR PEDIATRIC GASTROENTEROLOGY,
HEPATOLOGY AND NUTRITION

CDHNF
CHILDREN'S DIGESTIVE HEALTH AND NUTRITION FOUNDATION

APGNN
THE ASSOCIATION OF PEDIATRIC GASTROENTEROLOGY
AND NUTRITION NURSES

What is Gastroesophageal Reflux?

Gastroesophageal Reflux (GER) occurs when stomach contents come go into the esophagus (the tube that connects the mouth to the stomach), during or after a meal. Most infants with GER are happy and healthy even though they spit up or vomit. An infant with GER may experience:

- Spitting
- Vomiting
- Coughing
- Irritability
- Poor feeding
- Blood in the stools

How common is reflux?

GER occurs often in normal infants. More than half of all babies experience reflux in the first 3 months of life. Only a small number of infants have symptoms due to GER. Most infants stop spitting up between the ages of 12 to 18 months.

Why does reflux happen?

There is a ring of muscle at the bottom of the esophagus, which opens and closes, allowing food to enter the stomach. This ring of muscle is called the lower esophageal sphincter (LES). This sphincter opens to release gas (burping)



after meals, in normal infants, children and adults. In infants, when the sphincter opens the stomach contents often go up the esophagus and out the mouth (spitting up or vomiting). GER can also occur when babies cough, cry or strain.

What are the worrisome symptoms of GER?

In a small number of babies, GER may result in symptoms that are concerning. These include problems such as:

- Poor growth due to an inability to hold down enough food
- Irritability or feeding refusal due to pain
- Blood loss from acid burning the esophagus
- Breathing problems

Each of these problems can be caused by disorders other than GER. Your health care provider needs to determine if GER is causing your child's symptom.

How does your health care provider know your child has reflux?

An infant that spits or vomits may have GER. The doctor or nurse will talk with you about your child's symptoms and perform a physical examination. If the infant is healthy, happy and growing well, no treatment or testing may be needed. Tests may be ordered to help the doctor or nurse determine whether your child's symptoms are related to GER. Sometimes, treatment is started without the need for any tests.

How is reflux treated?

The treatment of reflux depends upon the infant's symptoms and age. Some babies may not need any treatment, as GER can resolve in many cases without treatment. Healthy, happy babies may only need the feedings thickened with cereal and to be kept upright after they are fed. Overfeeding can aggravate reflux, and your health care provider may suggest different ways of handling the problem. For example, smaller volume with more frequent feeding can help decrease the chances of regurgitating. If a food allergy is suspected they may ask you to change the baby's formula (or modify the mother's diet if the baby is breastfed) for one to two weeks. If a child is not growing well, feedings with higher calorie content or tube feeding may be recommended.

1. When a child is uncomfortable, or has difficulty sleeping, eating or growing, the doctor or nurse may suggest a medication. Different types of medicine can be used to treat reflux by decreasing the acid secreted by the stomach. One class of these medications is the H2-blockers such as cimetidine (Tagamet), ranitidine (Zantac), famotidine (Pepcid) and nizatidine (Axid). Another type of medication is the proton-pump inhibitors such as esomeprazole (Nexium), omeprazole (Prilosec), lansoprazole (Prevacid), rabeprazole (Aciphex) and pantoprazole (Protonix).
2. Very rarely do infants have severe GER that prevents them from growing or cause breathing problems. In some of these infants, surgery may be the best option.