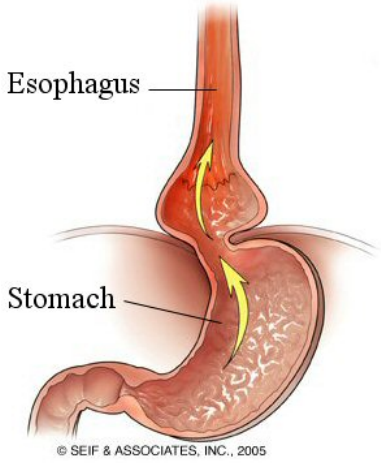
# Gastroesophageal Reflux in Infants

Gastroesophageal reflux (GER) occurs when stomach contents come back up into the *esophagus* (the tube that connects the mouth to the stomach). This usually happens during or after a meal. A ring of muscle at the bottom of the esophagus opens and closes to allow food to enter the stomach. This ring of muscle is called the lower esophageal sphincter (LES). The LES opens to release gas (burping) after meals in normal infants. When the LES opens in infants, the stomach contents often go up the esophagus and out the mouth (spitting-up). All babies spit up. This is normal and is called physiological GER. Physiological GER can also occur when babies cough, cry, or strain. When the GER is more severe, it becomes abnormal (*pathological*) GER. Most infants with GER are happy and healthy, even though they sometimes spit-up or vomit. GER may also be called Chalasia.




## SYMPTOMS

GER often occurs in normal infants. More than half of all infants have GER in the first 3 months of life. An infant with pathological GER may experience:

- Back arching.
- Irritability.
- Poor weight gain.
- Poor feeding.
- Coughing.
- Blood in the stools.

Only a small number of infants have severe symptoms due to GER. Most infants stop spitting-up between the ages of 12 and 18 months. In a small number of infants, GER may result in symptoms that are of concern. These include problems such as:

- Poor growth because they cannot hold down enough food.
- Irritability or refusing to feed due to pain.
- Blood loss from acid burning the esophagus.
- Breathing problems.

These problems can be caused by disorders other than GER. Your caregiver needs to determine if GER is causing your infant's symptoms.

## TREATMENT

The treatment of GER depends on the infant's symptoms and age. Some infants may not need treatment because GER often goes away by itself. Healthy babies may only need their feedings thickened and their bodies kept upright after they are fed. Over-feeding can make GER worse, so your caregiver may suggest different ways of feeding. For example, smaller quantities and feeding more often can help decrease the chances of GER. If a food allergy is suspected, you may be asked to change the infant's formula or to change your diet if you are breastfeeding. If an infant is not growing well, feedings with higher calorie content or tube feeding may be advised.

**Other treatments include the following:**

- When an infant is uncomfortable, has a hard time sleeping or eating, or does not gain weight, the caregiver may suggest a medication. Different medicines can be used to treat GER by decreasing the acid leaked by the stomach.
- Very rarely, infants have severe GER that prevents them from growing or causes breathing problems. In some of these infants, surgery may be an option.

## HOME CARE INSTRUCTIONS

- Do not over-feed your baby. This aggravates the condition. At feedings, give your baby smaller amounts and feed more frequently.
- Burp your baby frequently (after 1 or 2 ounces of formula or after feeding on each breast) during each

feeding. This will get rid of air in your baby's stomach and help prevent spitting up. Feed your baby in a mildly upright position (not lying flat).

- If the baby is bottle-fed, speak to your child's caregiver about adding rice cereal to infant milk (including expressed breast milk). If the mixture is too thick for your infant to eat easily, you can change the nipple size or cross cut the nipple.
- Keep your baby in the same position for awhile after feeding. You may hold the baby or use a front-pack, backpack, or swing. Avoid using an infant seat.
- For sleeping, place your baby flat on their back. Raising the head end of the crib works well. DO NOT put your baby on a pillow.
- Do not hug or play hard with your baby after meals. When you change your baby's diapers, be careful not to push the baby's legs up against the stomach. Keep diapers loose.
- When you get home from your child's checkup, weigh your baby on an accurate scale and record it daily. Compare the weight to the clinic scale immediately upon returning home so you will know the difference between scales. If your child loses weight, call your child's caregiver.

## SEEK IMMEDIATE MEDICAL CARE IF:

- Your child is vomiting large amounts or has repeated forceful vomiting, particularly in infants under 2 months of age.
- You notice vomiting fluid that is green or yellow in color or looks like coffee grounds or blood.
- Your child has a hard time breathing after vomiting or spitting-up.
- Your child is irritable related to feeding, or refusing food.
- Your child has weight loss or poor weight gain.
- Your child has difficult or painful swallowing.

## FOR MORE INFORMATION

Call or visit these websites:
North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition: 1-215-233-3918
Internet: www.NASPGHAN.org, www.CDHNF.org, www.KidsAcidReflux.org

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