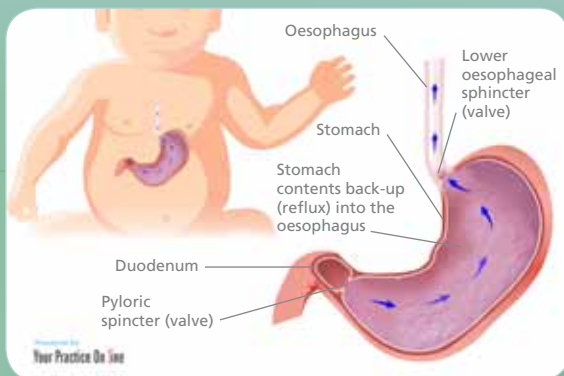


## BACKGROUND

Gastro-oesophageal reflux (GOR), and gastro-oesophageal reflux disease (GORD) are related, but different:

***GOR is normal, GORD is a disease.***

**GOR** ('reflux') refers to the passage of contents from the stomach into the oesophagus. The refluxed material may enter the throat or mouth; in infants, it often is ejected from the mouth, sometimes forcefully. Reflux is a normal occurrence in individuals of all ages, especially during and immediately after meals. Reflux is usually normal if it is associated with few, mild, infrequent symptoms, or none at all, and the infant is growing and developing normally.



In contrast, **GORD** is present when reflux causes symptoms that are troublesome, severe, or of longstanding; and/or if reflux causes a complication. The most common complication is damage to the oesophagus ("oesophagitis").

This leaflet focuses on GOR and GORD ***in infants, ie, age 12 months and under.***

**For further information on reflux in children visit:**

Living with Reflux  
[www.livingwithreflux.org](http://www.livingwithreflux.org)  
e-mail: [info@livingwithreflux.org](mailto:info@livingwithreflux.org)

The material set out in this leaflet is provided for information only and does not replace or substitute for a professional medical opinion. If you have any concerns regarding the health of a child, you should seek advice from a qualified medical professional.

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**Living with Reflux**  
Raising awareness of Gastro-oesophageal Reflux

**Providing support and information to families living with Gastro-oesophageal reflux**

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**Parents guide to**

**Gastro-Oesophageal Reflux (GOR) and Gastro-Oesophageal Reflux Disease (GORD) in INFANTS (under 1 year of age)**

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## INFANTS

In the first several months of life, infants take in huge volumes of feeds relative to their body weight. This is because they are growing and developing rapidly and require a much higher caloric intake per kg body weight than older children or adults. The infant stomach has a limited capacity to stretch to accommodate these volumes, and the oesophagus in infants is relatively short, making it easy for stomach contents to overflow into the oesophagus, and out of the mouth. This is often referred to as infant 'regurgitation', 'spitting up', 'possetting', 'spilling', or 'vomiting'. This is usually effortless, but on occasion can be forceful. The peak age for regurgitation is between 3 and 7 months; during this period, up to 70% of otherwise healthy, happy, thriving infants regurgitate a few times a day. The tendency to regurgitate gradually decreases, so that by age 12-15 months, only about 5% of infants continue to regurgitate. Ongoing regurgitation past the age of 18-24 months is considered abnormal.

**In other words, in the large majority of infants, GOR is a normal occurrence that they will outgrow with time, the introduction of solid foods, and assuming the upright position, i.e., walking. When such infants are thriving, and generally happy, it's evident that this is physiologic reflux, ie, normal.**

On the other hand, many infants cry excessively and/or appear to be in discomfort, with arching of the back, and excessive fussiness. Because they may *also* be regurgitating or spitting up, it is often assumed that the unexplained crying or apparent discomfort is due to the regurgitation, and that they must therefore have GORD, and require pharmacologic treatment. However, unexplained crying or irritability are not specific to GORD. There are other more common causes of these symptoms than GORD. These include:

- Constipation
- Infection
- 'Colic'. 'Colic' or excessive unexplained crying may be due to difficulty 'changing state' - in other words, once some infants

start crying for any reason, their immature nervous system makes it hard for them to change from that 'state' to another, ie, to self-calm. This is a normal maturational issue, and unexplained crying due to this cause usually resolves by 3-5 months of age.

- Gassiness. Breast milk contains a lot of the sugar lactose, and this sugar cannot all be digested in the small intestine, so a lot of it reaches the large bowel where it is converted to gas, and may cause cramping. Infants are not used to this sensation, and this may be a cause of crying.
- Air swallowing. If the infant is struggling to suck from the bottle, a lot of air can be swallowed during feeding, causing stomach distension, discomfort, and difficulty burping.
- Exposure to tobacco smoke
- Sensitivity to foods. Most commonly these are the protein in cow's milk formula, or cow or soy milk protein transmitted in breast milk.

**In summary: Regurgitation or spitting up are normal in most otherwise healthy, happy infants. Irritability does not usually mean the regurgitation is causing the crying, or that that GORD is present. Of all the infants who regurgitate, with or without irritability, very few have GORD.**

## What can you do?

If you have any concerns or worries you should always speak with your doctor as soon as possible. If your infant has any of the following 'red flag' or warning signs, you should seek medical attention promptly:

### 'Red-flag' or warning signs for which you should seek medical attention

- Vomiting bile (green material)
- Repeated projectile (forceful) vomiting
- Crying that does not stop
- Vomiting blood
- Abdominal swelling or distension
- Severe constipation
- Stools that are bloody or jet-black
- Persistent refusal of feeds
- Lethargy
- Fever
- Weight loss, or poor weight gain
- Excessive crying or irritability during or after feeding or regurgitation

- Vomiting old food, i.e., several hours after feeding
- Choking or blue spells
- Chronic vomiting that starts after 6 months of age

## What can you do to alleviate symptoms?

In an infant with repeated regurgitation that is distressing to them or you, assuming no 'red-flag' or warning signs are present, some of the following may help, recognising that an improvement may take 2-3 weeks to occur.

- Avoid exposure to smoke (tobacco/other) - it causes irritability.
- Avoid over-feeding
  - Ask your medical professional about appropriate sized bottles, nipples or nursing routines
- Burp (wind) your baby frequently before, during and after feeding
- Keep your baby upright after feeds for at least 30 minutes
- Avoid the use of car seats immediately after feeding
- Avoid clothing or nappies that are tight around the abdomen
- Where possible try not to lay your infant flatter than a 30-degree angle above horizontal, including while changing nappies. Raise the head of the crib mattress

## What your doctor may advise

- Removal of certain foods from your diet if you are breastfeeding; specifically, cow's milk, soy milk, eggs, shellfish, caffeine, chocolate. You can also just do this yourself.
- Thickened feeds
- A trial of hypoallergenic formula
- Referral to a paediatrician or a paediatric gastroenterologist
- Further tests
- Treatment with medication: remember, these medications are not without potential side-effects, immediate or late

