

# Gastroesophageal Reflux in Infants

## What is gastroesophageal reflux?

- Reflux is when stomach contents move into the esophagus (the tube that carries food from the mouth to the stomach). See Figure 1.
- Reflux is common in newborn babies, especially those who are premature.
- Reflux is seen most often in the first 9 months. It usually goes away by the time your baby is 1 year old.
- Reflux can happen when a baby burps, moves, hiccups, coughs, sneezes, strains, or has a bowel movement. It often happens when a baby is active.
- Some reflux is normal and is often called spitting up. Some babies spit up regularly. Spitting up doesn't hurt and doesn't affect feeding, sleeping, weight gain, or growth. These babies are sometimes called "happy spitters".
- Reflux can become a problem if it causes pain. Reflux can feel like heartburn. This pain can lead to problems with breathing, feeding, sleeping, and growing.

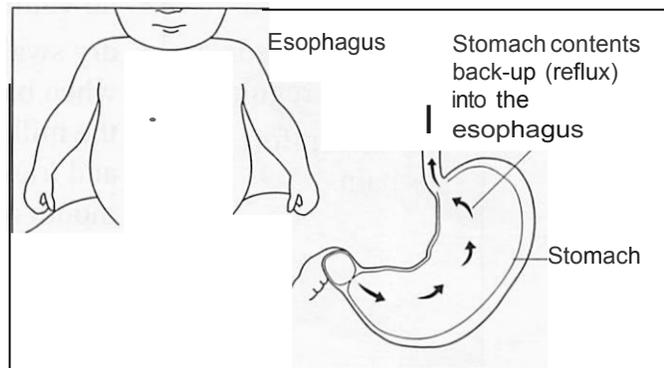


Figure 1

## What makes reflux worse ?

Reflux can be made worse:

- when someone smokes in the house
- when the baby is sick
- by overfeeding
- by crying or coughing
- by swallowing lots of air
- when the baby doesn't burp well
- by laying down too soon after feeding
- by being constipated

## What are the signs of reflux?

	<b>Happy Spitter</b>	<b>Hidden or Silent Reflux</b>	<b>Visible Reflux</b>
<b>Vomiting (Throwing Up)</b>	<ul style="list-style-type: none"> <li>• no vomiting</li> <li>• spits up once in a while or regularly</li> <li>• no discomfort or pain</li> </ul>	<ul style="list-style-type: none"> <li>• no vomiting</li> <li>• dry swallows happen when baby feels the milk is coming up and tries to clear his mouth or throat by swallowing</li> <li>• face may turn red</li> <li>• may have a worried look or grimace</li> <li>• eyes may water</li> <li>• sour or bad breath</li> </ul>	<ul style="list-style-type: none"> <li>• vomiting</li> <li>• may also have hidden/silent reflux</li> <li>• gagging or choking</li> <li>• may have a worried look</li> <li>• sour or bad breath</li> </ul>
<b>Feeding</b>	<ul style="list-style-type: none"> <li>• clear hunger cues</li> <li>• comfortable after feeds</li> <li>• feeds well</li> </ul>	<ul style="list-style-type: none"> <li>• shows signs of hunger but won't feed</li> <li>• may only feed when asleep</li> <li>• fussy, arches, squirms, or is irritable/ cranky during or after feeds</li> <li>• coughs or gags during or after feeds</li> </ul>	<ul style="list-style-type: none"> <li>• shows signs of hunger but won't feed</li> <li>• may only feed when asleep</li> <li>• arches the neck and back, especially during feeds</li> <li>• fussy, arches, squirms, or is irritable/ cranky during or after feeds</li> <li>• coughs or gags during or after feeds</li> <li>• drinks small amounts</li> </ul>
<b>Weight Gain</b>	<ul style="list-style-type: none"> <li>• good weight gain and growth</li> </ul>	<ul style="list-style-type: none"> <li>• may not gain weight as well</li> </ul>	<ul style="list-style-type: none"> <li>• doesn't gain weight well</li> </ul>
<b>Sleep</b>	<ul style="list-style-type: none"> <li>• normal sleep pattern</li> </ul>	<ul style="list-style-type: none"> <li>• restless sleep</li> <li>• wakes with painful cry or cough</li> </ul>	<ul style="list-style-type: none"> <li>• restless sleep</li> <li>• wakes with painful cry or cough</li> </ul>

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## What can I do to help my baby?

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There are many things you can do to help reduce reflux.

### ***Holding and Carrying***

Some positions put less pressure on your baby's stomach and reduce reflux. Keep your baby upright to help keep food in the stomach. When your baby is bent forward or slouched, pressure on the stomach can push food up and cause reflux.

- **When you carry or hold your baby, keep him upright**, with a straight body and head above the stomach (Figure 2).
- A front pack keeps your baby upright and straight (Figure 3). If your baby has breathing problems, speak with your healthcare provider before using a front pack.
- "Sling" type carriers bend your baby's body too much and may cause reflux (Figure 4).



Figure 2



Figure 3



Figure 4

### ***Sleeping***

- Your baby should **sleep on his back**, unless your doctor tells you to use another position.
- **Your baby's bed should be flat**, unless your healthcare provider suggests another position.

## Changing Your Baby's Diaper

- **Change your baby's diaper before feeds or halfway through the feed**, when the stomach is not yet full.
- Use an **inclined surface** for diaper changes, such as a wedge or pillow. When changing the diaper, roll your baby side to side, rather than lifting the legs (Figure 5).
- **Keep the diapers loose.** A tight diaper, straining on a bowel movement, or sitting in a hunched position can put extra pressure on your baby's stomach and increase reflux.
- If your baby has **hard bowel movements** or doesn't have regular bowel movements, speak with your healthcare provider.



Figure 5

## Feeding

- **Breastmilk is best** for a baby with reflux as it is easy to digest, empties quickly from the stomach, and has digestive enzymes.
- Breastfeeding uses a natural side-lying position (Figure 6). When bottle feeding, make sure your baby is **upright for feeds** (Figure 7). Some babies need to be in a **raised, side-lying position** (Figure 8).



Figure 6



Figure 7



Figure 8

- **Babies that feed too fast are more likely to have reflux.** Be sure you are using the correct nipple for your baby's age and sucking ability. A nipple that is too fast will fill your baby's stomach too quickly and may cause reflux. Also, if your baby feeds in less than 15 minutes, give your baby a break halfway through the feed. Burp your baby more often to slow down the feeding time to 15 to 30 minutes. This short break lets the stomach empty a little.

- Give small feedings but more often. Large meals can make your baby feel uncomfortable and increase reflux.
- Don't overfeed. Watch for signs that your baby is full (relaxed body, sleeping). If you try to make your baby drink more, your baby might throw up. Some babies that have reflux tend to overfeed. We think it might be because it feels better when milk is going down rather than coming back up.
- If your baby does throw up, give your baby a feeding break. Feed again when your baby gives hunger cues.
- Use gravity to reduce reflux. Keep your baby in an upright position for 20 to 30 minutes after feeding. Handle your baby gently after feedings.
- Your doctor may suggest a special formula for your baby or a special diet for you if you are breastfeeding.

### ***Burping***

- Burp your baby every 5 to 10 minutes when breastfeeding. If bottle-feeding, burp your baby every 1 to 2 ounces (30 to 60 mL).
- Burping on the shoulder is better for some babies than bending over. Watch your baby's face so you can see if he is spitting up or choking (Figure 9).
- Don't bend your baby over too far as this may make your baby throw up (Figure 10).
- If burping in a seated position, keep your baby upright and straight (Figure 11).



Figure 9



Figure 10



Figure 11

## ***Child Safety Seats (Car Seats) and Other Seats***

- Sitting in a car seat can put pressure on your baby's stomach and can make him reflux.
- Only use the car seat when travelling in a vehicle. When you reach your destination, take your baby out of the seat.
- Keep your baby's head and body straight to reduce reflux when sitting in a child safety seat, bouncy chair, swing, or stroller. Try to prevent your baby from sliding into a crooked position (Figure 12).
- To keep your baby straight and centred, put a small, rolled-up receiving blanket or towel on either side of your baby's body and head. Make sure you keep the rolls outside of the straps (Figure 13). Keep the child safety seat straps snug against your baby. Always follow the instructions that came with your child safety seat.



Figure 12



Figure 13

- Keep your baby sitting upright in a stroller, swing, or bouncy seat. Use rolled towels or blankets to help keep your baby straight (Figures 14, 15, and 16).



Figure 14: Stroller



Figure 15: Swing



Figure 16: Bouncy Seat

## ***Playing***

- **Tummy time is important for babies.** As their tummy muscles get stronger, they will have less reflux.
- It can be hard to find a good time for tummy time play because you may be worried your baby will reflux. A **good time to play with your baby** is the few minutes before a feeding, when your baby's tummy is empty (Figure 17).
- Put **rolls under your baby's armpit or use a wedge or a breastfeeding pillow** for supervised tummy time (Figure 18).
- **Lay your baby on your lap with your knees bent so his head is above his stomach** (Figure 19). This is a good position for face-to-face play.



Figure 17

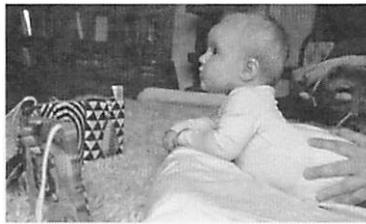


Figure 18



Figure 19

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## **What can I do if these ideas don't help?**

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Speak with your baby's healthcare provider. The doctor may also prescribe medicine.

Take your baby to the hospital right away if your baby:

- has problems breathing (breathing faster than normal)
- has vomit that is bright green, brown or black (looks like coffee grounds)
- has forceful vomiting
- refuses to feed for longer than 6 hours

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*This material is for information purposes only. It should not be used in place of medical advice, instruction and/or treatment. If you have questions, speak with your doctor or appropriate healthcare provider.*