

INFORMATION STATEMENT

Reflux - sleeping position for babies with Gastro- Oesophageal Reflux (GOR)



DEFINITIONS

Gastro-Oesophageal Reflux (GOR) is the effortless regurgitation or spitting up of gastric (stomach) contents into the oesophagus (food pipe) with or without effortless regurgitation and vomiting¹

Gastro-Oesophageal Reflux Disease (GORD) occurs when the reflux of gastric (stomach) contents causes troublesome signs and/or complications, that is, when GOR has an adverse effect on the well being of the baby. For example, when the GOR causes poor weight gain or complications such as oesophagitis or respiratory signs. This requires medical assessment before a diagnosis of GORD is made^{1,7}

Regurgitation in children is defined as the passage of refluxed contents into the throat, mouth or from the mouth. Other terms include “spitting up”, “possiting” or “spilling”. It is a characteristic sign of reflux in infants but is not diagnostic of GORD¹

SIDS and Kids recommend that all babies, including those with GOR, sleep on the back on a firm, clean and well-fitting mattress that is flat (not tilted or elevated) to reduce the risk of SUDI, including SIDS and fatal sleep accidents.

- Regurgitation in infants is normal. It is normal for up to 50% of babies less than three months of age and 70% of completely healthy infants under twelve months of age to have regurgitation that is physiologic. Most of this regurgitation resolves spontaneously after 6 months, and completely by twelve months in 95% of babies.¹⁻³
- Babies with GOR should be placed to sleep on their back from birth on a firm, flat mattress that is not elevated.⁴
- Elevating the sleeping surface for back sleeping babies does not reduce GOR and is not recommended.⁴⁻⁵
- If a baby is in an elevated cot, further hazards may be introduced into the sleeping environment. When elevated, babies are more likely to slip down the cot and become completely covered by bedding, or if a pillow is used to elevate the baby pillows become a suffocation hazard.
- In babies with GOR, the risk of sudden death when baby is in the tummy or side sleeping positions outweighs any benefits of tummy or left side positioning of babies.⁶
- If for a rare medical reason a baby must be slept in a position other than the back position, medical staff should advise the parents in writing and provide information about the other ways parents can use to reduce the risk of Sudden Unexpected Death in Infancy (SUDI).
- Medical assessment is required for a diagnosis of Gastro-Oesophageal Reflux Disease (GORD).⁷

Introduction

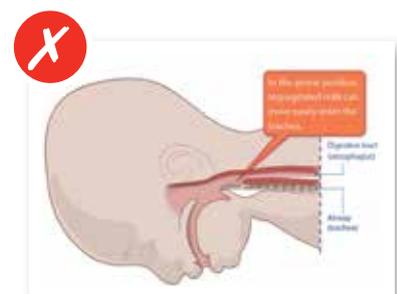
Gastro-oesophageal reflux (GOR) regurgitation or 'spitting up' is common in babies. Regurgitation occurs in about 50% of babies less than 3 months of age and resolves spontaneously, without intervention, by 12 months in all but 5% of babies.¹⁻⁴ It is usually mild and self-resolving. GOR is a normal physiological process occurring several times per day in healthy babies both term and preterm and is normally cleared by swallowing.⁸⁻⁹ The great majority of children with the more serious Gastro-Oesophageal Reflux Disease (GORD) are over one year of age.⁷

Most GOR can be managed by educating and reassuring parents that it will resolve by itself without treatment or medication. Medical attention is recommended if vomiting is very frequent and growth should be monitored using parent-held records.

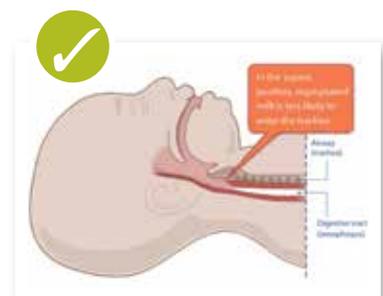
Babies who are breastfed have less GOR.¹⁰⁻¹²

Babies with GOR should be placed on their back to sleep on a firm, flat mattress that is not elevated.

Sleeping baby on the back provides airway protection.⁶ The back sleeping position is safer for babies with GOR as babies can protect their airways when placed on the back compared with babies placed to sleep on the tummy or side.



PRONE (on tummy)



SUPINE (on back)

Figure 1: Back is best for sleep

There is clear anatomical, physiological, and epidemiological evidence to support placing a baby on their back to sleep, from birth.⁶

Figure 1: In the supine position the upper respiratory airways are above the oesophagus (digestive tract), therefore regurgitated milk can be easily swallowed and aspiration into the respiratory tract avoided. When baby is placed on their tummy the digestive tract sits above the baby's upper airways. If baby regurgitates or vomits milk or fluid, these substances are more likely to be inhaled into the baby's airway and lungs.

[Source: Young, J. (2009). Supine is safest. Poster, the State of Queensland (Queensland Health), Queensland Government.]

The tummy or side positions should not be used for babies including those with GOR or GORD unless parents are advised in writing by the child's medical practitioner.

The American Academy of Pediatrics advises that the back sleeping position be recommended in the treatment of gastro-oesophageal reflux for mild to moderate cases.⁴ The tummy and side sleeping positions significantly increase the risk of sudden infant death for babies under six months of age.⁴⁻⁶

Elevating the cot during sleep is not recommended

There is no evidence to support elevating the head of the cot for babies with GOR. In a critical review of the literature elevating the head of the cot in the supine position does not reduce GOR.⁵

Placing a pillow in the cot is not recommended as it increases the likelihood of baby slipping down under the bedding and the baby's head becoming covered.¹² A pillow should never be used to elevate a baby. Various products, such as wedges that fit under the mattress to elevate the head of the baby while sleeping are dangerous if the baby slips down under the bedding and the head becomes covered with bedding. In addition, elevating the head of the cot may cause baby to slide down to the foot of the cot into a position that might compromise breathing and, therefore, is not recommended.¹³

Elevating a baby during feeding and tummy time

While props in the shape of a wedge may provide an aid during feeding, and tummy time while the baby is under supervision, they should never be used during sleep or when baby is awake and not being watched by an adult.

Sleep positioners are not recommended

Aids and devices intended to keep babies in certain sleeping positions are NOT recommended; they do not prevent babies from rolling on to the tummy (prone) position, and they limit the baby's movements as they get older.¹² These products have not been researched and, like other soft products in the cot, may create a suffocation risk.⁴

Thickened feeds

Two critical systematic reviews of the literature suggest that thickening of feeds is helpful in reducing the signs of GORD.^{5,13} Results show that frequency of regurgitation and vomiting is reduced and increasing weight gain can be achieved by thickening feeds.

Smoking

Eliminating environmental tobacco smoke (ETS) is important for many baby health outcomes. In adults, cigarette smoking is a common cause of gastro-oesophageal reflux, and ETS from parental smoking may also be a cause of GOR in babies.¹⁵⁻¹⁹

Rare situations where the tummy sleeping position is recommended for medical reasons

If the child's medical practitioner determines that the stomach sleeping position is necessary because of a rare medical condition or other concern, the medical practitioner should advise the parents in **writing**. Ideally, this an individualised care plan for baby. The medical practitioner should also provide information about the child care practices that reduce the risk of sudden infant death:

To Reduce the Risks of SIDS and Fatal Sleep Accidents:

1. Sleep **baby on the back** from birth, not on the tummy or side
2. Sleep baby with **head and face uncovered**
3. Keep baby **smoke free** before birth and after
4. Provide a **safe sleeping environment** night and day
5. Sleep baby in their **own safe sleeping place** in the **same room as an adult care-giver** for the first six to twelve months
6. **Breastfeed** baby



References:

1. Sherman, P.M., Hassall, E., Fagundes-Neto, U., Gold, B.D. & Kato, S., Vandenplas Y. (2009). A global, evidence-based consensus on the definition of gastroesophageal reflux disease in the pediatric population. *Am J Gastroenterol* 104, 1278-95
2. Hegar, B., Dewanti, N.R., Kadim, M., Alatas, S., Firmansyah, A. & Vandenplas, Y. (2009). Natural evolution of regurgitation in healthy infants. *Acta Paediatrica*, 98, 1189-93
3. Nelson, S.P., Chen, E.H., Syniar, G.M. & Christoffel, K.K. (1997). Prevalence of symptoms of gastroesophageal reflux during infancy. A pediatric practice-based survey. Pediatric Practice Research Group. *Archives of Pediatrics & Adolescent Medicine*, 151 (6), 569-72
4. American Academy of Pediatrics. Task Force on Sudden Infant Death Syndrome. (2005). The changing concept of Sudden Infant Death Syndrome: diagnostic coding shifts, controversies regarding the sleeping environment, and new variables to consider in reducing risk. *Pediatrics*, 116(5), 1245-55
5. Craig, W.R., Hanlon-Dearman, A., Sinclair, C., Taback, S. & Moffatt, M. (2004) Metoclopramide, thickened feedings, and positioning for gastro-oesophageal reflux in children under two years. *Cochrane Database Systematic Reviews*, Issue 3. Art. No.: CD003502
6. Jeffery, H.E., Megevand, A. & Page, H. (1999). Why the prone position is a risk factor for Sudden Infant Death Syndrome. *Pediatrics*, 104 (2 Pt 1), 263-9
7. Vandenplas, Y. & Rudolph, C.D. (2009). Pediatric gastro-oesophageal reflux clinical practice guidelines. *Journal of Pediatric Gastroenterology & Nutrition*, 49, 498-547
8. Jeffery, H.E. & Page, M. (1995). Physiological gastro-oesophageal reflux in preterm infants. *Acta Paediatrica*, 84, 245-250
9. Jeffery H.E., Ius, D., Page, M. (2000). The role of swallowing during active sleep in the clearance of reflux in term and preterm infants. *Journal of Pediatrics*, 137, 545-548
10. Heacock H, Jeffery H, Baker J. & Page, M. (1992). Influence of breast versus formula milk on physiological gastroesophageal reflux in healthy, newborn infants. *Journal of Pediatric Gastroenterology and Nutrition*, 14,41-6
11. Camponozzi A, Boccia G, Pensabene L, Panetta F, Marseglia A, Strisciuglio P, Barbera C, Maguzzu G, Pettoello-Mantovani M, Staiano A. (2009). Prevalence and natural history of gastroesophageal reflux: pediatric prospective survey. *Pediatrics*, 123, 779-83.
12. SIDS and Kids. (2012). *Sleep Safe, My Baby: A guide to assist sleeping your baby safely*. (Long brochure). Melbourne: SIDS and Kids
13. American Academy of Pediatrics, Task Force on Sudden Infant Death Syndrome. (2011). SIDS and Other Sleep-Related Infant Deaths: Expansion of recommendations for a Safe Infant Sleeping Environment. *Pediatrics*, 128(5), e1-27
14. Horvath, A., Dziechciarz, P. & Szajewska, H. (2008). The effect of thickened-feed interventions on gastro-oesophageal-reflux in infants: Systematic review and meta-analysis of randomized, controlled trials. *Pediatrics*, 122, e1268-77
15. Gaffney, K.F. (2001). Infant exposure to environmental tobacco smoke. *Journal of Nursing Scholarship*, 33 (4), 343-347
16. Shenassa, E.D. & Brown, M.J. (2004). Maternal smoking and infantile gastrointestinal dysregulation: the case of colic. *Pediatrics*, 114(4), e497-505
17. Martin, A.J., Pratt, N., Kennedy, J.D., Ryan, P., Ruffin, R.E., Miles, H. & Marley, J. (2002). Natural history and familial relationships of infant spilling to 9 years of age. *Pediatrics*, 109(6), 1061-7
18. Karaman, O., Uguz, A. & Uzuner, N. (1999). Risk factors in wheezing infants. *Pediatrics International*, 41(2), 147-50
19. Alaswad, B., Toubas, P.L. & Grunow, J.E. (1996). Environmental tobacco smoke exposure and gastroesophageal reflux in infants with apparent life-threatening events. *Journal - Oklahoma State Medical Association*, 89(7), 233-7.

SIDS and Kids. National Scientific Advisory Group (NSAG). 2013. Information Statement: Sleeping position for babies with gastro-oesophageal reflux (GOR). Melbourne, National SIDS Council of Australia. This information statement was first posted in March, 2013.



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