

wrapping babies

wrapping is a useful strategy that parents can use to help their babies settle and sleep on their back



To Reduce the Risk of Sudden Unexpected Deaths in Infancy (SUDI), including 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

- Wrapping is a useful strategy that parents can use to help their babies to settle and sleep on their back, especially during the first 6 months of life
- Wrapping and placing babies on the back provides stability and helps to keep babies in the recommended back position
- When wrapping baby, allow for hip flexion and chest wall expansion and ensure baby is not over dressed under the wrap, has the head uncovered and does not have an infection or fever
- Babies must not be wrapped if sharing a sleep surface (including bed-sharing) with an adult
- Discontinue wrapping baby when baby is able to turn onto the tummy during sleep

Research has shown that one of the best ways to reduce the risk of SIDS and sudden and unexpected death in infancy is to sleep babies on their back. Managing unsettled infant behaviour and promoting sleep for babies, whilst ensuring that the safe sleeping recommendations are followed, is sometimes difficult for parents. Wrapping is a useful strategy that parents can use to help their babies to settle and sleep on their back, especially during the first 6 months of life.

Wrapping and placing babies on the back provides stability and helps to keep babies in the recommended back position¹⁻². Epidemiological studies have shown that being on the back and wrapped decreases the risk of SIDS more than being on the back without being wrapped³. Wrapping a baby also reduces crying time⁴ and promotes sleep by lessening the frequency of spontaneous arousals⁵⁻⁶. However wrapping a baby does not influence breastfeeding frequency and duration and the amount of ingested milk⁷. Wrapping has also been shown to be effective in reducing a baby's response to pain, while preterm babies who are wrapped and placed on their back show improved neuromuscular development.³

Tummy sleeping increases the risk of sudden unexpected infant death and must be avoided. Wrapping a baby and placing them in the tummy position is even more dangerous as it prevents babies from moving to a position of safety^{2,3}. Wrapping techniques that use tight wrapping with the legs straight and together have been associated with an increased incidence of abnormal hip development.^{3,8} Other studies have linked tight chest wrapping with an increased risk for pneumonia⁹, while some studies have indicated that overheating may occur if the baby is wrapped with their head covered or if the baby has an infection³. It is therefore important to allow for hip flexion and chest wall expansion when wrapping^{2,3} and to ensure the head is uncovered and the baby does not have an infection or fever³.

A variety of baby wrapping techniques appropriate to the baby's developmental age can be used based on the principles of safe wrapping. For example, a younger baby (less than 3 months) may have their arms included in the wrap to reduce the effects of the Moro or 'startle' reflex; whilst an older baby (more than 3 months) may have their lower body wrapped with their arms free, to allow the baby access to their hands and fingers which promotes self soothing behaviour, while still reducing the risk of the baby turning to the tummy position. The Moro or 'startle' reflex should have disappeared by the time the baby is 4-5 months of age.

Principles of Safe Wrapping

- Ensure that baby is positioned on the back with the feet at the bottom of the cot.
- Ensure that baby is wrapped from below the neck to avoid covering the face.
- Sleep baby with face uncovered (no doonas, pillows, cot bumpers, lambs wool or soft toys in the sleeping environment).
- Use only lightweight wraps such as cotton or muslin (bunny rugs and blankets are not safe alternatives as they may cause overheating)¹⁰.
- The wrap should not be too tight and must allow for hip and chest wall movement^{8,9}.
- Make sure that baby is not over dressed under the wrap. Use only a nappy and singlet in warmer weather and add a lightweight grow suit in cooler weather.
- Provide a safe sleeping environment (safe cot, safe mattress, safe bedding).
- Babies must not be wrapped if sharing a sleep surface (including bed-sharing) with an adult. Sharing a sleep surface with a baby can be hazardous in certain circumstances. See SIDS and Kids information statement 'Sleeping with a baby' for advice about sharing a sleep surface with a baby.
- Modify the wrap to meet the baby's developmental changes, eg. arms free once 'startle' reflex begins to disappear at around 3 months; (Moro or 'startle' reflex should have disappeared by 4-5 months).
- When baby is able to roll from their back to their tummy and then onto their back again during supervised play (usually 4-6 months) the use of a wrap can be discontinued for settling and sleep. The wrap may prevent an older baby who has turned onto their tummy during sleep from returning to the back sleeping position.

Examples of techniques that can be used to wrap a baby based on their developmental age. Reduce the effects of the Moro or startle reflex for a younger baby by including arms in wrap. Help an older baby stay on their back by wrapping their lower body, but leaving their hands and arms free to self soothe. Most babies eventually resist being wrapped.

The SIDS and Kids 'Safe Wrapping: Guidelines for safe wrapping of young babies' pamphlet shows you how to wrap your baby safely. An alternative to wrapping is to use a safe infant sleeping bag; one with a fitted neck and armholes that is the right size for the baby's weight. Clothing can be layered underneath the sleeping bag according to climate conditions. There is some evidence that sleeping bags may assist in reducing the incidence of SIDS¹¹, possibly because they delay the baby rolling into the tummy position and eliminate the need for bedding. It is important to encourage tummy time to play when the baby is awake and supervised by an adult, but babies must not be allowed to sleep in the tummy position.



0-3 months



3-6 months

The SIDS and Kids Safe Sleeping program is based on scientific evidence and was developed by Australian SUDI researchers, paediatricians, pathologists, and child health experts with input from overseas experts in the field. The 80% drop in SIDS deaths and the more than 7,500 lives that have been saved is testament to the effectiveness of the program.

For further information visit the SIDS and Kids website at www.sidsandkids.org or phone SIDS and Kids in your State or Territory on 1300 308 307.

References:

- Gerard CM, Harris KA, Thach BT. (2002) Spontaneous arousals in supine infants while swaddled and unswaddled during rapid eye movement and quiet sleep. *Pediatrics* 110 (6): e70.
- Gerard CM, Harris KA, Thach BT. (2002) Physiologic studies on swaddling: an ancient child care practice, which may promote the supine position for infant sleep. *The Journal of Pediatrics* 141 (3): 398-403.
- van Sleuwen BE, Engelberts AC, Boere-Boonekamp MM, Kuis W, Schlupen TWJ, L'Hoir MP. (2007) Swaddling: A systematic review. *Pediatrics* 120(4): e1097-e1106.
- Ohgi S, Akiyama T, Arisawa K, Shigemori K. (2004) Randomised controlled trial of swaddling versus massage in the management of excessive crying in infants with cerebral injuries. *Archives of Disease in Childhood* 89(3): 212-216.
- Franco P, Seret N, Van Hees JN, Scaillet S, Groswasser J, Kahn A. (2005) Influence of swaddling on sleep and arousal characteristics of healthy infants. *Pediatrics* 115(5): 1307-11.
- Renfrew MJ, Lang S, Martin L, Woolridge M. (2000) Interventions for influencing sleep patterns in exclusively breastfed infants. *Cochrane Database of Systematic Reviews Online*: (2) CD 00013.
- Bystrova K, Matthiesen AS, Widström AM, Ransjö-Arvidson AB, Welles-Nyström B, Vorontsov I, Uvnäs-Moberg K. (2007) The effect of Russian Maternity Home routines on breastfeeding and neonatal weight loss with special reference to swaddling. *Early Human Development* 83(1): 29-39.
- Kutlu A, Memik R, Mutlu M, Kutlu R, Arslan A. (1992) Congenital dislocation of the hip and its relation to swaddling used in Turkey. *Journal of Pediatric Orthopaedics* 12(5): 598-602.
- Yurdakok K, Yavuez T, Taylor C. (1990) Swaddling and acute respiratory infections. *American Journal of Public Health* 80(7): 873-875.
- van Gestel JP, L'Hoir MP, ten Berge M, Jansen NJ, Plotz FB. (2002) Risks of ancient practices in modern times. *Pediatrics* 110(6): e78.
- L'Hoir MP, Engelberts AC, van Well GT, McClelland S, Westers P, Dandachli T, Mellenbergh GJ, Wolters WH, Huber J. (1998) Risk and preventive factors for cot death in The Netherlands, a low-incidence country. *European Journal of Pediatrics* 157(8): 681-8.

Bibliography

Richardson HL, Walker AM, Horne RS. (2009) Minimizing the risks of sudden infant death syndrome: to swaddle or not to swaddle? *Journal of Pediatrics* 155(4):475-81

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