

# Safe-sleep recommendations for infants have not reduced sudden deaths in newborns

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An analysis of trends in sudden unexpected infant death (SUID) over the past two decades finds that the drop in such deaths that took place following release of the 1992 American Academy of Pediatrics (AAP)

"back to sleep" recommendations, did not occur in infants in the first month of life. The report from investigators from MassGeneral Hospital for Children (MGHfC) and Newton-Wellesley Hospital (NWH), which has been published online in the *Journal of Pediatrics*, identifies several potentially modifiable factors that may contribute to the persistent risk of sudden, unexplained death during the first days and weeks of life.

"The frequency of SUID in the first month of life is higher than generally recognized, at an average of 444 cases per year in the U.S., of which 66 per year occur on the first day and 130 occur in the first week of life," says lead and corresponding author Joel Bass, MD, chair of the NWH Department of Pediatrics. "There actually has been a dramatic and unexpected increase in deaths attributed to suffocation and asphyxiation in both newborns and [infants](#) up to 1 year old, and these deaths are potentially preventable."

SUID is defined as the sudden, unexpected death of an apparently healthy, full-term infant under 1 year of age, the cause of which is not immediately apparent. It encompasses a range of situations, including sudden infant death syndrome (SIDS), which refers to deaths that remain unexplained after a thorough investigation, and deaths found to result from accidental strangulation or suffocation caused by factors such as unsafe bedding, becoming trapped between a mattress and a wall, or sleeping with a parent or another adult who inadvertently blocks the infant's airway.

Using Centers for Disease Control and Prevention records of births and infant deaths from 1995 through 2014, the researchers analyzed deaths occurring in the neonatal (first 27 days of life) and postneonatal (28 days to 1 year) periods. While the rates of postneonatal SUID declined nearly 23 percent from 1995 to 2002, after which they remained stable, SUID rates during the neonatal period remained unchanged. During that 20-year period the percentage of SUID cases attributed to suffocation or

strangulation increased in both age groups - from around 2 percent to nearly 23 percent in the neonatal period and from 3.4 percent to almost 25 percent in the postneonatal period.

Almost 30 percent of [neonatal deaths](#) occurred during the first 6 days of life. Bass notes that many of these deaths may be the result of sudden unexpected postnatal collapse (SUPC), a sudden collapse - sometimes with full respiratory and cardiac arrest - of an apparently healthy newborn born at more than 35 weeks gestation. SUPC leads to death in around half the cases and serious neurological consequences in half of survivors. There currently is no standard diagnostic code for SUPC, and Bass and his co-authors - including senior author Ronald Kleinman, MD, MGHfC physician-in-chief - have called for standardizing the definition of the condition and establishment of an SUPC registry to better identify such events and facilitate further study.

The investigators note that several recommended practices designed to promote breastfeeding, the importance of which they fully support, may inadvertently contribute to SUPC risks. The practice of skin-to-skin care, in which an infant is placed in a prone position on the mother's chest has been noted in other reports to have a strong association with SUPC. If the mother is also exhausted or sedated, she may even fall asleep with the infant on her chest resulting in co-bedding, an established risk factor for SIDS.

Another recommendation that may have unintended consequences is avoiding the use of pacifiers, which some breastfeeding advocates suggest eliminating and the AAP suggests should not be used until breastfeeding is well established. As pacifier use is strongly associated with a [reduced risk](#) of SIDS, the authors feel that recommendation should be reconsidered. Since breastfeeding is also associated with a reduced risk of SIDS, the authors recommend that safe-sleep education be integrated with lactation advice.

Kleinman says, "Overall, we think it is possible that certain neonatal practices resulting in unsafe sleep circumstances both during and after the birth hospitalization, along with pacifier avoidance, may have inadvertently interfered with the implementation of safe-sleep messages and prevented a decrease in the [death](#) rate. Future research is needed to more fully explore the best messaging during the birth hospitalization that will enhance safe-sleep practices recommended by both the National Institutes of Health and the AAP and help to prevent SUID."

**More information:** *Journal of Pediatrics* (2018). [DOI: 10.1016/j.jpeds.2017.12.045](#)

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