Use of a Fan During Sleep and the Risk of Sudden Infant Death Syndrome

Kimberly Coleman-Phox, MPH; Roxana Odouli, MSPH; De-Kun Li, MD, PhD


Objective  To examine the relation between room ventilation during sleep and risk of sudden infant death syndrome (SIDS).

Design  Population-based case-control study.

Setting  Eleven California counties.

Participants  Mothers of 185 infants with a confirmed SIDS diagnosis and 312 randomly selected infants matched on county of residence, maternal race/ethnicity, and age.

Intervention  Fan use and open window during sleep.

Main Outcome Measure  Risk of SIDS.

Results  Fan use during sleep was associated with a 72% reduction in SIDS risk (adjusted odds ratio [AOR], 0.28; 95% confidence interval [CI], 0.10-0.77). The reduction in SIDS risk seemed more pronounced in adverse sleep environments. For example, fan use in warmer room temperatures was associated with a greater reduction in SIDS risk (AOR, 0.06; 95% CI, 0.01-0.52) compared with cooler room temperatures (0.77; 0.22-2.73). Similarly, the reduction associated with fan use was greater in infants placed in the prone or side sleep position (AOR, 0.14; 95% CI, 0.03-0.55) vs supine (0.84; 0.21-3.39). Fan use was associated with a greater reduction in SIDS risk in infants who shared a bed with an individual other than their parents (AOR, 0.15; 95% CI, 0.01-1.85) vs with a parent (0.40; 0.03-4.68). Finally, fan use was associated with reduced SIDS risk in infants not using pacifiers (AOR, 0.22; 95% CI, 0.07-0.69) but not in pacifier users (1.99; 0.16-24.4). Some differences in the effect of fan use on SIDS risk did not reach statistical significance.

Conclusion  Fan use may be an effective intervention for further decreasing SIDS risk in infants in adverse sleep environments.

Author Affiliations: Division of Research, Kaiser Permanente Northern California, Oakland (Mss Coleman-Phox and Odouli and Dr Li); and University of California, Berkeley, School of Public Health, Berkeley (Ms Coleman-Phox).