Fewer spontaneous arousals during prone sleep in preterm infants at 1 and 3 months corrected age.

Ariagno RL, van Liempt S, Mirmiran M.

J Perinatol. 2006 Mar 30; [Epub ahead of print]

Objective: This study was performed to determine if there were fewer spontaneous arousals in prone sleep than in supine sleep.

Study design: Home polysomnography/video recordings were done during daytime naps in 14 preterm infants: four at corrected age of 1 month, nine at both 1 and 3 months, and one only at 3 month. A body movement lasting 3 to 60 s during sleep was used as an indicator of spontaneous arousals.

Results: Most arousals had a heart rate increase and change in respiration pattern. The mean duration of the intervals between successive arousals in active and quiet sleep was significantly longer in prone at 1 and 3 months of age. The duration of arousals was significantly shorter at 3 months corrected age compared with one month corrected age during active sleep. The duration of arousals was shorter during quiet sleep at one month compared with active sleep.

Conclusion: There were fewer spontaneous arousals that is, longer interval between successive arousals in prone, which may, in part, explain the increase in risk of Sudden Infant Death Syndrome.