THE EPIDEMIOLOGY OF THERMOREGULATION AND SIDS.

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**Background** - A high level of thermal insulation is associated with an increased risk of SIDS, particularly for infants sleeping prone. The reduction in prone sleeping position for infants after the “Back to Sleep” campaign led to a halving of the SIDS rates in the UK to 0.77 per 1000 livebirths by the mid nineties. The risk reduction campaign for SIDS also discouraged the use of heavy wrapping, and led to a fall in the thermal insulation of bedding and clothing used for control infants, from a median of 8 tog in the 1980s to 4 tog in the 1990s, with a concomitant fall in tog rates amongst the SIDS victims from 10 tog to 5 tog, though heavy wrapping remained a highly significant risk factor (1, 2).

**Methods** - A prospective, controlled population-based study of infants dying suddenly and unexpectedly in Southwest England (population 4.9 million) from 2003-2006 inclusive (184,000 births), with longitudinal data collected on the sleep environment of randomly selected control infants and on infants at high epidemiological risk of SIDS. **Results** - Of 157 unexpected infant deaths, data were obtained for 155, and 90 were attributed to SIDS, including 80 (89%) for which parental consent was given for inclusion in the research study. In the last 10 years the SIDS rate has fallen a further 40% to 0.49 per 1000 livebirths. The median insulation of bedding and wrapping used by both SIDS victims and control infants had also fallen again to 3.0 and 2.4 tog respectively, whilst only 5% of SIDS victims were wrapped in more than 10 tog (compared to 63% prior to the ‘Back to Sleep’ campaign). Swaddling, the use of pillows, or the use of duvets were all significant in the univariate analysis, but only swaddling and the use of pillows remained significant in the multivariate analysis, whilst head covering, which had been shown to be a highly significant factor in previous studies was much less common amongst SIDS victims in this study. **Conclusions** - Changes in thermal care of infants, particularly a reduction in thermal insulation of bedding and in the prevalence of head covering have been associated with a marked fall in SIDS rates. 1) BMJ 1990; 301:85-89; 2) BMJ 1996; 313:191-5.