

BIOTIN AND THE SUDDEN INFANT DEATH SYNDROME (COT DEATH)

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Research within the CSIRO Division of Food Research (Pearson *et al.*, 1976; Hood *et al.*, 1976) and in a collaborative study (Payne *et al.*, 1974) has shown that a marginal deficiency of biotin is a contributing factor in the death of young broiler chickens which have been subjected to stress, e.g. sudden changes in temperature or noise disturbance at night. As a result of this work on the Fatty Liver and Kidney Syndrome of young chickens, an investigation has been initiated to determine whether a similar marginal deficiency of biotin is involved in the Sudden Infant Death Syndrome (SIDS) of infants in the first year of life.

An initial study in conjunction with the Department of Nutrition and Food Science, Queen Elizabeth College, London and the University of Sheffield, has shown that the levels of biotin in the liver of infants (201 ± 15 ng biotin/g liver; $n = 13$) who had died unexpectedly was lower than those in infants (247 ± 18 ng biotin/g liver; $n = 25$) who had died from explicable causes. The results of a more detailed study involving 150 infants will be presented in an attempt to confirm this finding.

The higher incidence of SIDS in bottle-fed babies when compared to breast-fed babies suggests that nutrition is likely to be one factor contributing to the incidence of SIDS. Preliminary analyses have shown that there is a considerable variation in the biotin content of human breast milk and that there are losses in total biotin during the processing of commercial infant formulas. Therefore, the intake of biotin by the infant during the first few months of life can vary considerably depending on the feeding regime and the bioavailability of dietary biotin. Most biotin which is ingested is present in a bound form and in some infant formulas this biotin may not be biologically available to the child.

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