

LONG-CHAIN POLYUNSATURATED FATTY ACIDS IN WEANING FOODS

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Infant formulae do not contain the W6 and W3 long chain polyunsaturated fatty acids (LCPUFA) found in human breast milk (Gibson and Kneebone 1981; Hawley et al. 1978) and as a consequence, formula fed infants have significantly lower tissue levels of LCPUFA than do breast fed infants (Sanders 1975; Carlson et al. 1986).

The purpose of this study was to determine the amounts of LCPUFA-rich foods, suitable to be fed to infants between the ages of 4 and 12 months, that would compensate for those LCPUFA not present in infant formulae.

Canned infant foods (Brands A and B) as well as sheep brains, chicken liver, lamb liver and egg yolk were analysed by gas chromatography for LCPUFA content.

Results showed that sheep brains were the richest source of W6 and W3 fatty acids (0.93 and 1.29g/100g food respectively) and of the canned foods, only the Brand A variety, Egg Yolk and Steak, contained appreciable amounts of these fatty acids (0.56 and 0.04g/100g food respectively). Breast milk contains 0.49g of W6 and 0.05g of W3 fatty acids/100g milk.

However, when compared with breast milk intake (150ml/kg.body weight/day), the required intake of Brand A, Egg Yolk and Steak, is 250g/kg.body weight/day and sheep brains 11g/kg.body weight/day. Clearly the weaning food intake needs to be far in excess of usual amounts if the LCPUFA intake is to match that provided by breast milk.

Therefore it must be concluded that breast feeding is a preferred means of feeding infants up to 12 months of age, if optimal conditions of LCPUFA nutrition are to be met.

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