

Essential Fatty Acids During Pregnancy, Infancy and Childhood

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While essential fatty acids are required by all individuals, the need for them may be highest during pregnancy, lactation, infancy and childhood.

Pregnancy

Women should increase their EFA consumption during pregnancy to meet the increased demand for EFAs – for the proper development of the mammary gland, placenta, and uterus during pregnancy, and most importantly for development of the fetus. The omega-3 fatty acid DHA may be most critical. DHA may be deficient in women who deliver pre-term, as well as in low birth-weight babies. A deficiency of DHA has also been linked to the development of post partum depression, as well as some behavioral and mood disorders.

Lactation

Lactating women require increased amounts of EFAs in the diet to compensate for the amounts present in breast milk. Various long-chain fatty acids are present in breast milk, including DHA, GLA, and AA. Infants fed breast milk, rich in DHA, perform better on cognitive function tests later in life than those who were fed standard formula.

Infancy and Childhood

Normal growth and development in infants depends on an adequate supply of EFAs, especially DHA and AA. In fact, a recent workshop at the National Institutes of Health (NIH) has recommended the addition of AA and DHA to all infant formulas. DHA and AA are needed for development of the nervous system, retina and brain. Low levels of DHA have been noted to occur in children with learning and behavioral problems, cognitive impairment, hyperactivity, attention deficit disorder (ADD), and attention deficit hyperactivity disorder (ADHD).

Low levels of another fatty acid – GLA – have been noted in infants with eczema and seborrheic dermatitis. The rising incidence of eczema in infants and children in recent years has been suggested to be due to the increased percentage of babies now being formula fed. In Europe, some infant formulas now contain GLA in the form of borage oil. Other childhood diseases are also linked to low levels of GLA – juvenile rheumatoid arthritis, cystic fibrosis, and attention deficit disorder.

Given the importance of essential fatty acids during pregnancy, lactation, infancy and childhood, it may be prudent for these groups to increase their intake of essential fatty acids, either through diet or supplementation.