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Infant formula must contain DHA omega-3 and AA omega-6, say international experts

This release is available in [Spanish](#).

New recommendations published by international experts in the Journal of Perinatal Medicine state that infant formula should include DHA omega-3 and AA omega-6 to guarantee a correct eye and brain development.

These recommendations fro DHA and AA intake have been developed by a panel of child health experts from 11 countries with endorsement from organizations such as The World Association of Perinatal Medicine, Child Health Foundation and the Early Nutrition Foundation.

The expert team emphasizes that breastfeeding is the preferred method of feeding, as DHA and AA are available in breast milk. However, when the mother is unable or chooses not to breastfeed, infant formula should include DHA at the recommended levels of between 0.2% and 0.5% of fatty acids and the amount of AA should be at least equal to the DHA level. The experts also note that the addition of at least 0.2% DHA plus AA is necessary to achieve functional developmental benefits.

"Over the past decade, many research studies have highlighted the importance of DHA omega-3 and AA omega-6 in infant development -said Cristina Campoy, of the Department of Paediatrics of the University of Granada (CIBM)-. It is therefore vital that pregnant and nursing mothers consume adequate amounts of DHA in their own diet, and, if using an infant formula, should provide their infants with a formula containing DHA and AA at recommended levels".

DHA omega-3 and AA omega-6

Docosahexaenoic acid, or DHA, is a long-chain polyunsaturated omega-3 fatty acid, or 'good' fat, found throughout the body. It is a major structural fat in the brain and retina of the eye accounting for up to 97 percent of the omega-3 fats in the brain and up to 93 percent of the omega-3 fats in the retina. It is also a key component of the heart.

Studies have shown that DHA omega-3 is important for infant brain, eye and nervous system development and has been shown to support long-term heart health. It is important throughout pregnancy, but particularly in the third trimester when significant brain growth occurs.

Arachidonic acid, AA, is a long-chain omega-6 fatty acid, another 'good' fat. It is the principal omega-6 in the brain, representing about 48 percent of the omega-6 fats. Like DHA, AA omega-6 is important for proper brain development in infants. It is also a precursor to a group of hormone-like substances called eicosanoids that play a role in immunity, blood clotting and other vital functions in the body.

Infants whose mothers supplement with DHA during pregnancy and nursing or who are fed formula milk supplemented with DHA and AA have significantly enhanced levels of these nutrients available to them. Major infant brain growth occurs during pregnancy and throughout the first two years of life. During these times, infants have the greatest need for DHA omega-3 and AA omega-6.

DHA and AA in the diet

The main dietary source of DHA is oily fish. AA is found in foods such as meat, eggs and milk. While most women typically consume enough AA in their diets, those who consume a typical Western diet are at risk for low stores of DHA. This may be because oily fish is not a staple of the typical Western diet. Additionally, expert bodies have advised pregnant and nursing women to limit their fish consumption due to the potentially high levels of toxins such as mercury.

The amount of essential fatty acids provided to infants through maternal intake during pregnancy and/or breastfeeding and through supplemented formula milks is important. Babies cannot make these essential fats themselves, which is why it is vital that they are made available via the mother's diet during pregnancy and breastfeeding or through supplemented infant formula.

About the recommendations

The Recommendations and Guidelines for Perinatal Medicine were developed by a team of 19 experts from 11 countries who reviewed the current research and recommendations on DHA and AA and evaluated the body of research exploring how DHA & AA affect infant brain and eye development. The expert team, which included experts from Italy, France, Germany, Spain and the UK concluded that both DHA and AA should be added to infant formula in order to provide formula-fed infants these important nutrients at a comparable rate to their breastfed counterparts. The guidelines also recommend that pregnant or breastfeeding women should include enough DHA in their diets to support the brain and eye development of their babies. The Recommendations and Guidelines for Perinatal Medicine were supported by the The World Association of Perinatal Medicine (www.wapm.info), the Early Nutrition Academy (www.metabolic-programming.org), and the Child Health Foundation (www.kindergesundheit.de).

Summary of the recommendations

- The authors emphasize the importance of a balanced diet for breastfeeding women, including a regular supply of DHA
- Pregnant women should aim for a DHA intake of at least 200mg a day (equivalent to two portions of oily sea fish per week)
- If breast milk is not available to the baby, current evidence supports the addition of DHA and AA to infant formula
- The DHA added should make between 0.2% and 0.5% of fatty acids [noting that 0.2% is the minimum level necessary to see functional developmental benefits]
- Infant formula should be supplemented with AA in amounts at least equal to the amount of DHA
- EPA, another omega-3 fatty acid, should be less than the amount of DHA
- Dietary supply of DHA and AA should continue during the second six months of life, but experts do not have enough information to recommend exact amounts

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