

Medications and More

NEWSLETTER

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Notes from the Editor:

Happy New Year! Here is what's happening in the breastfeeding arena:

USBC has a petition to encourage President-elect Obama to place a high priority on breastfeeding as an essential public health issue. To sign the petition, [click here](#).

USBC is hosting a strategic planning session in Arlington, VA, on Jan. 29 & 30. Regional representatives (voted on in December by state coalitions) will attend and take the info back to their states.

The next Hartmann/Hale Human Lactation Research Conference will be held in Amarillo on June 4-6.

The next ILCA conference will be held in Orlando, FL, on July 22-26.

The Breastfeeding Promotion Act (HR2236) introduced by Rep. Carolyn Maloney (D-NY) in May, 2007, has 23 co-sponsors. It needs at least 200 to move it through the legislative process. For more information on the bill, [click here](#). You can help by contacting your national legislators and asking them to co-sponsor the bill.

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Guest Author

Can Fats Make You Happy? Depression and Long-Chain Omega-3 Fatty Acids in the Perinatal Period

by Kathleen Kendall-Tackett, Ph.D., IBCLC

We hear a lot today about the health benefits of omega-3 fatty acids. Is it hype? Will the media soon turn its attention to the next "miracle" supplement? Probably not. The evidence for the effectiveness of EPA and DHA is compelling. Omega-3 deficiencies are related to high levels of inflammation in our bodies. And inflammation increases our risk of heart disease, autoimmunity, inflammatory arthritis—and depression (Calder, in press; Kendall-Tackett, in press).

Here's how it happened. During the 20th century, we dramatically changed our diets. We now consume more proinflammatory omega-6 fatty acids, and fewer anti-inflammatory omega-3s, than we did a century ago (Kiecolt-Glaser et al., 2007). Omega-6s are found in vegetable oils, such as corn and safflower oils. We eat a lot of these in processed foods and commercial baked goods. Omega-3 fatty acids are found in plant and marine sources. The parent omega-3 is α -linolenic acid (ALA), and it is found in walnuts, flax seed and canola oil. Unfortunately, ALA (including flax) is not effective in preventing or treating depression. Only the long-chain omega-3 fatty acids are effective: eicosapentenoic acid (EPA) and docosahexanoic acid (DHA). EPA, in particular, is anti-inflammatory because it competes for the same metabolic pathways as arachidonic acid (a long-chain omega-6), and stops the escalation of the inflammatory response system, including pro-inflammatory cytokines, eicosanoids and leukotrienes (Calder, in press). That is why EPA is helpful not only with depression, but also autoimmunity, allergic diseases, inflammatory arthritis, and heart disease.

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A number of recent studies have demonstrated that EPA and DHA are effective for preventing and treating mood disorders including postpartum depression (Hibbeln, 2002), major depression in children (Nemets et al., 2006) and adults (Nemets et al., 2002), bipolar disorder (Frangou et al., 2006), and recurrent self-harm (Garland et al., 2007). Researchers have documented these effects in population studies, randomized clinical trials, and in prevention studies.

The chief dietary source of EPA and DHA is fish. According to population studies, people must eat 1 to 1.5 pounds of fish per week to achieve the mental health effects (Noaghiul & Hibbeln, 2003). But eating that much fish is generally not safe for pregnant and breastfeeding women because of contaminants in seafood (assuming mothers even like fish). The best sources of EPA and DHA are still fish-oil supplements. Most recent studies of pregnant women have noted no teratogenic effects of these supplements with a wide range of dosages (Marangell et al., 2004; Shoji et al., 2006; Smuts et al., 2003). The same is true for breastfeeding. At modest levels of supplementation, EPA/DHA also appear to have no negative impact on mothers or their breastfeeding babies (Freeman et al., 2006). And supplementation had no impact on cytokine levels in breast milk (Hawkes et al., 2002).

However, high doses can potentially alter breast milk. In one study, high-dose fish-oil supplementation significantly increased EPA and DHA concentrations in breast milk and erythrocytes (Dunstan, Mori et al., 2004; Dunstan, Roper et al., 2004), and increased breast milk IgA and sCD14. The researchers expressed some caution, but it should be noted that the dosage used in this study was very high (2.2 g DHA, 1.5 g EPA): 11 times the recommended minimum of DHA. Even with this large dose, EPA/DHA might help promote beneficial probiotic *Lactobacilli*, which can help protect against the development of allergic disease.

Sources of EPA and DHA

As noted above, fish oil is the best source of EPA and DHA. Fortunately, finding safe sources of fish

oil is now relatively easy. The U.S. Pharmacopeia is an independent, not-for-profit organization that tests fish oil for contaminants and lists specific brands that they verify on their Web site (www.USP.org). Other sources of DHA include prenatal vitamins and fortified foods. Be sure to read labels of fortified foods carefully, however. Some advertise "omega-3s" and contain flax, not EPA/DHA. These products are not harmful. But they won't help with depression.

What About Cod Liver Oil?

Some studies have used cod liver oil as their source of EPA/DHA. This supplement has the added benefit of including Vitamin D, which is helpful since a high number of mothers are also deficient in Vitamin D (Wagner, Taylor, & Hollis, 2008). However, cod liver oil at high dosages can be toxic because it contains three-fat soluble vitamins (A, D & E). Used with care, and at modest doses, cod liver oil appears to be safe during pregnancy (Hellend et al., 2003; Olafsdottir et al., 2006). It may prove to be a good supplement for breastfeeding women as well (Wagner et al., 2008).

In summary, long-chain omega-3 fatty acids can have a major impact on a mothers' physical and mental health. If mothers make omega-3s a part of their daily diet, they'll discover what many others have learned: the right kind of fat can indeed make them happy—and can help them cope with the stresses and strains of new motherhood.

Recommended Dosages

200-400 mg DHA for prevention of depression

1,000 mg EPA for treatment of depression

U.S. Food and Drug Administration Generally Recognized as Safe Levels:

3,000 mg DHA/EPA

1,500 mg DHA

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