

# Can Fats Make You Happy?

## Omega-3s and Your Mental Health: Pregnancy, Postpartum and Beyond

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

Department of Pediatrics, Texas Tech University  
School of Medicine

Becoming a mother can be wonderful—and highly stressful. Sleepless nights, breastfeeding difficulties, a history of trauma, low partner support, or a baby with health problems are all stressors that can put you at risk for depression. Fortunately, there are some steps that you can take to help you cope.

### You Are What You Eat: Fatty Acids and Depression

Does it seem like more and more people you know are depressed? You're not imagining things. Depression is on the rise—both here and abroad. And much of this increase is due to what we eat. Over the last century, we've increased the amount of Omega-6 fatty acids in our diets, while simultaneously decreasing the amount of Omega-3s. Omega-6s are found in vegetable oils, such as corn and safflower oils, and are a staple of many processed foods. Omega-3 fatty acids are polyunsaturated fats found in plant and marine sources, and most Americans are deficient in them (Kiecolt-Glaser et al., 2007). As a result, we are at risk for a whole host of problems—including depression. And pregnant and postpartum women are especially vulnerable.



For more information on depression in new mothers, visit  
[www.BreastfeedingMadeSimple.com](http://www.BreastfeedingMadeSimple.com)

## Inflammation in Pregnant and Postpartum Women



**“Inflammation increases the risk of depression—especially in pregnant and postpartum women.”**

This change in our diets does bad things to our bodies. While we need some Omega-6s, most Americans get way too many. And excessive Omega-6s increase inflammation (Kiecolt-Glaser et al., 2007), which increases risk of depression (Robles et al., 2005). This is especially true for pregnant and postpartum women (Groër & Morgan, 2007).

During the last trimester of pregnancy, inflammation levels naturally rise in anticipation of birth. These inflammatory cells have a good purpose: they help your body prepare for labor and also help you fight infection after your baby is born. In addition, normal postpartum stressors, like sleep deprivation, can raise inflammation levels. This is part of our normal stress response. But when combined with the changes associated with pregnancy and postpartum, inflammation levels can get too high.

Inflammation can potentially lead to another problem for pregnant women: preterm birth. In one study, women who were depressed during their pregnancies have more than double the risk of having a preterm baby (Dayan et al., 2006), and inflammation is the likely culprit (Cousson-Read et al., 2005).

Your inflammation levels are also more likely to be too high if you do not have enough Omega-3s in your diet. Omega-3s also lower inflammation by lowering the number of cells in our blood stream that cause it (known as pro-inflammatory cytokines). A recent large study in Italy found that people with high levels of Omega-3s in their blood had low levels of inflammation. In contrast, people with low levels of Omega-3s had higher levels of inflammation (Ferrucci et al., 2006). Interestingly, when pregnant women who were at risk for preterm birth were given eggs enriched with an Omega-3 (DHA), the length of their pregnancies increased by an average of six days (Smuts et al., 2003).

Pregnant and postpartum women are especially likely to be deficient in Omega-3s because babies need these fatty acids for their developing nervous systems. Writing about mothers in Australia, Rees and colleagues (2005) observed that babies need about 67 mg a day of DHA for their development. In contrast, Australian mothers were consuming about 15 mg a day—well under what was required. Babies will take what they need from maternal stores, and mothers' stores become further depleted with each pregnancy, further increasing their risk of depression (Freeman et al., 2006).



The mental-health effects of dietary Omega-3s can be seen in several recent studies. These studies found that populations with higher levels of Omega-3s in their diets had lower rates of major depression (Tanskanen et al., 2001), postpartum depression (Hibbeln, 2002), bipolar disorder (Noaghiul & Hibbeln, 2003), and even suicide (Sublette et al., 2006). So how can you get more Omega-3s in your diet?

## Omega-3s are Not Created Equal

Go into any well-stocked supermarket and you will see a dizzying array of foods that are fortified with Omega-3s: eggs, cereal, soy milk, snack bars. With regard to depression, Omega-3s are not all created equal. If you are interested in Omega-3s for depression, it's important to know what you are buying. Many products that list Omega-3s contain alpha-linolenic acid (ALA). ALA is the Omega-3 found in flaxseed, walnuts and other plant sources. It is an essential fatty acid and is beneficial to cardiovascular health. But it is *not* effective in either the prevention or treatment of depression (Bratman & Girman, 2003). If you want the anti-depressant effects of Omega-3s, you must look for foods or supplements containing the long-chain Omega-3 fatty acids: EPA and DHA.

### EPA, DHA and Depression

Getting EPA and DHA from seafood can ease depression. However, seafood contaminated with mercury and other compounds is a significant health hazard. As a pregnant or postpartum woman, you cannot safely eat enough fish in order to get an antidepressant effect. Knowing about the effects of contaminants in seafood are particularly important for you since they can have a negative impact on your baby's developing nervous system.

Fortunately, there are many sources of EPA/DHA that are safe to take. Some sources include DHA alone, which can help prevent depression. Fish-oil supplements contain both EPA and DHA and have been used to treat depression, sometimes in conjunction with medications. Sources of both pharmaceutical-grade and over-the-counter fish-oil products verified by the U.S. Pharmacopeia are widely available (see page 4). All of these brands are tested for contaminants and are safe for pregnant and breastfeeding women to take. Be sure to discuss any supplements you take, including Omega-3s, with your health care provider as they can potentially interact with a small number of prescription medications.



**Recommended Dosages**  
**200-400 mg DHA for prevention of depression**  
**1,000 mg EPA for treatment of depression**  
**FDA Recommended Safe Levels:**  
**3,000 mg DHA/EPA**

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

## Sources of Contaminant-Free EPA/DHA

### Pharmaceutical-Grade Fish Oil (EPA & DHA)

Carlson Labs ([www.CarlsonLabs.com](http://www.CarlsonLabs.com))

Vital Nutrients ([www.VitalNutrients.net](http://www.VitalNutrients.net))

### Brands of Over-the-Counter Fish-Oil Supplements verified by the U.S. Pharmacopeia ([www.usp.org](http://www.usp.org))

Berkley & Jensen, Equaline, Kirkland Signature, Nature Made, NutriPlus

### Vegetarian DHA Supplements

Nature's Way DHA ([www.NaturesWay.com](http://www.NaturesWay.com))

O-mega-Zen-3 ([www.Nutru.com](http://www.Nutru.com))

### Prenatal Supplements with DHA

OptiNate ([First Horizons Pharmaceutical](http://www.FirstHorizonsPharmaceutical.com))

Citracal Prenatal + DHA ([Mission Pharmacal](http://www.MissionPharmaceutical.com))

### DHA-Fortified Foods

DHA-fortified eggs ([Gold Circle Farms](http://www.GoldCircleFarms.com))

[Oh Mama!](http://www.OhMama.com) Nutrition bar for pregnant and breast-feeding women

[Odwalla Soy milk](http://www.Odwalla.com)

Bellybar Nutrition Bar ([Nutrabella](http://www.Nutrabella.com))



## References

- Bratman, S., & Girman, A.M. (2003). *Handbook of herbs and supplements and their therapeutic uses*. St Louis, MO: Mosby.
- Coussons-Read, M.E., Okun, M.L., Schmitt, M.P., & Giese, S. (2005). Prenatal stress alters cytokine levels in a manner that may endanger human pregnancy. *Psychosomatic Medicine*, 65, 71-76.
- Dayan, J., Creveuil, C., Marks, M.N., Conroy, S., Herlicoviez, M., Dreyfus, M., & Tordjman, S. (2006). Prenatal depression, prenatal anxiety, and spontaneous preterm birth: A prospective cohort study among women with early and regular care. *Psychosomatic Medicine*, 68, 938-946.
- Freeman, M.P. Hibbeln, J.R., Wisner, K.L., Brumbach, B.H., Watchman, M., & Gelenberg, A.J. (2006). Randomized dose-ranging pilot trial of omega-3 fatty acids for postpartum depression. *Acta Psychiatrica Scandinavica*, 113, 31-35.
- Ferrucci, L., Cherubini, A., Bandinelli, S., Bartali, B., Corsi, A. Lauretani, T., et al. (2006). Relationship of plasma polyunsaturated fatty acids to circulating inflammatory markers. *Journal of Clinical Endocrinology & Metabolism*, 91, 439-446.
- Groër, M.W., & Morgan, K. (2007). Immune, health and endocrine characteristics of depressed postpartum mothers. *Psychoneuroendocrinology*, in press.
- Hibbeln, J.R. (2002). Seafood consumption, the DHA content of mothers' milk and prevalence rates of postpartum depression: A cross-national, ecological analysis. *Journal of Affective Disorders*, 69, 15-29.
- Kiecolt-Glaser, J.K., Belury, M.A., Porter, K., Beversdorf, D., Lemeshow, S., Glaser, R. (2007). Depressive symptoms, omega-6: omega-3 fatty acids, and inflammation in older adults. *Psychosomatic Medicine*, 69, in press.
- Nemets, H., Nemets, B., Apter, A., Bracha, Z., & Belmaker, R.H. (2006). Omega-3 treatment of childhood depression: A controlled, double-blind pilot study. *American Journal of Psychiatry*, 163, 1098-1100.
- Noaghiul, S., & Hibbeln, J.R. (2003). Cross-national comparisons of seafood consumption and rates of bipolar disorders. *American Journal of Psychiatry*, 160, 2222-2227.
- Robles, T. F., Glaser, R., & Kiecolt-Glaser, J. K. (2005). Out of balance: A new look at chronic stress, depression, and immunity. *Current Directions in Psychological Science*, 14, 111-115.
- Smuts, C.M., Huang, M., Mundy, D., Plasse, T., Major, S., Carlson, S.E.. (2003). A randomized trial of docosahexaenoic acid supplementation during the third trimester of pregnancy. *Obstetrics & Gynecology*, 101, 469-479.
- Sublette, M.E., Hibbeln, J.R., Galfalvy, H., Oquendo, M.A., & Mann, J.J. (2006). Omega-3 polyunsaturated essential fatty acid status as a predictor of future suicide risk. *American Journal of Psychiatry*, 163, 1100-1102.
- Tanskanen, A., Hibbeln, J.R., Tuomilehto, J., Uutela, A., Haukkala, A. Viinamaki, H., Lehtonen, J., & Vartiainen, E. (2001). Fish consumption and depressive symptoms in the general population of Finland. *Psychiatric Services*, 52, 529-531.