

Pregnancy, Lactation and Omega 3 Fatty Acids

What Are Omega-3 (n-3) Fatty Acids?

- Essential fatty acids which are necessary for health
- Not made in the body but come from the diet
- Eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) are the major n-3 fatty acids
- The body can make EPA and DHA from alpha linolenic acid (ALA)

Why You Should Get Enough Omega-3?

- Needed for the development of the brain, nervous system and immune function, which is important during the growth spurt in the last trimester and after birth [1]
- Adequate n-3 during pregnancy is associated with appropriate birth weight, fewer preterm births, head circumference, and cognitive development [2,3,4,5,6]
- Omega-3 is needed for both for the mother and the baby
- The fetus gains 50–60 mg n-3 per day during the last trimester (mostly DHA) [7]
- The mother's DHA stores decrease by 30% after birth [7]
- During lactation, the mother's body loses 70–80 mg DHA per day [7]
- The baby can only get EPA, DHA and ALA from the mother's diet
- Studies have found that n-3 fatty acids from the maternal diet can be found in breast milk, and in fetal cord blood [8,9]
- The recommended dose of DHA during pregnancy and lactation from either supplements or fish is 100 to 200 mg per day [10]

What Are Some Sources of EPA and DHA?

- Fatty fish like salmon, mackerel, trout, herring, halibut, sardines, and tuna [10,11]
- Omega-3 eggs (fortified with DHA) [12]
- Algae and algae oil [12,13]

What Are Some Sources of ALA?

- Leafy green vegetables, nuts (walnuts), and vegetable oils such as canola, soy, and especially flaxseed [14]
- Supplements

What Kind of Omega-3 Supplementation Is Best?

- Look for fish oil with both DHA and EPA
- The Council for Responsible Nutrition recommends these independently tested brands based on minimal levels of contaminants like mercury, dioxin and PCBs [15,16]
- The Vitamin Shoppe™ Essential Oils & Fatty Acids EPA-DHA Omega-3 Fish Oil (300 mg EPA/200 mg DHA)
- Carlson® Super Omega-3 Fish Oils 1000mg (300 mg EPA/200 mg DHA)
- Kirkland Signature™ Natural Fish Oil Concentrate 1000mg (150 mg EPA/100 mg DHA, 2 per day)
- Spring Valley Fish Oil 1200 mg (216 mg EPA/144 mg DHA, 1 per day)
- GNC Preventive Nutrition® Omega Complex (60 mg EPA/40 mg DHA, 4 softgels)

per day)

- CVS® Pharmacy Natural Fish Oil Concentrate 1000 mg (180 mg EPA/120 mg DHA, 1 per day)
- Best tolerated when taken with meals in divided doses

Omega-3 and Safety Issues:

- Fish with the lowest mercury levels include anchovies, cod, herring, lobster, mackerel, salmon, scallop, shrimp, canned tuna [17]
- Eat up to 12 ounces (3 average meals) a week of a variety of fish/shellfish that are lower in mercury (complete listing at <http://www.cfsan.fda.gov/~frf/sea-mehg.html>)
- Do not eat shark, swordfish, king mackerel, or tilefish because of high mercury levels [12]
- Up to 3 g of fish oil daily in pregnancy is safe [18]
- The American Heart Association states that supplementation above 3 g of n-3 a day should only be done under a physician's care [19]
- Fish oil is preferred since cod liver oil contains high levels of vitamin A and D
- Note: fish oil contains minimal amounts of vitamin D
- Consult with a licensed medical doctor or Registered Dietitian before starting fish oil supplementation

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