DHA and pregnancy
What you need to know

OMEGA 3

Docosahexaenoic acid or **DHA is an essential omega-3 polyunsaturated fatty acid.**[1,2]

DHA is not synthesized by the body and **needs to be supplemented** through diet or supplementation.[1]

It is **primarily obtained from fatty fish** such as tuna, salmon, and anchovies.[2,3,4]

It is the **building block** of the brain.[1,2]

Why is DHA important?

It is beneficial for both the baby's growth and development, and the mother's health.[1]

DHA is particularly **present in high concentration** in the brain, retina, and nervous system. In the brain, **the accumulation continues** until the first two years of the baby's life.[1,2]

References

1. Greenberg, J. A., Bell, S. J., & Van Ausdal, W. (2008). Omega-3 fatty acid supplementation during pregnancy. Reviews in obstetrics and Gynecology, 1(4), 162. **2.** Omega-3 Fatty Acids. (2022, July 18). National Institutes of Health. Retrieved October 14, 2022, from https://ods.od.nih.gov/factsheets/Omega3FattyAcids-HealthProfessional. **3.** Cheng, C. Y., Fowles, E. R., & Walker, L. O. (2006). Postpartum maternal health care in the United States: A critical review. The Journal of perinatal education, 15(3), 34. **4.** Irvine, E. J., Ferrazzi, S., Pare, P., Thompson, W. G., & Rance, L. (2002). Health-related quality of life in functional GI disorders: focus on constipation and resource utilization. The American journal of gastroenterology, 97(8), 1986-1993.

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Benefits of adequate intake of DHA during pregnancy

DHA benefits for baby:

- Supports eye and brain development[1]
- Contributes to the development of cognitive functions[1,2]
- Aids in developing adequate immune responses[1]
- Reduces the risk of preterm birth and low birth weight[1,2,3]

DHA benefits for mother:

- May help prevent perinatal depression[1,2]
- May lower the risk of preeclampsia[1]
- Reduces the risk of preterm labor and preterm birth[1,3]

However, modern refined diets are mainly lacking in omega-3 polyunsaturated fatty acids[4]

Over 95% of pregnant women **do not meet the daily needs of omega-3 polyunsaturated fatty acids** during pregnancy.[4]

References

1. Omega-3 Fish Oil and Pregnancy. (2021, April 27). American Pregnancy Association. Retrieved October 14, 2022, from https://americanpregnancy.org/healthy-pregnancy/pregnancy-health-wellness/omega-3-fish-oil-and-pregnancy.
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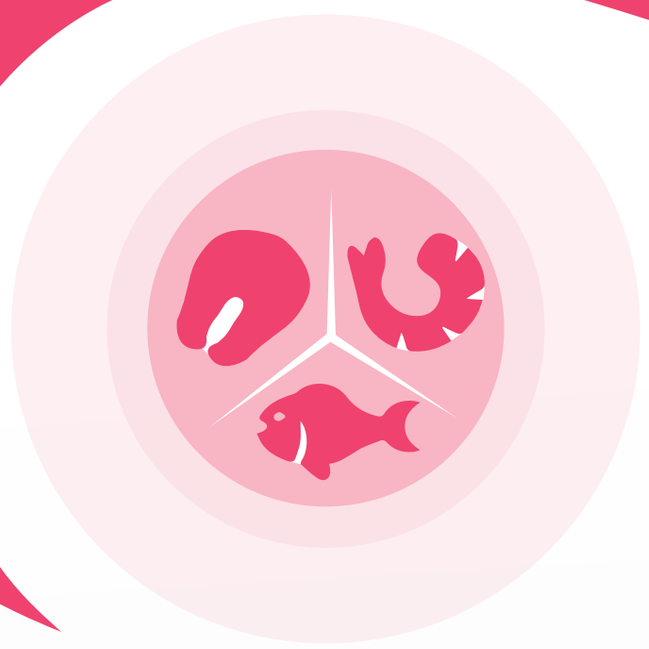
DHA from diet



According to the American College of Obstetricians and Gynecologists (ACOG), pregnant women should:[1]

Consume 2-3 servings a week of a variety of fish (anchovy, herring, salmon, sardine, shrimp, lobster, tilapia (freshwater), etc...)

Avoid certain fish with high mercury concentrations (swordfish, king mackerel, marlin, tuna bigeye, etc.)

Consume 1 serving a week of some fish (halibut, albacore tuna, snapper, etc.)

Consume DHA-fortified eggs, cereals, or dairy products

It is important that pregnant women avoid all raw and undercooked seafood and eggs

DHA supplementation in pregnant women: What's the right dose?

According to the consensus guidelines of the World Association of Perinatal Medicine, the Early Nutrition Academy, and the Child Health Foundation, pregnant women are recommended to take **at least 200 mg DHA/day for optimal growth and development of the fetus.**[2,3]

Recent studies have shown **benefits of high doses of omega-3 polyunsaturated fatty acids supplementation** including DHA, especially in women with low status, on **reducing preterm birth.**[4]

References

1. Update on Seafood Consumption During Pregnancy. (n.d.). ACOG. Retrieved October 14, 2022, from https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2017/01/update-on-seafood-consumption-during-pregnancy. **2.** Basak, S., Mallick, R., & Duttaroy, A. K. (2020). Maternal docosahexaenoic acid status during pregnancy and its impact on infant neurodevelopment. Nutrients, 12(12), 3615. **3.** Koletzko, B., Lien, E., Agostoni, C., Böhles, H., Campoy, C., Cetin, I., Decsi, T., Dudenhausen, J. W., Dupont, C., Forsyth, S., Hoesli, I., Holzgreve, W., Lapillonne, A., Putet, G., Secher, N. J., Symonds, M., Szajewska, H., Willatts, P., Uauy, R., & World Association of Perinatal Medicine Dietary Guidelines Working Group (2008). The roles of long-chain polyunsaturated fatty acids in pregnancy, lactation and infancy: review of current knowledge and consensus recommendations. Journal of Perinatal Medicine, 36(1), 5–14.
4. Carlson, S. E., Gajewski, B. J., Valentine, C. J., Kerling, E. H., Weiner, C. P., Cackovic, M., ... & DeFranco, E. A. (2021). Higher dose docosahexaenoic acid supplementation during pregnancy and early preterm birth: a randomised, double-blind, adaptive-design superiority trial. EClinicalMedicine, 36, 100905.

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