The Prenatal DHA Test:

What It Means for You & Your Baby

THE ORIGINAL

Omega-3 Test For Mom and Baby

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As an expecting mom, you need to make sure you are getting the right nutritional support during pregnancy. Some of the specific nutrients doctors often recommend are folic acid, vitamin D and the omega-3 fatty acid DHA. While the former two have been discussed in doctors' offices for decades, the latter nutrient — DHA — has only recently become part of the conversation. And for good reason.

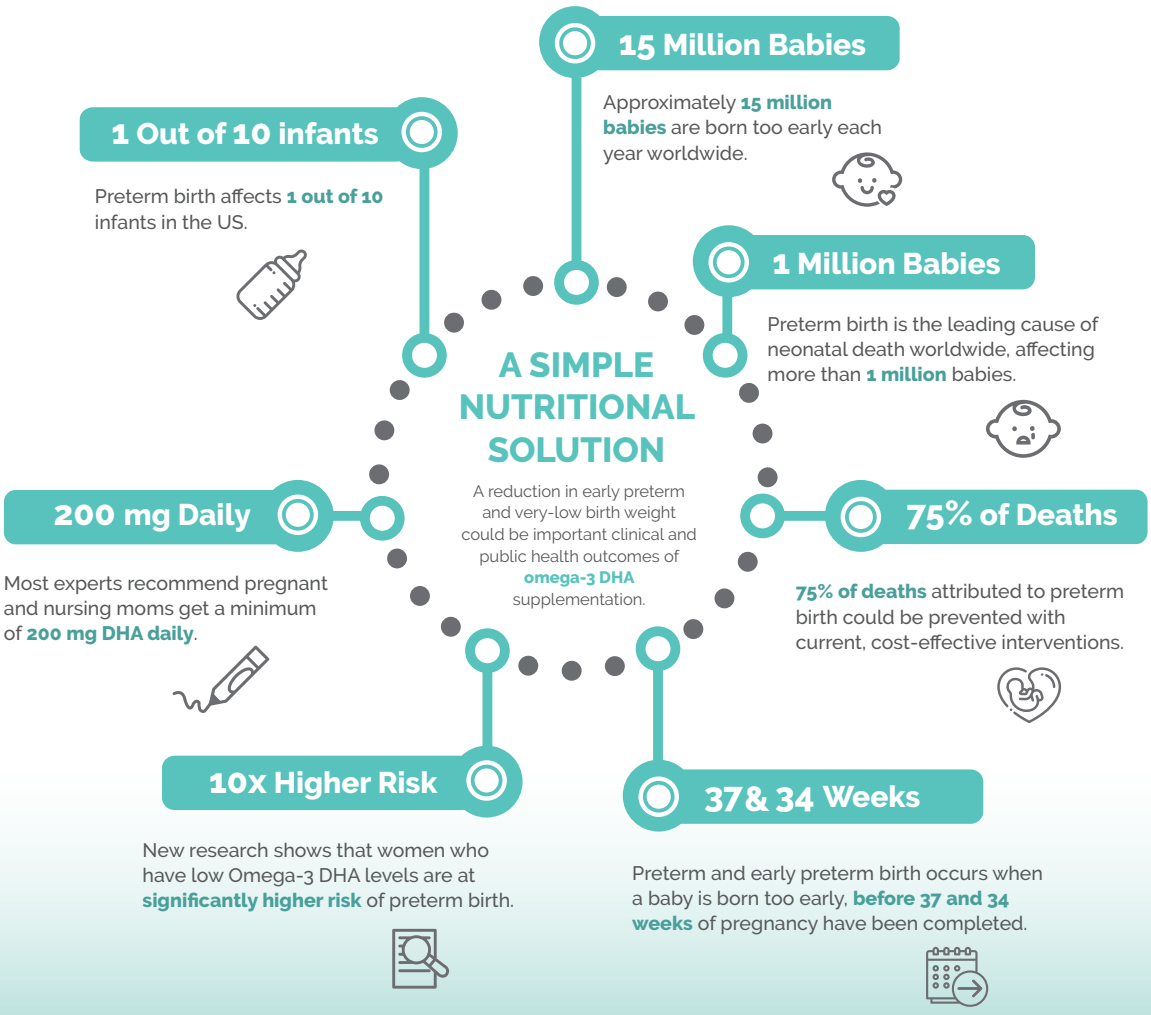
But first, what is DHA and where does it come from? DHA is short for docosahexaenoic acid and it primarily comes from marine sources like fish, algae and krill. It is also often found in prenatal supplements.

Omega-3 fatty acids, including DHA, have been the subject of several research studies during the last 30 years with results pointing to their benefits in pregnancy, particularly for preterm and early preterm birth — i.e. having a baby before 37 and 34 weeks, respectively.

There are several approaches you can take to limit your chances of prematurity, such as maintaining a healthy weight, monitoring your blood pressure and controlling your blood sugar levels to avoid risk factors like obesity, high blood pressure and diabetes.

While there is clearly a need to address these risk factors, there may be at least one nutritional deficiency involved as well: a low intake of DHA. In other words, simply increasing your DHA intake could give you the support you need to carry your baby full term.

THE RISKS OF PRETERM BIRTH



SOURCES: *Middleton, P.; Gomersall, J.C.; Gould, J.F.; Shepherd, E.; Olsen, S.F.; Makrides, M. Omega-3 fatty acid addition during pregnancy (review). Cochrane Database Syst. Rev. 2018; Carlson, S.E.; Colombo, J.; Gajewski, B.J.; Gustafson, K.M.; Mundy, D.; Yeast, J.; Georgieff, M.K.; Markley, L.A.; Kerling, E.H.; Shaddy, D.J. DHA supplementation and pregnancy outcomes. Am. J. Clin. Nutr. 2013, 97, 808–815.; Jackson, K. H.; Harris, W.S. A Prenatal DHA Test to Help Identify Women at Increased Risk for Early Preterm Birth: A Proposal. Nutrients 2018, 10(12), 1933.*

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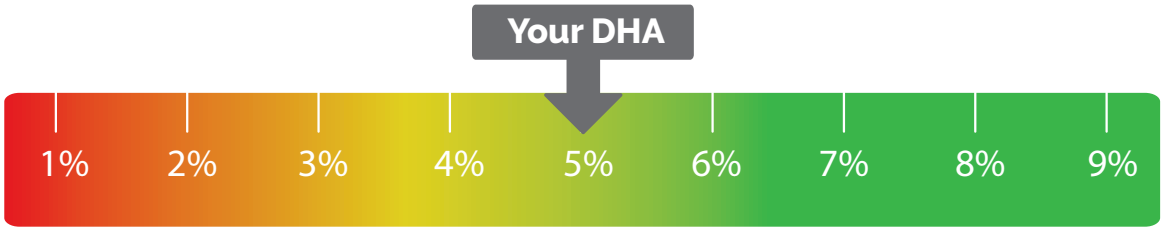

The Health and Financial Toll of Having a Baby Too Early

Around 10% of babies are born too early each year and the medical community is still uncertain as to all the reasons why. Unfortunately, babies born prematurely have a higher risk of death and disability, including developmental delays, blindness and cerebral palsy.

Preterm birth (before 37 weeks) is now the second leading cause of death in children under five worldwide and accounts for half of all newborn deaths, according to a report by the March of Dimes and the World Health Organization (WHO). Early preterm birth (before 34 weeks) puts infants at even higher risk for death and a variety of adverse health problems, which can lead to extended time in the neonatal intensive care unit (NICU) and higher hospital costs.

Preterm births have increased in the last 20 years in almost all countries, and while treatment for these infants has improved significantly, preventing preterm birth and carrying a fetus to term is still much safer, healthier, and cheaper.

While prematurity can negatively affect the health of both baby and mom, the financial toll is also significant. Figures from the March of Dimes show an uncomplicated birth costs around $4300. Each premature/low birthweight baby costs around $50,000 more. And when maternal costs are figured in, it is almost $60,000 more.

A 2016 study found that using at least 600 mg DHA daily could save the US healthcare system up to $6 billion by preventing preterm births. This is a significant cost-savings for a very simple, inexpensive nutrient solution. Further, a recent study showed that DHA could reduce the risk of preterm and early preterm birth by 11% and 42%, respectively.

What is the Prenatal DHA Test?

The Prenatal DHA Test measures the amount of DHA in your blood. It requires a simple finger stick and one drop of blood. For you, DHA is important because studies have shown that women with higher DHA blood levels are less likely to have early preterm birth. For your baby, DHA is important for brain, eye and immune system development. The amount of DHA in your blood is directly impacted by your genetics and what you eat.

Once you know your prenatal DHA level, you can personalize your diet to safely change your level in as little as two to three months. Achieving a score of 5% or higher is desirable, while anything below that number is related to increased risk of early preterm birth.

DHA levels in pregnant women of 4.3% are described in the research as "very low" and 3.5% as being "exceedingly deficient." It is estimated that 80% of US women of childbearing age have a DHA level below 5%.

What Your DHA Level Means

Researchers believe that assessing your DHA status could be instrumental in preventing preterm birth. In other words, if you know your DHA level is low, then you can make the necessary dietary modifications to bring those levels into an optimal range. Therefore, establishing your DHA status during the different stages of pregnancy could play a crucial role in preventing prematurity.

Until recently, omega-3 intake was confirmed primarily through dietary or supplemental records, but we believe that measuring blood levels of DHA during pregnancy to guide this intake is needed. It's hard to think of a more important and actionable biomarker in pregnancy with such potentially consequential outcomes.

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5 REASONS EVERY PREGNANT WOMAN NEEDS TO KNOW HER DHA LEVEL

1.

42%

Early preterm birth happens before 34 weeks gestation. DHA can reduce the risk of early preterm birth by 42%.

2.

$50K

In the US, an uncomplicated birth costs $4300, while a premature birth costs on average $50K more.

3.

10x

Research shows that women who have low blood DHA levels are at 10-fold increased risk of early preterm birth.

4.

>5%

A recent scientific paper showed that pregnant women should strive for a DHA level of 5% or above to reduce their preterm birth risk.

5.

~60 mg

The recommended amount of DHA for pregnant women and nursing moms is 200 mg daily from diet and supplements, but most only get ~60 mg from their diet and less than 1 in 10 report taking a supplement.

MEASURE *Eating fish or taking supplements does not guarantee your Prenatal DHA level will be in the desirable range - it must be measured.*

MODIFY *With your Prenatal DHA Test results, you will have the right information to personalize your DHA intake.*

MONITOR *Track how your dietary changes affect your Prenatal DHA level by re-testing after two to three months.*

SOURCES: *Middleton, P.; Gomersall, J.C.; Gould, J.F.; Shepherd, E.; Olsen, S.F.; Makrides, M. Omega-3 fatty acid addition during pregnancy (review). Cochrane Database Syst. Rev. 2018; Carlson, S.E.; Colombo, J.; Gajewski, B.J.; Gustafson, K.M.; Mundy, D.; Yeast, J.; Georgieff, M.K.; Markley, L.A.; Kerling, E.H.; Shaddy, D.J. DHA supplementation and pregnancy outcomes. Am. J. Clin. Nutr. 2013, 97, 808–815.; Jackson, K. H.; Harris, W.S. A Prenatal DHA Test to Help Identify Women at Increased Risk for Early Preterm Birth: A Proposal. Nutrients 2018, 10(12), 1933.*

How You Can Improve Your DHA Level

There are very simple dietary changes you can make to increase your DHA level. First, you can (and should) eat two servings of low-mercury, high-DHA fish per week. Some options include salmon, tuna, anchovies, herring and mackerel.

Taking a DHA supplement is also a good option. In this case, you don't need to worry about mercury or other environmental contaminants in supplements, but always check the DHA content on the label to make sure to make sure it provides at least 200 mg of DHA daily. If you want to take more, studies have shown that doses up to 1000 mg DHA daily to be safe during pregnancy.

It is important to remember that while dose matters, your DHA level matters most. Once you have established a dose that gets you to the 5% range or higher, then you need to maintain that dose or dietary regimen to keep your level in the optimal range.

Taking flaxseed oil supplements that are rich in the plant omega-3 fatty acid alpha-linolenic acid, or ALA, will not affect your prenatal DHA level. If you are a vegan, vegetarian or allergic to or prefer not to eat fish and shellfish, algal DHA supplements are a great option.

Put simply, eating more fish rich in DHA or taking DHA supplements raises blood DHA levels. Still, exactly how your Prenatal DHA level will respond to changing your diet or starting supplementation is unique for each woman and hard to predict.

If you increase your DHA intake, we recommend waiting two to three months before retesting (if possible). If you plan on breastfeeding, increasing the amount of DHA in your diet during pregnancy will increase breastmilk DHA levels for a short time after birth.

Continuing to eat fish or take a DHA supplement after birth is needed to keep breastmilk DHA levels higher and provides essential nutrition for your child's developing brain and eyes. You can test your breastmilk DHA level with OmegaQuant's Mother's Milk DHA Test as early as one month after birth.

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