

New research out of Denmark has shown that giving pregnant women fish oil supplements reduces the risk of asthma in their children.

In the study released on Wednesday, the Danish researchers learned that women who took fish oil supplements during the final three months of pregnancy helped them reduce their offspring's chances of developing asthma or persistent wheezing during the first five years of life.

"I would say that the finding that the effect was there was maybe not the surprise, because there have been indications," says the study's lead researcher, Dr. Hans Bisgaard, of the University of Copenhagen. "But the magnitude was very surprising to us."

In order to determine whether fish oil supplements during pregnancy can affect childhood asthma, Bisgaard and colleagues gave 2.4 grams of either fish oil capsules or olive oil capsules to 736 pregnant women during the third trimester of pregnancy. Investigators then monitored the health of their newborns to see any signs of wheezing, asthma, lower respiratory tract infections and skin conditions for five years.

The fish oil capsules used in the study were an over-the-counter product called Incr Omega TG33/22, a fish extract that contained the fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

And it turns out that 16.9 percent of the children born to mothers in the fish oil group had developed persistent wheezing or asthma by the age of 5, compared with 23.7 percent of children born to moms in the group that got 2.4 grams of olive oil. That's about a 30 percent reduction in cases of asthma or wheezing that occur during the first three years of life.

The researchers further observed that for the study women with the lowest levels of EPA and DHA, the risk of offspring in the fish oil supplement group developing persistent wheeze or asthma was 17.5 percent versus 34.1 percent for the placebo group, which translates to 54 percent relative reduction in risk of developing either of these respiratory conditions in early childhood.

The researchers, however, insisted these findings are speculative, since other factors may influence the effect.

"Together, these observations support the plausibility of the findings and point towards a precision-medicine approach in which factors such as blood levels of fatty acids, genotype, and parental history of asthma could potentially be used to tailor interventions to those most likely to benefit," said Dr. Christopher Ramsden, a scientist at the National Institutes of Health who wrote an editorial about the new study. "These results also highlight the importance of measuring baseline EPA and DHA levels in future trials involving fish oil."

Bisgaard and his colleagues report their findings in Thursday's *New England Journal of Medicine*.

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