

New study on omega-3 fatty acid supplements and preterm birth prevention

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Taking a higher than recommended dose of omega-3 fatty acids does not reduce the risk of preterm births but may still be helpful for women with low levels of the fatty acid in their blood, according to South Australian researchers.

A study of more than 5500 women from across Australia has found no change in the number of premature deliveries for women taking omega-3 [fatty acids](#) supplements compared with a group given [vegetable oil](#).

Researchers from the South Australian Health and Medical Research Institute's Women and Kids research theme randomly divided the [pregnant women](#) into two groups and gave them the different supplements from around 12 to 34 weeks' gestation.

Lead researcher Dr. Karen Best said the trial included a cross-section of women, regardless of factors such as [preterm birth](#) risk and baseline omega-3 levels.

"What we were trying to do is to see a broad-based supplement plan," Dr. Best said.

"So, there were women with twins, there was one later with triplets, women with single pregnancies and all of the women were randomized to either have the control or the fish oil tablets, and no one knew what anyone was getting obviously."

There are three types of preterm birth according to the World Health Organisation. Extremely preterm are those born at less than 28 weeks, very preterm are born between 28 and 32 weeks and moderate to late preterm are born between 32 and 37 weeks.

Dr. Best said in Australia preterm births in general make up about 10 percent of the population, with births at less than 34 weeks' gestation making up between 2 and 3 percent.

Dr. Best said these results were reflected in the study, which is published in the *New England Journal of Medicine* today.

She said while previous studies had suggested that omega-3 fats could prevent preterm births, the new research indicated the benefits for preventing preterm might be through a targeted supplementation.

"The World Health Organisation recommends around 300mg of omega-3 a day for a woman who is pregnant," Dr. Best said.

"But a lot of women don't actually get that amount, and that was one of the reasons for doing this study to see if we could increase that and if that would help with early preterm birth.

"In our fish oil capsules, we had 800 mg of DHA (docosahexaenoic acid), which is what we were thinking would decrease the preterm birth rate. So, we were giving a bit more than what the daily dose recommended."

She said the next step for researchers was to try and devise a tailored supplement strategy.

"The work we're doing now is looking into what levels women did have and what percentage your omega-3 needs to be to reduce preterm births," Dr. Best said.

"And we're actually seeing in some extra research that we've done, the women who were low in omega-3 and did get the fish oil capsules it did actually help with preterm births. So, we're not saying that omega-3 doesn't work across the board, it just depends on what your personal levels are.

Dr. Best said it would be best to check omega levels and then tailor treatment to the individual woman.

"So, if you're low in [omega-3](#), then you can be recommended to take it and if you're not and your levels are fine then you probably don't need it for a preterm birth."

SAHMRI Women and Kids is a research department of the world-leading institute in Adelaide, South Australia. It is committed to improving the health and wellbeing of [women](#), children and families, particularly those most at risk of poor health outcomes.

Provided by University of Adelaide

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