

# As kids' weight climbs, power of healthy fat supplements drops

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Credit: Robert Kraft/public domain

Body weight plays a significant role in how much benefit children may get from consuming "good" fats, new research suggests.

The researchers compared fatty acid uptake after kids took a [supplement](#) to both overall body [weight](#) and body-mass index. The more a child

weighed, the smaller the measurement was of two key [omega-3 fatty acids](#) in their bloodstream. And the higher the BMI category, the lower the levels of EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid).

The study provides important information to parents trying to ensure their kids get an appropriate amount of omega-3 fatty acids and also highlights the need for weight-appropriate dosing of supplements and medications, say researchers from The Ohio State University. Their study appears in the journal *PLOS ONE*.

Most of the science behind omega-3 benefits has concentrated on adults, infants and small [children](#). But a growing body of research is looking at their role in the health of older children. In particular, omega-3 consumption has been shown to lower blood pressure and increase good cholesterol (HDL) in children 8 to 15 years old.

Omega-3 fatty acids are found naturally in foods including salmon, walnuts and soybeans. Parents looking to feed their children more of these foods should be mindful that as they gain weight they'll need more of them to make a difference, said lead author Lisa Christian, an associate professor of psychiatry in the Institute for Behavioral Medicine Research at Ohio State's Wexner Medical Center.

"While this study just looked at [fatty acid supplements](#), it's important to recognize that weight differences could factor into how children and adults respond to many types of medications," Christian said.

"Weight, rather than age, may be more meaningful when determining recommended doses. The difference in size between a 7-year-old and a 10-year-old can be quite significant," she said.

The data comes from a trial conducted by Mary Fristad, professor of

psychiatry, psychology and nutrition, and Eugene Arnold, professor emeritus of psychiatry and behavioral health. Their work looked at fatty-[acid](#) supplementation in 64 children with mood disorders. The 7- to 14-year-old children took either an omega-3 supplement or a placebo for 12 weeks. Those who took the supplement received 2,000 milligrams of omega-3 fatty acids in the form of four capsules daily.

"We have a growing body of evidence that omega-3 fatty acids are beneficial for physical and mental health. This paper gives us more information about an important question about taking omega-3 supplements—how much is a good amount," Fristad said of the new study.

Given fluctuations in BMI percentile measures as children grow, it would seem to make the most sense to base dosing on weight alone, Christian said.

The study also points to a need to consider weight-related differences in all studies of omega-3 intake in adults and children, the researchers wrote in their study.

**More information:** *PLOS ONE*, [journals.plos.org/plosone/article?id=10.1371/journal.pone.0173087](https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0173087)

Provided by The Ohio State University

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