

Trial of omega fatty acid supplementation in toddlers born preterm shows promising results

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Researchers from Nationwide Children's Hospital have shown that omega fatty acid supplements may improve autism spectrum disorder symptoms in toddlers who were born very preterm (more than 11 weeks early). The study was published recently in the *Journal of Nutrition*.

"The trial had two goals. First, we wanted to confirm the feasibility of a large study of toddlers born very preterm and exhibiting symptoms often seen with ASD. Second, we wanted to see what the effects of omega fatty acids would be on parent-reported ASD symptoms and related behaviors," says Sarah Keim, Ph.D., lead author on the study and principal investigator in the Center for Biobehavioral Health in The Research Institute at Nationwide Children's.

Dr. Keim and her team conducted a study where 31 toddlers who were born prematurely participated. For 3 months, half of them took a daily dietary supplement that contained a special combination of omega-3 and [omega-6 fatty acids](#), and the other half took a placebo, although families were unaware of which they received to make the study rigorous.

The group that took the daily omega fatty [acid](#) supplement exhibited a greater reduction in ASD symptoms than those who took the placebo, according to ratings provided by the children's parents.

"We found clinically significant improvements in ASD symptoms in the

treatment group, although the benefits were confined to one measure we used," explains Dr. Keim. "We need to do a larger trial to further understand the potential impacts on a larger group of children."

The researchers suggest that observed benefits of omega fatty acid supplementation could be due to the role of these nutrients in inflammation in the body. ASD is generally considered a neuroinflammatory condition, and influencing inflammation through nutritional supplementation could improve behaviors in children with ASD symptoms.

Researchers hope that by giving omega fatty acids to children early when they first show symptoms and the brain is still actively developing may help them long-term.

"Currently, no medications are available to help children born prematurely with the developmental delays and behavior problems they often experience. For very young children, the medications that physicians sometimes try tend to have many side effects. And we don't know what effect those medications have on brains that are still developing," says Dr. Keim. "If using omega fatty acid supplementation helps, it would have a really huge impact for these kids."

Dr. Keim and her team plan to expand the work in a full-scale trial in the future. They recently received a grant from the National Institutes of Health to study the effect of [omega fatty acids](#) in children ages 2-6 year who have ASD.

Provided by Nationwide Children's Hospital

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