

Researcher finds possible lipid metabolism disorder in children with autism

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(Medical Xpress) -- University of Alabama researcher Dr. Yasmin Neggers, a professor of human nutrition and hospitality management, found a possible lipid metabolism disorder in children with autism.

Neggers, whose main research focus is nutrition during pregnancy, was inspired by a visiting colleague to learn more about this disorder that affects the brain's normal development of social and communication skills.

The colleague, Dr. Eun-Kyung Kim from Kangnung-Wonju National University in Korea, and Neggers decided to look at blood levels of lipids and [fatty acids](#) in two groups of South Korean [children](#) – one group of typically-developing boys and another group of boys with an [autism](#) diagnosis. These fatty acids, particularly omega-3 and omega-6, are needed for normal development of the nervous system, including the [brain](#).

“Many studies have shown omega-3 fatty acids to be neuro-protective because they decrease the risk of neurological problems,” Neggers said. “We were surprised when we didn’t find studies that looked at omega-3 levels in children with autism.”

Even though there were no major differences in what these children ate, those with autism had a lower omega-3 to omega-6 fatty acid ratio and lower levels of high density lipoprotein, more commonly known as HDL. For both levels, it’s often believed, the higher the better.

HDL is commonly referred to as “good” cholesterol. High levels of HDL seem to protect against heart attacks, while low levels increase the risk of heart disease.

“It’s a very preliminary study, but we think there is some kind of lipid metabolism disorder in children with autism,” Neggers said. “It is plausible that low blood levels of HDL and omega-3 fatty acids observed in autistic children at an early age may be an indicator of impaired fatty acid metabolism.

“What we need to do is follow these kids until they become older and then see whether their lower amounts of good cholesterol result in any health problems, such as a higher risk of cardio-vascular disease. We don’t know.”

Neggers is not suggesting parents change their children’s diets quite yet. More studies need to be done.

“We wouldn’t suggest starting to give omega-3 supplements to autistic children yet,” Neggers said, “although it wouldn’t hurt because it’s good for you. But these findings suggest the need for further investigation. The next step is to look at bigger sample sizes for a longer amount of time and with children of different ethnicities.”

There is nothing, yet, to suggest that increasing [blood levels](#) of HDL or omega-3 fatty acids will reduce the symptoms of autism. In fact, the study doesn’t reveal what causes what – if autism causes a lipid metabolism disorder or if the disorder causes autism.

What’s important about these findings is what it could mean later in life for the person with autism. Mystery still surrounds autism. Neggers hopes this is one more clue to solve it.

Provided by University of Alabama

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