

NEWS

# Vitamin D linked to lowered autism risk in large study

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Children born with high blood levels of vitamin D have 25 percent decreased odds of autism compared with those born with low levels. Researchers presented the unpublished results today at the **2018 International Society for Autism Research** annual meeting in Rotterdam, the

Netherlands.

The results come from the largest study yet to explore a link between vitamin D and autism. It involves an analysis of dried blood spots from 3,370 newborns in Sweden, 1,341 of whom now have an autism diagnosis.

The findings reinforce evidence of a link between vitamin D and autism risk. A 2017 study of 4,000 children in the Netherlands, including 68 who have autism, revealed that **those born to vitamin D-deficient women** have more than twice the autism risk of controls.

A link between vitamin D and autism is not surprising, because the nutrient is crucial for normal brain development. Newborns get vitamin D from their mothers, who get most of theirs from sunlight.

Still, women deficient in the vitamin should not panic about their child's autism risk.

"The size of the relationship is so modest," says lead investigator **Brian Lee**, associate professor of epidemiology and biostatistics at Drexel University in Philadelphia, who presented the findings. "This does not mean you need to run out and get sunburned."

## Spotty measure:

Lee and his colleagues measured vitamin D levels in dried blood spots from children born in Stockholm between 1996 and 2000. The blood spots are routinely made within a few days of birth to screen for rare diseases.

They used established cutoffs in adults to classify the children as deficient, insufficient or sufficient in vitamin D. The analysis includes 1,341 children with autism and 1,638 controls.

They found that children who have sufficient vitamin D have about 0.75 the odds of autism compared with those who are deficient. The researchers controlled for the year and season of birth and preterm birth, as well as maternal age, smoking, multivitamin use, body mass, psychiatric conditions and birthplace.

Lee and his colleagues got similar results when they restricted the autism group to the 429 children who do not have intellectual disability. These results suggest that co-occurring intellectual disability doesn't account for the link between vitamin D and autism.

The researchers also reproduced their finding comparing data from 376 of the children who have autism with data from 391 of their unaffected siblings. So neither genes nor environmental factors that siblings share are likely to explain the link.

Still, Lee cautions that nutrition-related factors besides vitamin D could account for the link.

“Nutrients don’t travel alone,” he says. “So chances are, if you’re high in vitamin D, you’re very likely to be high in some other ‘vitamin X,’ and it’s very possible that vitamin X might be responsible for the association.”

He also warns that the findings may not generalize to people outside of Sweden, which has lower levels of sunlight than many other places. What’s more, he says the cutoff for vitamin D deficiency in adults may be meaningless for newborns. To determine whether the link between autism and vitamin D is real, researchers would need to test whether taking vitamin D supplements during pregnancy lowers autism risk.

*For more reports from the 2018 International Society for Autism Research annual meeting, [please click here](#).*