

Vitamin D status in newborns and risk of MS in later life

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Credit: CDC.gov

Babies born with low levels of vitamin D may be more likely to develop multiple sclerosis (MS) later in life than babies with higher levels of vitamin D, according to a study published in the November 30, 2016, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

"More research is needed to confirm these results, but our results may provide important information to the ongoing debate about vitamin D for pregnant women," said study author Nete Munk Nielsen, MD, MSc, PhD, of the State Serum Institute in Copenhagen, Denmark.

In Denmark, dried [blood spots](#) samples from newborn screening tests are stored in the Danish National Biobank. Researchers identified everyone in Denmark who was born since April 30, 1981, had onset of MS by

2012 and whose dried blood spots samples were included in the biobank. The blood from those 521 people was then compared to that of 972 people of the same sex and birthday who did not have MS. In this study, newborns with levels of vitamin D less than 30 nanomoles per liter (nmol/L) were considered born with deficient levels. Levels of 30 to less than 50 nmol/L were considered insufficient and levels higher than or equal to 50 nmol/L were considered sufficient.

The [study participants](#) were divided into five groups based on vitamin D level, with the bottom group having levels of less than 21 nmol/L and the top group with levels higher than or equal to 49 nmol/L. There were 136 people with MS and 193 people without MS in the bottom group. In the top group, there were 89 people with MS and 198 people without the disease. Those in the top group appeared to be 47 percent less likely to develop MS later in life than those in the bottom group.

Nielsen emphasizes that the study does not prove that increasing vitamin D levels reduces the risk of MS.

The study has several limitations. Dried blood spots samples were only available for vitamin D analysis for 67 percent of people with MS born during the time period. Vitamin D levels were based on one measurement. Study participants were 30 years old or younger, so the study does not include people who developed MS at an older age. In addition, the Danish population is predominantly white, so the results may not be generalizable to other populations. Furthermore, it cannot be excluded that this apparent beneficial effect could be mediated through other factors in later life such as vitamin D levels, in which case a possible maternal vitamin D supplementation would not reduce the MS risk in the offspring.

Sources of vitamin D are diet, supplements and the sun. Dietary vitamin D is primarily found in fatty fish such as salmon or mackerel. Levels of

vitamin D should be within the recommended levels, neither too low nor too high.

Provided by American Academy of Neurology

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