Do minerals play a role in development of multiple sclerosis?

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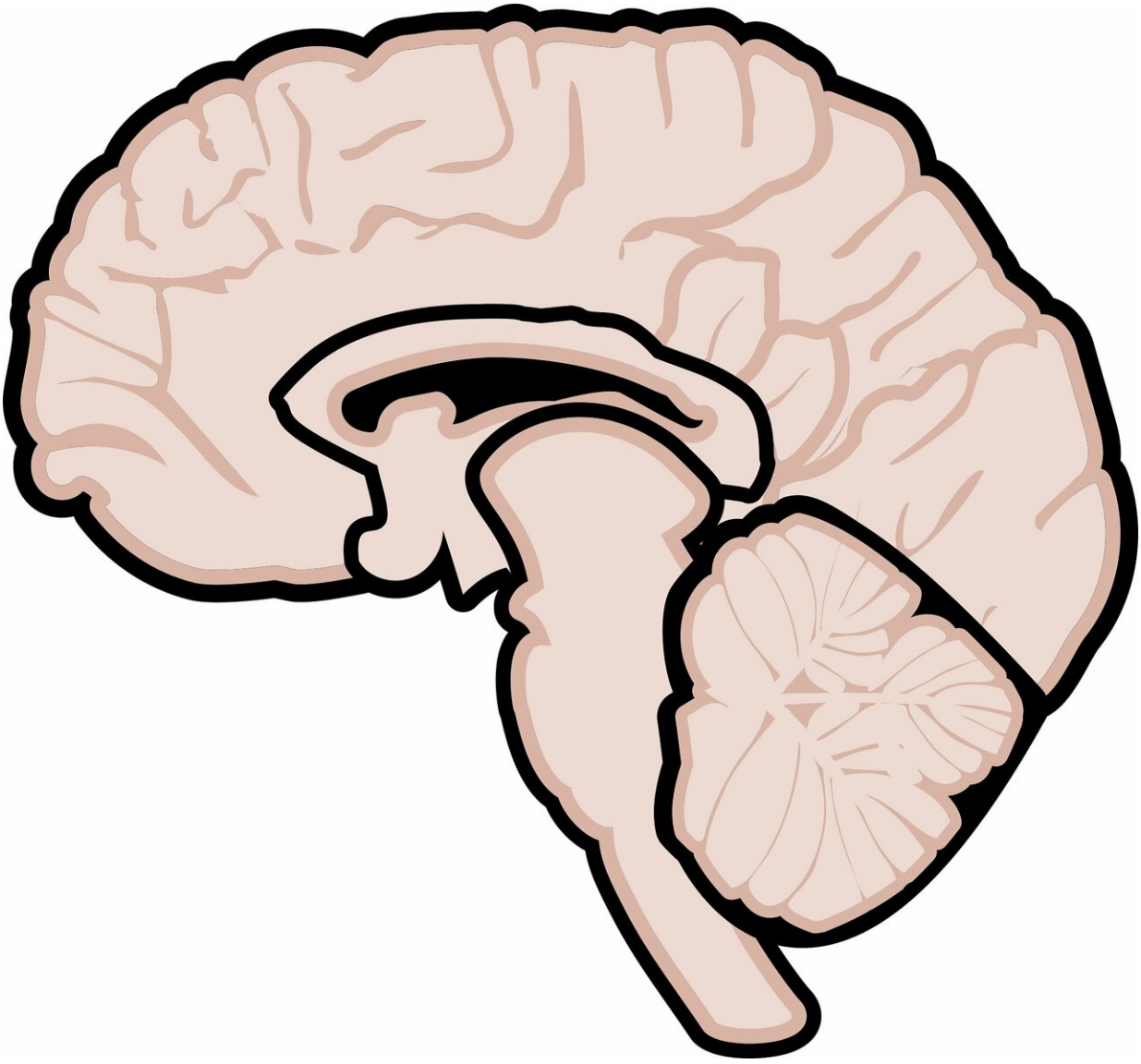

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Some studies have suggested that minerals such as zinc and iron may play a role in how multiple sclerosis (MS) progresses, once people have been diagnosed with it. But little was known about whether zinc, iron and other minerals play a role in the development of the disease. A new study shows no link between dietary intake of several minerals and whether people later develop MS. The study is published in the April 3, 2019, online issue of *Neurology*, the medical journal of the American Academy of Neurology. This article will also be published in the April 30 print issue of *Neurology* which is largely dedicated to null hypothesis studies with negative or inconclusive results. These results have the potential to inform future research efforts and to save study participants from avoidable risks.

"Higher intake of vitamin D has been associated with a lower risk of MS, but our findings show that intake of minerals is not an important determinant of MS risk," said study author Marianna Cortese, MD, Ph.D., of Harvard T.H. Chan School of Public Health in Boston.

The study involved 80,920 female nurses in the Nurses' Health Study and 94,511 in the Nurses' Health Study II. The women were asked via a questionnaire about diet and any supplement use every four years for up to 20 years of follow-up before some of the women developed MS.

The minerals studied were zinc, iron, potassium, magnesium, calcium, phosphorus, manganese and copper.

During the study, 479 of the women developed MS.

The researchers evaluated the women's intake of the minerals to see if higher intake was tied to a higher or lower risk of MS. No such relationship was found. Researchers looked at mineral intake at the

beginning of the study and also cumulative intake before MS onset and found no association.

The results were the same when researchers adjusted for other factors that could affect the risk of MS, such as smoking and taking vitamin D supplements.

"While previous studies have suggested that zinc levels are lower in people with MS and that zinc may produce a more anti-inflammatory immune response in an animal model of MS, these effects may be too subtle within the range of zinc intakes common in the US population to modify MS risk," Cortese said.

A limitation of the study was that only women were included, and most were white, so the results cannot be directly generalized to men or people of other races.

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