Liset Elstgeest

Elstgeest LEM, de Koning EJ, Brouwer IA, van Schoor NM, Penninx BWJH, Visser M.

Eur J Endocrinol. 2018 Jul 27. pii: EJE-18-0187. doi: 10.1530/EJE-18-0187. [Epub ahead of print]

<https://eje.bioscientifica.com/view/journals/eje/179/4/EJE-18-0187.xml>

In older age, vitamin D deficiency is a common health problem. A link between this vitamin and mood might exist as vitamin D receptors are present in areas of the human brain that are related to mood. Previous studies on the association between vitamin and depression showed inconsistent results and used a single measurement of 25-hydroxyvitamin D (25(OH)D) level. We investigated the association between change in serum 25(OH)D level and parallel change in depressive symptoms over time in Dutch older adults.

Data from two cohorts of the Longitudinal Aging Study Amsterdam (LASA) were used: the older cohort (65-88y, 173 persons) and the younger cohort (55-65y, 450 persons). They had given blood samples at two time points, in which serum 25(OH)D levels were measured. At these time points, they also filled out a questionnaire about depressive symptoms. The time period for the older cohort was 13 years and for the younger cohort 6 years.

The results showed no association between change in 25(OH)D and change in depressive symptoms in the older cohort. Also in the younger cohort, no associations were observed in participants with higher baseline 25(OH)D concentrations (>58.6 nmol/l). However, in participants with lower baseline 25(OH)D concentrations (<58.6 nmol/l), an increase in 25(OH)D was associated with a small decrease in depressive symptoms.

This study suggest that over 6 years an increase in vitamin D levels is associated with a small decrease in depressive symptoms, but only in middle-aged adults with lower baseline levels. Well-designed intervention trials are needed to determine whether a causal link between vitamin D and depression exist.