



Vitamin D 'may help slow ageing'

A vitamin made when sunlight hits the skin could help slow down the ageing of cells and tissues, say researchers.

A King's College London study of more than 2,000 women found those with higher vitamin D levels showed fewer ageing-related changes in their DNA.

However, the American Journal of Clinical Nutrition study stops short of proving cause and effect.

A lack of vitamin D has already been linked to multiple sclerosis and rheumatoid arthritis.

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Professor Tim Spector
King's College London

The genetic material inside every cell has an inbuilt "clock", which counts down every time the cell reproduces itself.

The shortening of these strands of DNA called telomeres is one way of examining the ageing process at a cellular level.

Snapshot measurement

The King's team looked at white blood cells, which tend to experience faster rates of turnover - and faster shortening of telomeres - when the body's tissues are suffering more inflammation.

They looked at a total of 2,160 women aged between 18 and 79, and took a snapshot measurement of the levels of vitamin D in their bloodstream, comparing this to the length of the telomeres in their white blood cells.

They found that, after adjusting the results for the age of the volunteer, women with higher levels of vitamin D were more likely to have longer telomeres in these cells, and vice versa.

What we do know is that while telomere length can be used as a biological marker, for an individual, it is not a very precise one

Professor Thomas von Zglinicki
Newcastle University

Professor Brent Richards, who led the study, said: "These results are exciting because they demonstrate for the first time that people who have higher levels of vitamin D may age more slowly than people with lower levels of vitamin D.

"This could help to explain how vitamin D has a protective effect on many ageing-related diseases, such as heart disease and cancer."

Another of the study's authors, Professor Tim Spector, said: "Although it might sound absurd, it's possible that the same sunshine which may increase our risk of skin cancer may also have a healthy effect on the ageing process in general."

No proof

The study authors, however, conceded that while this suggested a link between vitamin D levels and telomere length, it did not provide unequivocal evidence that vitamin D was responsible for this effect, rather than some other factor unaccounted for in the research.

Professor Thomas von Zglinicki, a leading telomere researcher from the University of Newcastle, said that this was more evidence that telomere length could be related to ageing and age-related diseases.

However, he said: "What we do know is that while telomere length can be used as a biological marker, for an individual, it is not a very precise one.

"Other studies have found that people who die at the same age can have significant differences in their telomere length - up to 30 times the differences described in this study.

"We just still don't know how all the different factors that correlate to telomere length work together."

He said that it was possible that vitamin D might not be delaying the shortening of telomeres, but that another factor which did this might alter the way the vitamin was created and metabolised by the body.

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