Clinical Update

Vitamin D May Slow Aging

Evidence links vitamin D levels to telomere length

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Vitamin D, produced naturally by the body through exposure to sunlight, may help slow the aging of cells and tissues, say researchers at King's College London. Researchers measured telomeres in women and found that women with higher levels of vitamin D had longer telomeres. They studied 2,160 women, ages 18 to 79 and measured leukocyte telomere length (LTL). LTL is a predictor of ageing-related disease and decreases with each cell cycle and increased inflammation, the scientists said.

However, the study -- published in the American Journal of Clinical Nutrition -- did not prove a direct cause and effect between vitamin D levels and aging.

"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," said study leader Professor Brent Richards.

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

The scientific community has already called for an increase in the recommended level of vitamin D intake.

Currently, the recommended daily intake is set at 400 IU, and the tolerable upper intake level (UL) in Europe and the US is set at 2000 International Units (IU), equivalent to 50 micrograms per day. Research, particularly from clinical trials, suggests that this should be raised.

A recent risk assessment by the US-based trade organization, the Council for Responsible Nutrition (CRN) concluded that the UL could be raised to 10,000 IU (250 micrograms per day).

Vitamin D refers to two biologically inactive precursors - D3, also known as cholecalciferol, and D2, also known as ergocalciferol. The former, produced in the skin on exposure to UVB radiation, is said to be more bioactive. The latter is derived from plants and only enters the body via the diet.

Both D3 and D2 precursors are hydroxylated in the liver and kidneys to form 25- hydroxyvitamin D, the non-active 'storage' form, and 1,25-dihydroxyvitamin D, the biologically active form that is tightly controlled by the body.