

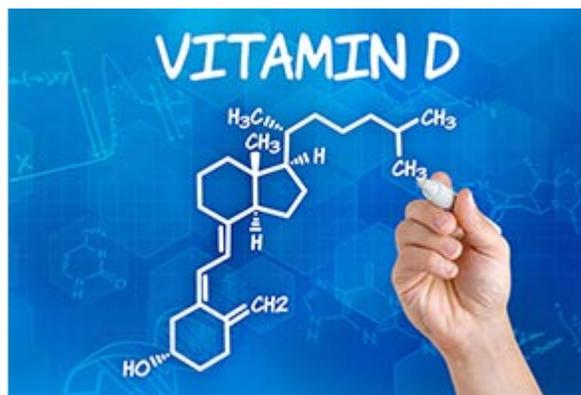


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Study: Vitamin D Levels May Impact Headache Pain

Researchers continue to study the role of vitamin D in the body as this fat-soluble vitamin shows potential benefits in a wide range of bodily systems. While research shows a link between vitamin D and bone health, its role in other systems of the body is still under investigation. Some research has shown a connection between vitamin D levels and headache pain, according to an article in the online newsletter "Very Well." The article was written by Colleen Doherty MD, and reviewed by a board-certified physician.



What Is Vitamin D?

Vitamin D is a fat-soluble vitamin that exists in two forms:

- Cholecalciferol (vitamin D3): derived from ultraviolet light penetrating the skin and present in oily fish, such as salmon and tuna.
- Ergocalciferol (vitamin D2): derived from the fungal sterol, ergosterol, and found naturally in sun-dried, shiitake mushrooms. Both forms of vitamin D are used in the fortification of foods and in vitamin D supplements.

What Is Vitamin D Deficiency?

When individuals are vitamin D deficient, parathyroid hormone levels in the body increase, causing calcium to be leached from the bones. This leads to bone weakening, causing rickets in children and osteomalacia in adults — patients with osteomalacia have diffuse bone and muscle pain and weakness. When physicians check vitamin D status, they measure 25-hydroxyvitamin D level.

What Causes Vitamin D Deficiency?

A number of medical conditions can predispose individuals to vitamin D deficiency, including malnutrition, kidney or liver disease and gut malabsorption, as in celiac disease.

Low sunlight exposure is also a concern for vitamin D deficiency, especially those who reside in nursing homes or who live in geographical regions with little daylight.

Vitamin D and Head Pain

There may be a link between headaches and vitamin D deficiency, according to the article. In 2009, two researchers in India published a paper in "Headache" — a study on eight patients with both vitamin D deficiency and chronic tension-type headaches, according to the article.

All the patients in the study had very low vitamin D levels (25-hydroxyvitamin D levels -10ng/mL), and had little to no relief of their headache with conventional medications. The patients were supplemented with daily vitamin D (1000- 1500IU) and calcium (1000mg), and obtained headache relief within a few weeks of therapy.

The researchers felt that the vitamin D — not the calcium — was more essential to headache relief because of the timing of the relief. They explained that calcium levels typically return to normal within a week, but the patients did not feel relief of their headaches for four to six weeks, which is when their vitamin D levels started returning to normal.

In another study in *The Journal of Headache Pain*, researchers found that with increasing latitude (moving closer to the North and South Pole and farther away from the equator), the prevalence of headaches, both migraines and tension-type headaches, increased.

The increase in latitude (or the farther you get from the equator) correlates with less intense and a shorter duration of sunlight. With less sunlight, there is less vitamin D absorption, so presumably lower levels overall.

What Is a Sufficient Vitamin D Level?

There is no consensus on the optimal level of vitamin D, but most experts believe that a 25-hydroxyvitamin D level under 20 nanograms per milliliter or ng/mL is deficient.

The Bottom Line

It's important to remember that a link or association does not mean that one causes the other, according to the article. The big picture here is that low vitamin D may contribute to head pain. In other words, headaches may be more common in people who live farther from the equator where there is less sunlight. But this is certainly not a hard and fast rule and more studies — especially large randomized controlled trials — are needed to better articulate this relationship.



October ALTRUM NEWS Study Shows Older Adults Need More Protein

Government guidelines on protein intake are too low to keep you healthy — especially if you're over 50, according to an article in US News and World Report. Studies show that taking in more protein helps to maintain muscle mass that might otherwise be lost in the process of aging. Get the details in this issue of *ALTRUM News*.

ALTRUM Garlic Support Gets a New, 'Odorless' Formula

ALTRUM Daily Garlic Support (DGS) long has been a staple of the ALTRUM nutritional supplements line. The new ALTRUM Daily Garlic Support formula brings you an odorless, allicin-rich, garlic supplement. Each capsule contains 500 mg of garlic extract (bulb).

This high-quality, garlic extract provides the benefits of garlic without the strong odor. ALTRUM Daily Garlic Support helps maintain a healthy immune system, cardiovascular health and normal blood pressure.*



ALTRUM Vitamin D3

ALTRUM Vitamin D3 is a unique combination of vitamin D3 and organic fruits and greens. Also known as "the sunshine vitamin," vitamin D is essential for many functions of the body and is vital for overall health and well-being.* ALTRUM packs 2,000 IU of this fat-soluble nutrient in each capsule of ALTRUM Vitamin D3.

Vitamin D3 is known to help maintain healthy bones and teeth. It helps the body absorb calcium and supports immune health, nervous system function and cellular function.*

ALTRUM Vitamin D3 is enriched with organic greens, such as chlorella and spirulina that provide amino acids, beta carotene and antioxidants that help support overall health. ALTRUM Vitamin D3 also contains organic fruits – acai, amla, cranberry and raspberry – that contain powerful antioxidants that help protect the body from damage caused by free radicals.*

More Health Benefits of Vitamin D3

- Helps maintain normal blood levels of calcium and phosphorus*
- Helps protect against osteoporosis*
- Helps maintain healthy blood pressure *
- Helps support colon health*

ALTRUM Vitamin D3 contains no genetically modified ingredients (non-GMO), artificial colors, artificial flavors or preservatives. Keep out of the reach of children.

Suggested use: As a dietary supplement, take one or two capsules per day with food.

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent disease. Please check with your physician when using prescription medications along with food supplements.

Vanilla Nutritional Drink Mix

Ingredients in Nutritional Drink Mix

- Protein – 10 g — an excellent source
- Fiber – 5 g — an excellent source
- Enzyme blend — protease (digest protein), amylase (digest carbs) and lipase (digest fats) to help assimilate nutrients in the formula
- HMB — to help maintain muscle mass
- Non-fat milk — contains a form of niacin (niacinamide riboside) that can help maintain a healthy weight
- Vitamins and minerals — 30 percent of daily value
- Flavor — Vanilla



- Stevia — natural sweetener
- Beet sugar — natural sweetener

* These statements have not been evaluated by the Food and Drug Administration.

This product is not intended to diagnose, treat, cure or prevent disease.

Please check with your physician when using prescription medication in combination with food supplements.

ALTRUM News brings you the most recent information on ALTRUM nutritional supplements and how nutrition helps maintain youthful vigor, health and mobility — plus much more.



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