

# Postmenopause vitamin D deficiency associated with disc degeneration and lower back pain

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Lumbar disc degeneration and resulting lower back pain become greater concerns with age and disproportionately affect women more than men,

likely as a result of decreasing estrogen levels during menopause. A new study demonstrates that vitamin D deficiency, smoking, high body mass index (BMI), and osteoporosis are risk factors for greater back pain. Study results are published online today in *Menopause*, the journal of The North American Menopause Society (NAMS).

Lumbar disc degeneration is a common musculoskeletal disease that often causes [lower back pain](#). Previous studies have shown the effect of estrogen on disc degeneration, which partially explains why degeneration is more severe in postmenopausal women than in men of the same age. In addition to lower estrogen concentrations, vitamin D deficiency is common during the postmenopause period.

Vitamin D is critical in maintaining levels of calcium and phosphorus, helping to prevent bone diseases such as rickets and osteoporosis. Recent studies have shown that vitamin D deficiency is associated with lower back pain and that supplementation can relieve this pain and improve musculoskeletal strength. But few studies have been conducted regarding the role of vitamin D in spinal degeneration, especially in postmenopausal women.

This new study evaluated vitamin D status in postmenopausal women and its relationship with disc degeneration and lower back pain. It concluded that vitamin D deficiency is highly prevalent in postmenopausal women and that a serum concentration of vitamin D less than 10 ng/mL, indicating severe deficiency, should be considered an indicator of severe disc degeneration and lower back pain. It further identified additional [risk factors](#) such as smoking, high BMI, and osteoporosis for lower back pain beyond vitamin D deficiency.

Study results appear in the article "Does vitamin D status influence lumbar disc degeneration and low back pain in [postmenopausal women](#)? A retrospective, single-center study."

"This study shows that very low vitamin D levels were linked to a greater likelihood of moderate to severe lower back pain and more severe [lumbar disc degeneration](#), possibly because of the beneficial effects vitamin D has on nerve and muscle pain sensitivity, muscle strength and mass, and inflammation. Although not all women need vitamin D supplementation, this speaks to the importance of avoiding severe vitamin D deficiency states," says Dr. Stephanie Faubion, NAMS medical director.

Provided by The North American Menopause Society

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