

C. Mark Spivey, M.D.

Board-Certified, Sports Trained Orthopedic Surgeon · Specializing in General Orthopedics and Sports Medicine

Fracture Management



Jason R. Miller, DPM, FACFAS

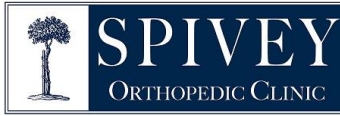
Do Low Levels of Vitamin D Increase Risk of Stress Fractures in Active People?

Active people who enjoy participating in higher impact activities may need to maintain higher vitamin D levels to reduce their risk of stress fractures, according to a retrospective study published online ahead of print in the January/February issue of *The Journal of Foot & Ankle Surgery*.

Lead investigator Jason R. Miller, DPM, FACFAS and his research colleagues tested the serum concentration of 25(OH)D, which is used to determine vitamin D status, in patients with confirmed stress fractures.

The researchers reviewed the medical records of patients who experienced lower extremity pain, with a suspected stress fracture, from August 2011 to July 2014. All patients had x-rays of the affected extremity and were sent for magnetic resonance imaging (MRI) if no acute fracture was observed. Musculoskeletal radiologists independently reviewed all MRI's. The investigators then confirmed the diagnosis of a stress fracture after reviewing the images.

The serum vitamin D level was recorded within 3 months of diagnosis for 53 patients. Using standards recommended by the Vitamin D Council (sufficient range: 40 to 80 ng/mL), more than 80% of patients would have been classified as having insufficient or deficient vitamin D levels. According to the standards set by the Endocrine Society (sufficient range: 30 to 100 ng/mL), over 50% had insufficient levels.



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“Based on these findings, we recommend a serum vitamin D level of at least 40 ng/mL to protect against stress fractures, especially for active individuals who enjoy participating in higher impact activities,” said Dr. Miller.

“However, vitamin D is not the sole predictor of a stress fracture and we recommend that individuals who regularly exercise or enjoy participating in higher impact activities should be advised on proper and gradual training regimens to reduce the risk of developing a stress fracture,” said Dr. Miller.

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