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## Vitamin D Blog: Muscle Pain in the ED

— Patients presenting to the emergency department with diffuse myalgia and weakness may have very low levels of vitamin D, warns a case report.

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Patients presenting to the emergency department with widespread muscle pain may have very low levels of vitamin D, [warns a case report in the \*Journal of Emergency Medicine\*](#).

A 22-year-old African-American woman complained of diffuse myalgia -- with pain in the chest, back, and legs -- for at least 4 months, according to [Deshon Moore, MD](#), of Wayne State University in Detroit, and colleagues. The patient also said she had weakness in her upper and lower extremities, and that it was hard to move around and perform activities of daily living.

The majority of her vital signs were normal, but her creatinine phosphokinase levels were significantly elevated, at 5,680 mcg/L.

Doctors immediately put her on IV hydration and morphine for pain control while they looked at her medical records. Four months prior to her ED visits, tests done by her primary care physician revealed "markedly low" vitamin D levels of 5 ng/mL, but she wasn't informed of her deficiency and didn't receive any treatment.

"We determined that her diffuse myalgia and weakness were likely secondary to untreated vitamin D deficiency," Moore's group wrote.

So the ED team gave her a 50,000 IU dose of vitamin D<sub>3</sub> (cholecalciferol) before sending  
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So the ED team gave her a 50,000-IU dose of vitamin D3 (cholecalciferol) before sending her home with a prescription for the same oral dose of vitamin D3 to be taken once a week for 8 weeks.

She was also told to follow-up with her primary care doctor, who switched the oral treatment to weekly, in-office intramuscular injections.

A couple of weeks after her discharge, hospital staff followed up. The patient reported that she felt much better. Staff noted that her creatinine phosphokinase levels were decreasing. By 6-month and 1-year follow-up, she had made a full recovery, the researchers reported.

"Hypovitaminosis D may be an important but underappreciated etiology of undifferentiated myalgia, that, when present, warrants initiation of vitamin D repletion therapy even from the emergency department," they wrote.

They said they reported the case to help emergency physicians "appreciate this disease and consider it when clinically appropriate."

*Have a tip on a vitamin D study? Email Kristina Fiore at [k.fiore@medpagetoday.com](mailto:k.fiore@medpagetoday.com). You can also catch our vitamin D feed on Twitter, [@vitaminDblog](https://twitter.com/vitaminDblog).*

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