

# Vitamin D supplements could help pain management

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Vitamin D supplementation combined with good sleeping habits may help manage pain-related diseases. This paper published in the *Journal of Endocrinology*, reviews published research on the relationship

between vitamin D levels, sleep and pain management, and reports that levels of vitamin D combined with good quality sleep could help manage conditions including arthritis, menstrual cramps and chronic back pain.

Although the role of vitamin D in bone metabolism is well-established, there is growing debate on how vitamin D affects a variety of different biological processes, including those related to fertility, infection, pain and sleep. Previously published studies have shown that vitamin D can affect the body's inflammatory response, which also alters pain sensation. Several clinical studies have reported that vitamin D levels are associated with sleep disorders. Chronic pain conditions not only affect sufferers' quality of life but also negatively impact upon health service time and budgets. A link between sleep disturbances and pain has long been established but a role for vitamin D has not been fully investigated. These findings suggest that vitamin D supplementation combined with good sleep quality could increase the effectiveness of [pain management](#) treatments, for diverse conditions. This simple approach, if effective, could reduce the burden on health services and improve the lives of patients.

This review by Dr Monica Levy Andersen and colleagues at Universidade Federal de Sao Paulo, pulls together and reviews the most relevant studies that have examined the role of vitamin D in pain-related conditions or [sleep disturbances](#). Investigation of these data indicate that vitamin D levels may have an important role in the relationship between pain and sleep, and further highlight how important it is for health professionals to consider the sleep-pain-vitamin D inter-relationship in a variety of pain-related [conditions](#), such as arthritis, chronic back pain and [menstrual cramps](#).

Dr Monica Levy Andersen says, "we can hypothesize that suitable vitamin D supplementation combined with sleep hygiene may optimize the therapeutic management of pain-related diseases, such as

fibromyalgia"

"It is necessary to understand the possible mechanisms involved in this relationship, including immunological and neurobiological pathways related to inter-relationship among sleep, vitamin D and pain", explains Dr Andersen.

Assistant Professor Sof Andrikopoulos, University of Melbourne and Editor of the *Journal of Endocrinology* commented, "this research is very exciting and novel. We are unravelling the possible mechanisms of how vitamin D is involved in many complex processes, including what this review shows - that a good night's sleep and normal levels of [vitamin D](#) could be an effective way to manage [pain](#)."

**More information:** "The interfaces between vitamin D, sleep and pain" *Journal of Endocrinology*, 24 May 2017. [DOI: 10.1530/JOE-16-0514](#)

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