

Male patients with advanced cancer experienced reduced fatigue after vitamin D treatment

March 3 2022



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Fatigue, or severe tiredness and exhaustion, is a distressing condition for many patients with advanced cancer. Unfortunately, good

pharmacological treatment options are limited, and the ones available come with a risk of side effects and/or habituation.

In a recently conducted study in palliative home care in Stockholm, Palliative-D, we were able to show that correction of [vitamin D](#) deficiency reduced both pain and fatigue in patients with advanced and metastatic [cancer](#). The effects were moderate, but the [treatment](#) was surprisingly well tolerated without any [severe side effects](#). In a recently published study in *Cancers*, researchers performed a so-called post-hoc analysis of the material from the Palliative-D study, where sex differences regarding the effects of vitamin D were examined. The study showed that correction of vitamin D deficiency caused significantly reduced fatigue in men, but not in women. Even after adjusting the results for factors that could affect the outcome (confounding factors), i.e., differences in [pain medication](#), type of cancer, ongoing oncological treatment, colectomy and vitamin D levels prior to the start of the study, the effects of vitamin D treatment in men remained. After only four or eight weeks of treatment, no significant effect of vitamin D were noticed, and the effect was evident first after 12 weeks of treatment.

The Palliative-D study is the first study to show that vitamin D treatment could have positive effects on cancer related fatigue, and that there are sex differences in the effects of vitamin D. The strength of this study is that it is based on data from a randomized, placebo-controlled double-blind study; thus, the risk is small that the findings are due to chance or confounding factors. However, the weakness of the study is a high drop-out rate in the original study—of 244 patients included, only 150 completed all 12 weeks. The major cause of drop-out was that the patients died of their cancer before finishing the study. Another weakness is that the Palliative-D study was not originally designed to examine sex differences. Fatigue was also a secondary outcome measure in the original study; primary focus was pain. Drawing reliable conclusions will require a new study designed specifically to study

fatigue and [sex differences](#) of vitamin D treatment.

To summarize, this study shows that correction of vitamin D deficiency in cancer patients in palliative care seems to reduce [fatigue](#) in men, but not in women. Although the effects are moderate, vitamin D is a gentle treatment, and even a moderate effect may make an important difference in the combined symptom burden of a single patient. However, in patients with an expected survival time less than 12 weeks, treatment would probably not be relevant.

More information: Caritha Klasson et al, Sex Differences in the Effect of Vitamin D on Fatigue in Palliative Cancer Care—A Post Hoc Analysis of the Randomized, Controlled Trial 'Palliative-D', *Cancers* (2022). [DOI: 10.3390/cancers14030746](https://doi.org/10.3390/cancers14030746)

Provided by Karolinska Institutet

Citation: Male patients with advanced cancer experienced reduced fatigue after vitamin D treatment (2022, March 3) retrieved 26 June 2024 from <https://medicalxpress.com/news/2022-03-male-patients-advanced-cancer-experienced.html>

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