

Does vitamin D improve muscle health?

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Vitamin D supplementation does not have beneficial effects on muscle function, strength, or mass, according to an analysis of all available data from relevant randomized controlled clinical trials.

The analysis, which is published in the *Journal of Bone and Mineral Research*, included 54 trials involving 8,747 individuals. Overall, there

were no benefits of vitamin D over placebo for improving muscle health. On the contrary, vitamin D appeared to have detrimental effects in terms of increased time spent performing what's called the Timed Up and Go test, a decrease in maximum strength at knee flexion, and a tendency towards a reduced score of the Short Physical Performance Battery.

"Care should be taken recommending vitamin D supplementation to improve [muscle strength](#) and function in people with normal or only slightly impaired vitamin D status," said lead author Lise Sofie Bislev, MD, Ph.D., of Aarhus University Hospital, in Denmark. "We need to study further whether it may benefit muscles in those with severe vitamin D deficiency, however."

More information: Lise Sofie Bislev et al, Vitamin D and Muscle Health: A Systematic Review and Meta-analysis of Randomized Placebo-Controlled Trials, *Journal of Bone and Mineral Research* (2021). [DOI: 10.1002/jbmr.4412](https://doi.org/10.1002/jbmr.4412)

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