

Vitamin D supplements do not increase bone density in healthy children

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Giving vitamin D supplements to healthy children with normal vitamin D levels does not improve bone density at the hip, lumbar spine, forearm or in the body as a whole, according to a new Cochrane Systematic Review.

Building bone density in children helps protect against osteoporosis in later life. [Osteoporosis](#) is a condition where bones are weak, brittle and break easily. [Vitamin D](#) helps the body absorb calcium from food, reduces losses of calcium from the body and encourages calcium deposition into bone. Bone density is a major measure of bone strength and measures the amount of [bone mineral](#) present at different sites.

Study leader Dr Tania Winzenberg, from the Menzies Research Institute Tasmania, Hobart says, "By measuring bone density, you can assess how well an intervention such as vitamin D supplementation improves bone health."

The researchers set out to discover whether boosting levels of vitamin D in healthy children encouraged their bones to lay down greater amounts of calcium. They searched existing literature for carefully conducted (randomised controlled trials) research studies that had compared giving children vitamin D supplements with giving placebo. They found six studies that together involved 343 participants receiving placebo and 541 receiving vitamin D. All participants had taken vitamin D or the placebo for at least three months and were aged between one month and 19 years old.

"Vitamin D supplementation had no statistically significant effects on [bone density](#) at any site in healthy children. There was, however, some indication that children who had low levels of vitamin D in their blood might benefit from supplementation," says Dr Winzenberg.

"We now need randomised controlled studies focused on vitamin D deficient children to confirm if vitamin D supplements would help this particular group," she said.

This study adds to the existing reports published in The Cochrane Library that look at the effect of giving [vitamin supplements](#) to children. These include investigations on whether vitamin C can prevent colds or help children with asthma, and whether vitamins A and D can help children with cystic fibrosis.

Provided by Wiley

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