

# Study shows probiotic *Lactobacillus reuteri* NCIMB 30242 significantly increased vitamin D levels

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A study published in the *Journal of Clinical Endocrinology & Metabolism* is the first report of an oral probiotic supplement significantly increasing circulating vitamin D levels in the blood.

The lead author on the study, Mitchell Jones, MD, PhD, received the Early Career Investigator Poster Presentation Prize from the New York Academy of Sciences and the Sackler Institute for Nutrition Science at last week's Probiotics, Prebiotics, and the Host Microbiome: The Science of Translation conference in New York City(1).

The study(2) , a post-hoc analysis of a published randomized controlled trial, examined the effect of *Lactobacillus reuteri* NCIMB 30242 on fat-soluble vitamins. It showed that *L. reuteri* NCIMB 30242 increased circulating 25-hydroxyvitamin D levels by 25.5 percent in hypercholesterolemic adults over the nine-week intervention.

According to the National Institutes of Health, serum concentration of 25-hydroxyvitamin D is the best indicator of [vitamin D](#) status, and is important for adequate bone and overall health in healthy individuals(3). More than 40 million adults in the United States have – or are at risk of – developing osteoporosis, a disease most often associated with inadequate calcium intake. Insufficient vitamin D contributes to osteoporosis by reducing calcium absorption(4) . Researchers continue to study other possible health effects of vitamin D, such as protection

against heart disease, autoimmune diseases, and diabetes.

The Institute of Medicine recommends 600 IUs of vitamin D daily to meet the needs of almost everyone in the United States and Canada. Most people get vitamin D through sun exposure, foods that contain it, and supplements. A variety of factors may reduce vitamin D absorption, including limited exposure to sunlight, dark skin, obesity, and problems with absorption or ability to convert vitamin D to its active form.

"This study, part of an ongoing line of research in bile metabolism and Western disease, is adding to the body of knowledge on the microbiome and its role in human health," said Dr. Jones, lead study author and chief scientific officer, Micropharma Limited. "Although it has long been known that the gastrointestinal tract plays an active role in the absorption of vitamin D, these findings showing improved vitamin D status in response to an orally delivered probiotic are a first, and will inform the development of new products that may be beneficial for people with low vitamin D levels."

Previous studies have shown the effect of *L. reuteri* NCIMB 30242 on cholesterol reduction, but its effect on the absorption of fat-soluble vitamins was unknown.

"The vitamin D market has grown by 20 percent a year over the last 10 years, and within this timeframe, U.S. medical costs around osteoporosis and fractures in an aging population were already estimated at \$22 billion(5)," said Ryan Jones, Micropharma's chief executive officer. "As a pioneer in research and innovation on products that work naturally through the microbiome to impact health outcomes, we are very encouraged about the potential for these vitamin D findings for public health."

**More information:** References:

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