

## Can Bone Resorption Reduce with Nanocalcium Particles in Astronauts?

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**Abstract :** Poor absorption of calcium, elevated levels in serum and loss of bone are major problems of astronauts during space travel. Supplementation of calcium could not reveal this problem. In normal condition only 33% of calcium is absorbed from dietary sources. In this paper effect of space environment on calcium metabolism was discussed. Many surprising study findings were found during literature survey. Clinical trials on ovariectomized mice showed that reduction of calcium particles to nano level make them more absorbable and bioavailable. Control of bone loss in astronauts is critical important. In Fortification of milk with nano calcium particles showed reduces urinary pyridinoline, deoxypyridinoline levels. Dietary calcium and supplementation do not show much retention of calcium in zero gravity environment where absorption is limited. So, the fortification of foods with nano calcium particles seemed beneficial for astronauts during and after space travel in their speedy recovery.

**Keywords :** nano calcium, astronauts, fortification, supplementation

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