Increase in physical activity in men optimizes peak bone mass

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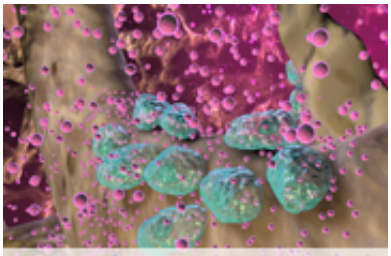

Image courtesy of Blausen Medical

(HealthDay) -- For young men, increasing physical activity over a five-year period is associated with improvements in bone mineral content (BMC) and bone mineral density (BMD), according to a study published in the May issue of the *Journal of Bone and Mineral Research*.

In an effort to assess the impact of increasing physical activity on measures of bone development, Martin Nilsson, P.T., from the University of Gothenburg in Sweden, and colleagues analyzed questionnaire results from 833 men (mean age, 24.1 years) five years following their initial enrollment in the Gothenburg Osteoporosis and Obesity Determinants study. BMC and areal BMD (aBMD) were measured using dual energy X-ray absorptiometry. Peripheral quantitative computed tomography was used to measure volumetric BMD (vBMD) and bone geometry. At baseline and five-year follow-up,

self-administered questionnaires were used to collect data about patterns of physical activity.

The researchers found that increased physical activity between the baseline and the five-year follow-up visits was associated with significant improvements in total body BMC and the aBMD of the lumbar spine and total hip. Increased physical activity was also significantly associated with development a denser trabecular bone of the tibia and a larger cortex (cortical cross-sectional area).

"Increased physical activity was related to an advantageous development of aBMD, trabecular vBMD, and cortical bone size, indicating that exercise is important in optimizing peak bone mass in young men," the authors write.

More information: Abstract
Full Text