
Exercise in youth has lasting bone benefits

NEW YORK (Reuters Health) - Men who participate in athletics in their late teens experience bone-building benefits that last for years, even if they are no longer training intensively, a new study shows. ADVERTISEMENT

Osteoporosis or brittle bone disease is most common among women, but also occurs in men, with the incidence expected to triple over the next fifty years, Dr. Anna Nordstrom and colleagues from Umea University in Sweden note in The Journal of Clinical Endocrinology & Metabolism.

Physical activity is known to help build bone mineral density (BMD), which reduces the likelihood of fractures in later life. While people achieve peak BMD after reaching puberty, they add, there is evidence that exercise has the greatest bone-building effect during childhood and early puberty.

Questions also remain about whether the benefits of early-life exercise for bone strength persist if a person stops training.

To investigate, the researchers followed 63 athletes and 27 non-athlete 'controls', whose average age was 17 at the study's outset, for nearly 8 years.

At the beginning of the study, all the athletes -- who were either ice hockey or badminton players - - were actively training for an average of about 9 hours a week, with workouts including soccer, long distance running, weight training and other activities. They had been training for an average of 10 years previously, and had a greater average BMD than the controls.

Twenty-seven months into the study, the athletes showed increases in BMD compared to the control group. At the second follow up, at 68 months after the study's outset, 27 of the athletes had stopped active training, and showed greater BMD loss than their counterparts who remained active. By the third follow up, at 94 months, an additional 13 athletes had stopped training. This group lost more BMD than either the controls or the athletes who were still active.

However, at the last follow-up, the men who began the study as active athletes still had higher BMD measurements than the control group, even if they were no longer training.

Most importantly, these gains were retained in the hip area, where fractures in later life can be particularly crippling, the researchers write.

The gains seen among even the athletes who stopped training would be enough to reduce future fracture risk by 50%, Nordstrom and her team estimate. "These results may suggest that a high peak BMD resulting from previous training may reduce the risk of osteoporotic fractures in men," they conclude.

SOURCE: The Journal of Clinical Endocrinology & Metabolism, July 2006.



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