

[IMAGE]

## Exercise Now = Strong Bones Later?

The human skeleton appears to respond more favorably to physical activity during the childhood "growth years" than in adulthood. Previous research has shown 10-20% higher peak bone mineral density (BMD) in young people who exercise compared with nonexercisers. In contrast, this figure is only 1-5% higher in adults who exercise regularly compared with sedentary adults.

If exercise is to be recommended during childhood, gains in bone density must be maintained in later life, particularly with respect to the risk of suffering fractures. To investigate this premise, the authors of a study published in *The Lancet* measured BMD in 22 active soccer players, 128 former soccer players, and 138 age-matched control subjects. Frequency of fractures was also assessed in 284 additional former soccer players and 586 controls.

**Results:** Leg BMD was significantly higher in active soccer players and former soccer players retired for five years or less. However, these increases declined with more lengthy retirement, such that players retired for 35 years or more had similar BMD levels as control subjects. Additionally, the separate analysis of fracture rates showed no difference between former athletes and controls.

If you have children, talk to them about the benefits of regular, moderate exercise, but remember: consistency is the key. As these results suggest, maintaining bone mineral density and avoiding debilitating bone fractures is a lifelong challenge. For online information on exercise and fitness, visit <http://www.chiroweb.com/tyh/sports.html>.

### *Reference:*

Karlsson MK, Linden C, Karlsson C, et al. Exercise during growth and bone mineral density and fractures in old age. *The Lancet*, Feb. 5, 2000: Vol. 355, pp469-70.

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