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題目 (Title):

幼年特發性關節炎兒童與青少年的骨質健康以及短期體能活動的影響
(Bone Health in Children and Adolescents with Juvenile Idiopathic Arthritis and the
Influence of Short-term Physical Exercise)

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目的 (Purpose):

探討 54 位患有幼年特發性關節炎的兒童與青少年接受短期運動訓練前後骨質密度的變化。
(To study bone mineral density (BMD) in 54 children and adolescents with juvenile idiopathic arthritis before and after a short-term exercise program.)

方法 (Methods):

共有 54 位兒童，包含 41 位女孩與 13 位男孩，年齡中位數為 13.9 歲，參加為期 12 週的運動訓練計畫；其中 33 位被分在運動組。運動訓練計畫包括 100 次跳繩練習與標準化肌力訓練。受試者分別於訓練開始、訓練結束後第三與第六個月以雙能量 x 光吸收儀與 DXA 雷射掃瞄儀測量腳跟處骨質密度與骨質成份。
(Fifty-four children, 41 girls and 13 boys, median age 13.9 years, participated in a 12-week exercise program, with 33 children in an exercise group. The program consisted of one hundred 2-footed jumps with a rope and standardized muscle strength exercise. Both BMD and bone mineral content were assessed with dual-energy x-ray absorptiometry (DXA) and DXA Laser Calscan for the heel at the

start and after 3 and 6 months.)

結果 (Results):

所有受試者於訓練開始時的測量結果與常模相比所得的 Z 分數顯示其骨質密度處於標準範圍。運動組的全身骨質密度(非 Z 分數)於訓練後有明顯增加(P = .012)。The study group had BMD measurements within the reference range compared with normative data with Z score at start. Bone mineral density values in total body, but not Z score, increased significantly (P = .012) in the exercise group.

結論 (Conclusions):

所有受試者的骨質密度皆處於標準範圍。十二週的運動訓練可增加幼年特發性關節炎兒童的骨質密度。

The study group had BMD measurements within the reference range. Twelve weeks of exercise increases BMD in children with juvenile idiopathic arthritis.