primary studies - published RCT

Effects of Exercise Intervention Program on Bone Mineral Accretion in Children and Adolescents with Cystic Fibrosis: A Randomized Controlled Trial.

Code: PM31281938 **Year:** 2019 **Date:** 2019 **Author:** Gupta S

Study design (if review, criteria of inclusion for studies)

RCT

Participants

Fifty-two CF children (mean age 149.79 mo)

Interventions

Patients were randomized into experimental and control groups. Experimental group performed prescribed exercises three times/week, while control group continued with routine physical activities for one year.

Outcome measures

Bone mineral density (BMD) of whole body and lumbar spine, pulmonary function, exercise capacity, quality of life and habitual activity.

Main results

Change in whole body and lumbar spine BMD over 12 mo in experimental group was lower by 0.006 g/cm(2) (95% CI -0.02 to 0.02) and higher by 0.001 g/cm(2) (95% CI -0.04 to 0.03) than controls, respectively. However, difference between groups was non-significant for both parameters. Experimental group had a significant improvement in their exercise capacity (p = 0.006), quality of life, and serum vitamin D (p = 0.007) levels. Differences between groups for changes in pulmonary function and habitual activity were non-significant.

Authors' conclusions

Exercise regime was not associated with significant improvement in BMD of CF patients, but it had a positive impact on both physical and psychological health of these patients.

http://dx.doi.org/10.1007/s12098-019-03019-x

See also

Indian J Pediatr. 2019 Jul 8. pii: 10.1007/s12098-019-03019-x. doi: 10.1007/s12098-019-03019-x.

Keywords

exercise; non pharmacological intervention - devices OR physiotherapy; training; Combined Modality Therapy; Aerobic training; Chest physiotherapy; strength training;