

Exercise associated with lower rate of fractures in elderly women

September 27 2010

Home-based exercises followed by voluntary home training seem to be associated with long-term effects on balance and gait (manner of walking), and may help protect high-risk, elderly women from hip fractures, according to a report in the September 27 issue of *Archives of Internal Medicine*.

"Falls are responsible for at least 90 percent of all hip fractures," the authors write as background in the article. "Hip fractures place the greatest demands on resources and have the greatest effect on patients because they are associated with high mortality rates and increased morbidity." Raija Korpelainen, Ph.D., of Oulu Deaconess Institute, Oulu, Finland, and colleagues performed an extended follow-up of 160 women who participated in a randomized trial aimed at reducing risk factors for fractures in elderly women with osteopenia (a reduction in [bone mass](#), or low levels of bone [calcium](#)).

Of the 160 women who participated in the randomized control trial, 84 were assigned to an exercise group, while the remaining 76 were placed in the control group. Women in the exercise group attended supervised balance, leg strength and impact training sessions once a week for a 6-month period from October to March each year from 1998 to 2001. The average observation time for both groups was 7.1 years.

During the follow-up time, 17 women in the exercise group were hospital-treated for fractures, while 23 fractures occurred in the control group. Additionally, the total incidence rate of fractures in the exercise

group was 0.05 per 1,000 women per year versus 0.08 in the control group. The authors found that, "fractures were proximal in 52.2 percent of the control group and 17.6 percent of the exercise group. Moderate lifelong physical activity decreased the overall risk of having any fractures during the total follow-up period." Additionally, no hip fractures occurred in the exercise group during the follow-up period, while five hip fractures occurred in the control group.

The exercise group also "demonstrated a significant gain compared with the control group in mean leg strength during the trial." Additionally, by the end of 2005, one woman in the exercise group had died compared with eight women in the control group, giving a crude death rate of 0.003 per 1,000 women per year in the exercise group and 0.03 for the control group.

According to the author's findings, "30 months of supervised, mainly home-based exercises followed by voluntary home training had a positive long-term effect on balance and gait in high-risk elderly women." Additionally, "life-long physical activity was associated with reduced risk of fractures. Furthermore, mortality was significantly lower in the [exercise](#) group than in the control group during the extended follow-up period. Regular daily [physical activity](#) should be recommended to [elderly women](#) with osteopenia."

More information: Arch Intern Med. 2010;170[17]:1548-1556.

Provided by JAMA and Archives Journals

Citation: Exercise associated with lower rate of fractures in elderly women (2010, September 27) retrieved 25 April 2024 from <https://medicalxpress.com/news/2010-09-fractures-elderly-women.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.