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functional fitness training is integration. It's about working various muscle groups to work together rather than isolating them to work independently. Functional fitness exercises can enhance the ability to perform daily tasks. Daily activity requires the use of more than one muscle or group of muscles at a time to complete a task. For example, mowing the lawn requires upper and lower body strength to push a lawn mower, especially up a hill; balance to prevent falling while mowing down hill; flexibility to reach the gas can off the top shelf in the garage; and endurance to mow the whole lawn. There are many benefits of participating in a functional fitness exercise program. These benefits include enhanced proprioception (ability to know where your body is in space), improved neuromuscular function, improved balance and coordination, increased strength, improved posture, improved functional movement, and improved flexibility and range of motion. The purpose of this presentation is to: 1) Present research findings on functional fitness exercise programs; 2) Increase awareness of the move toward incorporating functional fitness exercises into older adults' exercise programs; 3) Describe the benefits of functional fitness; and 4) Provide functional fitness exercises your participants can perform.

BMD Improvements Following FaME (Falls Management Exercise) in Frequently Falling Women Age 65 and Over: An RCT

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Introduction: Exercise to improve balance and strength is a key part of a multifactorial intervention to reduce falls (1, 2). The FaME (Falls Management Exercise) program (3) has been shown to reduce falls in community dwelling women aged 65 and over with a history of 3 or more falls in the previous year (4). Fractures are a major burden on both the individual and on health care budgets but are a rare consequence of falls (2, 5). Although there have been many trials examining falls prevention with exercise as the intervention, none have also had bone mineral density as an outcome measure (6). **Aims:** To investigate the effect of a 9-month group exercise intervention (FaME), compared with a control intervention on bone mineral density (BMD) of the lumbar spine and hip. **Subjects:** Community dwelling, independent women aged 65 years and over with a history of 3 or more falls in the previous year. Data are presented for 32 exercisers and 15 controls who had BMD pre and post intervention/control period, with a mean age of 72.38 (SD 5.23) years. **Methods:** Informed consent was obtained and local ethics approved. Subjects were unequally randomized into a control or an exercise group. Controls performed home-based seated flexibility training. Exercisers attended weekly 1-hr tailored dynamic balance and strength exercise classes and performed home exercise (Otago; 7) twice weekly for 9 months. BMD of the spine (L1-L4 and L2-L4) and the hip (total, neck of femur and Ward's triangle) was measured using DEXA (Hologic QDR-4500A). The coefficient of variation of this technique in the laboratory used was between 1% and 2%. Further information on trial design is available (4). **Results:** Exercisers showed no significant changes in BMD at any of the sites measured over the 9-month period (SPSS, ver. 14, paired *t* tests). In the controls there was a significant loss in neck BMD (mean 0.82 (SD 0.09) to 0.79 (0.08) g/cm², *p* < .02) and at Ward's triangle (mean 0.73 (SD 0.13) to 0.68 (0.14) g/cm², *p* < .005). The difference between groups (ANOVA repeated measures) was significant at Ward's triangle (*p* < .02) but did not reach

significance at L2-L4 ($p < .08$). **Conclusions:** A 9-month specific, progressive balance and strength exercise program that is effective at reducing further falls and injuries in community dwelling women with a history of falls is also effective at maintaining BMD compared with a sham intervention. The potential positive benefits of FaME to bone health maintenance support the use of such an intervention in a wider multifactorial intervention to reduce falls and injuries. **References:** (1) Gillespie LD et al. *The Cochrane Database of Systematic Reviews*, 2005 (Issue 5); (2) Skelton DA, Todd C. *WHO Health Evidence Network*, WHO, Denmark, 2004. (3) Skelton DA, Dinan SM. *Physiotherapy: Theory and Practice*. 1999;15:105–120. (4) Skelton DA et al. *Age Aging* 2005;34(6):636–639. (5) Department of Health. *NSFOP: Modern Standards and Service Models*, London, HMSO, 2001. (6) Gardner MM, et al. *Br J Sports Med*. 2000;34:7–17. (7) Campbell AJ, et al. *Brit Med J* 1997;315:1065–69.