

**Title of Intervention:** A Group Exercise Program

**Intervention Strategies:** Group Education

**Purpose of the Intervention:** To increase strength and mobility and to decrease falls

**Population:** Men aged 70 years or older

**Setting:** A Veterans Affairs ambulatory care center in California (north of Los Angeles); health care facility-based

**Partners:** None mentioned

**Intervention Description:**

- Group Education: An exercise program of progressive resistance exercises, walking and balance training took place three times a week for 90 minutes over 12 weeks. The control group was asked to continue usual activities during 12-week period. Exercises included strength training in various positions (standing, seated and supine), endurance training (bicycle, treadmill and indoor walking) and balance training (rocking balance board, balance beam, obstacle course). For strength training, participants increased repetitions and weight lifted.

**Theory:** Not mentioned

**Resources Required:**

- Staff/Volunteers: Certified instructor
- Training: Not mentioned
- Technology: Not mentioned
- Space: Room for group education
- Budget: Not mentioned
- Intervention: Weights, exercise bicycle, treadmill, rocking balance board, balance beam, obstacle course
- Evaluation: Stopwatch, 36-item Health Survey, Yale Physical Activity Survey, performance oriented mobility index, telephone

**Evaluation:**

- Design: Randomized controlled trial
- Methods and Measures:
  - Physical performance tests to assess strength, endurance, gait and balance included a sit-to-stand test, a 6 minute walk test, an indoor obstacle test, the performance oriented mobility index and a 15-second one-leg standing balance test.
  - The 36-item Health Survey (SF-36) was used to measure physical functioning, role limitations and general health perceptions.
  - The Yale Physical Activity Survey measured physical activity.
  - Participants were questioned every 2 weeks by telephone or at the exercise class to determine number of falls and injuries sustained

**Outcomes:**

- Short Term Impact: Exercise participants significantly increased their physical activity and muscular endurance at the knee joint, compared to controls and significantly increased strength in eight of the 12 movements measured. They also experienced a significantly greater increase than controls in total work for three of four joint movements and significantly increased the distance they walked compared to controls. Their gait score improved significantly more than controls. There were no significant group differences for the obstacle course, performance-oriented mobility index or the one-leg balance test.
- Long Term Impact: No serious fall-related injuries were noted in either group during the 12 week period. The exercise group did not reduce 3-month fall rates.

**Maintenance:** Not mentioned

**Lessons Learned:** Not mentioned

**Citation(s):**

Rubenstein LZ, Josephson KR, Trueblood PR, et al. Effects of a group exercise program on strength, mobility, and falls among fall-prone elderly men. *J Gerontol A Biol Sci Med Sci.* Jun 2000;55(6):M317-321.