

**Title of Intervention:** Exercise Training for Rehabilitation and Secondary Prevention of Falls

**Intervention Strategies:** Group Education

**Purpose of the Intervention:** To reduce falls among older adults

**Population:** Individuals 65 years of age and older

**Setting:** Out-patient geriatric rehabilitation unit; health care facility-based

**Partners:** None mentioned

**Intervention Description:**

- Group Education: After discharge from the hospital due to a fall, individuals participated in a training intervention. Strength, functional performance and balance training occurred three times per week for three months. Typical activities included flexibility exercises, calisthenics, ball games and memory tasks while seated. Both the control group and the intervention group received an identical physiotherapeutic treatment two times a week, consisting mostly of massaging, stretching and application of heat or ice predominantly to areas affected by fall-afflicted orthopedic problems. Transportation of patients to training locations was provided.

**Theory:** Not mentioned

**Resources Required:**

- Staff/Volunteers: Physical therapist, geriatrician
- Training: Not mentioned
- Technology: Not mentioned
- Space: Room for group exercise classes and physiotherapy
- Budget: Not mentioned
- Intervention: Exercise and therapy materials, transportation
- Evaluation: Fall diaries, self-addressed postage-paid envelopes, physical activity questionnaire, training lists, Geriatric Depression Scale, Philadelphia Geriatric Morale Scale, Tinetti's Motor Test, leg press, Barthel/Mahoney Activities of Daily Living Index, the Lawton/Brody Instrumental Activities of Daily Living Index, stopwatch

**Evaluation:**

- Design: Randomized controlled trial
- Methods and Measures:
  - Medical status, co-morbidity, medication and functional status were assessed with the Barthel/Mahoney Activities of Daily Living Index and the Lawton/Brody Instrumental Activities of Daily Living Index.
  - Muscle Function was measured using the One Repetition-Maximum as a measure of muscle strength in hip and knee extensors.
  - Physical function was evaluated by motor tasks such as stair climbing, chair rise, functional reach, timed up and go, walking performance, balance/sway, Tinetti's Motor Test and use of assistance devices.
  - Training Events were monitored by frequent questioning of participants regarding musculoskeletal complaints. A geriatrician and a physiotherapist evaluated symptoms and modified the training if necessary.
  - Training adherence was documented in training lists.
  - Overall physical activity was evaluated using a physical activity questionnaire for the elderly.
  - Emotional status was assessed with the short version of the Geriatric Depression Scale supplemented by the Philadelphia Geriatric Morale Scale.
  - Fall incidence was assessed with fall diaries in which participants recorded falls daily.

**Outcomes:**

- Short Term Impact: Intervention group participants significantly increased strength, functional motor performance and balance. Fall-related behavioral and emotional restrictions were significantly reduced in the intervention group.
- Long Term Impact: Secondary falls were reduced in the intervention group.

**Maintenance:** Not mentioned

**Lessons Learned:** Not mentioned

**Citation(s):**

Hauer K, Rost B, Rutschle K, et al. Exercise training for rehabilitation and secondary prevention of falls in geriatric patients with a history of injurious falls. *J Am Geriatr Soc.* Jan 2001;49(1):10-20.