

Role of exercise in reducing risk of fall in geriatric population

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Madam, Pakistan has a population of over 207 million making it the sixth largest country population-wise.¹ The geriatric population i.e. people over 60 years of age constitute 4.0% of the total population (8 million).² Approximately 44% of this age report to have had a fall as measured by Time Up and Go (TUG) test.² The most common risk factors of fall in this group include a previous history of fall, advanced age, living unaccompanied, certain medications, joint arthritis, diabetes, loss of peripheral sensation and depression. The consequences of around 30-50% of falls are minor injuries like bruises, abrasions and lacerations whereas 10% of falls result in major injuries like head injuries and fractures.² The most significant consequences leading to an increased morbidity and mortality are lower limb fractures which occur due to slipping or tripping over an object in majority of effected individuals.³

Exercise helps in improving the health conditions along with increasing mobility, flexibility and balance. It also improves sleep, relieves stress and boosts confidence. Regular exercise improves cardiovascular endurance, positively impacts musculoskeletal health and has bone-building effects.⁴

There can be two approaches to exercise intervention for the prevention of falls in geriatric population namely standalone intervention strategy and multifactorial interventional strategy. Standalone exercises would include resistance exercise, walking, tai chi etc. whereas multifactorial exercise programmes would include aerobic endurance, flexibility, strength and balance training. These exercises can specifically

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be used to treat balance and gait impairments. Moreover, they also aid in increasing flexibility and reducing muscle weakness. Tai chi has emerged as a new form of exercise which not only improves balance and physical performance but also results in fewer falls by significantly reducing fear of falling. In order to maintain sufficient level of strength and coordination, a minimum walk of 30 minutes daily is recommended for older adults.⁵

Exercise plan should be designed in accordance with socio-economic background and cultural diversity for long term adherence which in turn results in fall prevention for a longer period of time. It should be kept in mind that the basic component of exercise plan is counselling for developing self-regulation and self-monitoring of progress in older adults.

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