



## QUESTIONS | ANSWERS

### **Q: What is the best way to assess for frailty in older people?**

Healthy ageing is an important area of health care in society. Increasing longevity through the early detection and management of cardio-vascular disease and cancer has changed people's expectations of how long they will live (quantity) and also 'how will they live' (quality). Frailty is a threat to a healthier life as we age and places a burden on carers and the health system. Health care providers such as physiotherapists are in an ideal position to help patients in this area. The COVID crisis has accelerated some of this discussion.

The term 'older' carries different connotations around the world. In developing countries it is associated with the inability to live independently and obtain gainful employment. The World Health Organisation (WHO) defines 'older' as >50 years. The United Nations uses >60 years. In Western countries 'older' is considered to be >65 years which comprises 15% of the Australian population. Our older community is then sub-categorised into 'young-old' (65-75yrs), old (75-85yrs) and very old (>85yrs).

The process of ageing is often associated with the syndrome of frailty. According to the British Geriatrics Society (BGS), '**frailty describes a condition in which multiple body systems lose their built-in reserves**(1).

In general, people suffer from three or more of five symptoms that co-exist. These include unintentional weight loss, muscle loss and weakness, a feeling of fatigue; slow walking speed and low levels of physical activity. These will be expanded as we consider some physiological changes, which occur with ageing.

**The prevalence of frailty is 15-26% in those over 75 years**, increasing with age.

There are many **tools available to assess for frailty**. As a minimum the BGS include gait speed, a timed up and go test and the PRISMA 7 questionnaire. As the majority of frail patients have sarcopenia the "SARC-F" questionnaire is a helpful scoring tool. This tool combines capacity (e.g rising from a chair) with at risk events (e.g. falls). It is also a predictor for falls and frailty.

The key features to check for frailty are:

- On history: how many falls in the last year? Difficulty with stairs, rising from a chair or walking across a room?
- On examination: slow gait speed (taking > 5sec to walk 4m); Timed up and Go test (TUGT >10sec); unexplained weight loss and reducing grip strength.

### **Q: What are some physiological changes that occur with ageing and how does frailty develop?**

The physiological changes of ageing are well understood. All systems are affected. Understanding these changes allows us to tailor our interventions more effectively, in particular regarding physical activity.

Cardio-respiratory changes: From the age of 50 there is a 5-10% decline in VO<sub>2</sub>max (cardio-respiratory capacity) per decade. A VO<sub>2</sub>max of 15-20ml/kg is required for independent community living. The sedentary (inactive) elderly often reach this around age 80-85.

Musculoskeletal changes: The process of sarcopenia – loss of muscle mass, strength and endurance – commences at age 25. This becomes significant after 65 years when at least 25% of peak youth strength is lost. At 80 years there is 50% loss of skeletal muscle (muscle atrophy). Degenerative changes within most tissues occur, in particular the development of tendinopathy and articular cartilage degeneration.

Neurological changes: Proprioceptive, sensory and cognitive changes occur. The proprioceptive and sensory changes increase the risk of falls, and therefore hospital admission for trauma care. The outcome from such admissions generally leaves older patients in a declining health state. Cognitive changes, such as short-term memory loss, may affect compliance to exercises and also the ability to learn new movements.

Other factors: Sleep, hormonal changes, fatigue and adjusting to the changing seasons of life. All have to be taken into account when considering the prescription of exercise. Relationally, many elderly experience bouts of severe loneliness following the loss of a loved one, a 'shrinking friendship circle' and social isolation from community. This creates deep social, emotional and spiritual needs.

### **Q: Are there effective and safe ways to combat frailty?**

The key strategies involve having a good GP, prescribing safe physical activity, assessing nutritional needs and offering psychosocial care as needed.

As a starting point, endorsing the need for an excellent general practitioner is vital. In severe cases of frailty a holistic approach is required which is both very satisfying and time consuming. Within formal geriatric care services there will be multi-disciplinary teams available to the patient. This is ideal but not always possible. In the setting of a general practice, where the patient may have good family and social support, gains can be made to conquer frailty and improve the health and wellbeing of the elderly.

Once any acute illness is excluded (eg infection or metabolic disorder) the foundations of exercise prescription, dietary review and social support work together. Supervision to enhance compliance is needed more than that required in younger patients. To combat frailty the interventions include increased physical activity, dietary review and support to aid compliance.

The principles of prescribing exercise in the elderly: The health benefits of exercise for the elderly are profound. The ability to improve aerobic performance, strength and balance still exists despite the ageing process. The results are impressive with even the most sedentary individuals.

Patients should be active and exercise for at least thirty minutes every day (>150 minutes per week). Variety and safety is key with good supervision and support through family or health care professionals (e.g nurses, personal trainers, physiotherapists or exercise physiologists).

It should be noted that certain patients are fundamentally lazy and indeed may be proud of their inactivity. In a respectful way they need to be led to see that by choosing to be inactive and idle they will become a burden to loved ones and the community. (I am excluding those unmotivated due to mental illness, pain or other medical conditions).

As a guideline, exercise prescription for the elderly is similar to younger patients with the following adjustments:

- i. Longer recovery, warm up and cool down periods required
- ii. More variety and less repetition in training and activities
- iii. Aerobic training: Moderate intensity 150 minutes / week. Vigorous intensity 60 mins / week
- iv. Resistance training twice weekly
- v. Careful balance (proprioceptive) training – 2min twice daily as a minimum
- vi. Flexibility with static stretches - 10-30 secs, 3-4 times/region, 10 minutes, twice weekly
- vii. Consider early introduction of aquatic therapy (group classes). Generally very safe.
- viii. Consider group activities such as aqua-aerobics, chair based exercises and slow movement classes.

Nutritional review and psychosocial care: These areas are beyond the scope of this article but are essential. Creating hope and being encouraging in your demeanour is critical.

### **Summary**

In older patients consider frailty and go further in your assessment. Interventions should include safe physical activity, nutritional support and psychosocial care are effective as a method of combating frailty with ageing.

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Dr John Best