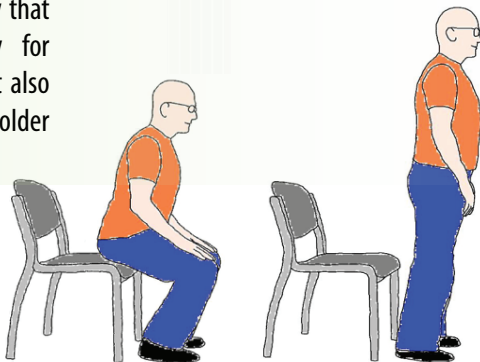


How can we treat Frailty?

There are a few studies investigating interventions specifically designed to improve outcomes for patients with frailty.

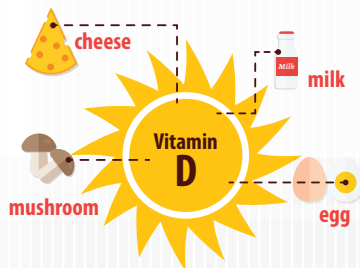
- ▶ **Exercise:** in particular aerobic, strength and balance training, are considered the most effective intervention. The demonstrated benefits of exercise in older adults include increased mobility, enhanced functional performance of activities of daily living, improved gait, decreased falls, improved bone mineral density and the muscle mass and strength and an increased general well-being (or: quality of life). Studies show that physical activity is important not only for maintenance of physiological functions, but also to reduce the risk of cognitive impairment in older people.



*Example of exercise that can be performed at home. Sit down and stand up from a chair for 10 times without using arms

*We thank Later Life Training Ltd for the use of the images.

- ▶ **Nutrition:** Current recommendations suggest to optimize protein intake and to correct vitamin D deficiency. However, nutritional intervention alone is not very effective.
- ▶ **Combination of diet and exercise:** the combination of adequate nutrition and exercise is more effective in the prevention and treatment of frailty than either alone.



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Frailty



"The research leading to these results has received support from the Innovative Medicines Initiative Joint Undertaking under Grant Agreement n.115621, resources of which are composed of financial contribution from the European Union's Seventh Framework Programme (FP7/2007-2013) and the European Federation of Pharmaceutical Industries and Associations (EFPIA) companies' in kind contribution".

What is frailty?

Frailty is a common geriatric condition associated with aging, which affects older people, particularly those over the age of 80 years and is more common in older women than in older men. Based on a recent definition achieved by experts, frailty is **“characterized by diminished resistance to stressors”**. In simplified terms, frailty can be considered **“a reduced capacity of man to adapt to stressors”**. Besides aging, there are often multiple interacting chronic diseases that contribute to this condition .

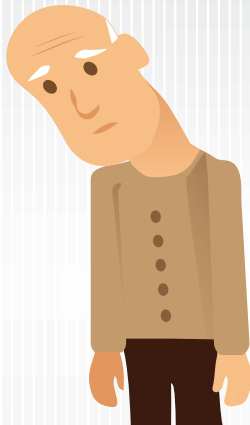


What are the symptoms?

The main symptoms that frail patients display are:

- ▶ Feeling of weakness,
- ▶ Slow walking speed,
- ▶ Weight loss,
- ▶ Fatigue,
- ▶ Sedentariness

Frailty often leads to disability, repeated falls, a decline of the quality of life, repeated hospitalizations, nursing home admission and increased risk of death.



What are the causes?

The causes of frailty are not completely understood.

There is a decline across multiple physiological systems (e.g. the nervous system, circulatory system and respiratory system). Aging, lifestyle (in particular lack of exercise and malnutrition) and past and present diseases play a major role.

The gradual reduction of functioning of various physiological systems and organs during aging is normal. However, in the frailty syndrome this reduction is more rapid and marked.

It is known that a sedentary lifestyle accelerates the decline of aging. Sedentariness leads to serious consequences (e.g. impaired balance, gradual muscle loss and impairment of heart and lung functioning), as well as psychological consequences (e.g. depression and cognitive decline). In addition, undernutrition plays an important role in the frailty syndrome. In many older subjects, lower caloric and protein intake makes it difficult to maintain the adequate structural integrity of organs and consequently of the body.

