

What is frailty?

Frailty is a state of age-associated decline in reserve and function across multiple physiologic systems that reduces the ability to cope with every day or acute destabilising factors and therefore increases the risk of poor health outcomes. It is considered as an intermediate state between the active and robust status of an older person and a dependent one.

What are the potential risks?

Vulnerability to various destabilising factors and major health implications, such as falls and higher risk of unfavourable outcomes to acute illnesses. Functional disability, loss of autonomy and institutionalisation.

Is there something we can do about it?

Frailty is a dynamic process. In many cases, it can be **preventable**, **delayable** and **reversible**, when targeted preventive interventions are applied. The earlier frailty is detected and taken care of, the higher are the chances for the person to remain **active** and **independent longer**.

Contact Person:

Cyprus

Marina Polycarpu
agecare@cytanet.com.cy

France

Prof. Athanase Bénétos
secretariat.geriatrie@chu-nancy.fr
Tél : (0033) 03.83.15.33.22

Greece

Prof. Vasilis Megalooikonomou
vasilis@ceid.upatras.gr

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How to Delay the Onset of Frailty Using Innovative Technology



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What is the FrailSafe project?

FrailSafe is an EU-funded project composed of different medical, social and information technology experts with the aim of better understanding, delaying and preventing the consequences of frailty.

With the help of **volunteers, innovative technologies** will be used to gather data and help detect frailty at an early stage to allow preventive measures.

Example of Innovative technologies:

- A smart **vest** to collect cardiorespiratory and movement data;
- **Virtual and augmented reality games** designed for cognitive stimulation and physical activation;
- **Dynamometer** to measure strength performance;
- **Mobile phone** to measure physical activity;
- **PWA device** for arterial stiffness measurement;
- **Beacons** to detect indoor mobility and behaviours;
- **IMUs** for movement analysis.

The active role of the volunteers is **crucial** as their questions, feedback and comments enable the **constant improvement** of the FrailSafe methodology, technologies and their implementation in real life conditions



How does it work concretely?

Are you interested in helping to fight frailty? Become part of this innovative study!

By taking part in the study you will receive your first frailty evaluation, and a blood sample will be taken to measure the length of your telomeres, which reflects your biological age.

Afterwards, a staff member will brief you on the technological devices that you may keep and use for some days at home.

The clinical evaluation and the use of technological devices will be repeated in intervals depending on your study group.

As the study develops, the devices will evolve and improve according to your needs and concerns thanks to your feedback and comments. With your help, we will have the tools to fight frailty more effectively!

What are the benefits for FrailSafe Volunteers?

By taking part in the study, you will benefit from:

- ✓ **2-4 comprehensive clinical evaluations** aiming at building a totally personalised health status profile (e.g. medical conditions, gait, balance and mobility evaluation, mood and memory testing, nutritional assessment, frailty risk estimation)
- ✓ **A tailored intervention plan** with individualized recommendations
- ✓ **Regular follow-ups** through medical appointments and phone calls
- ✓ **Being informed** in case of early signs of frailty
- ✓ Testing and assessing **medical and technological innovation products**
- ✓ **Contributing** to the research on frailty prevention

Are there any risks or drawbacks if I agree to participate?

There are no anticipated risks. Moreover, this study does not contain any drug testing. Your participation is free and you can withdraw from the study anytime you wish without justification.

Special care will be taken so as your participation in the study suits your personal needs and daily routine.