

*The Frailty Project is a research project on frailty epidemiology, funded by an NWO/ZonMw Veni grant [number 91618067]*

### **Introduction**

The Frailty Project started early 2018, as a Veni grant awarded to Emiel Hoogendijk, based at the Epidemiology of Aging group (Longitudinal Aging Study Amsterdam) at the Department of Epidemiology & Biostatistics of Amsterdam UMC – location VU University Medical Center.

The Frailty Project is an epidemiological research project with several objectives:

1. To study the public health impact of frailty (e.g., trends, life-expectancy)
2. To study mechanisms that explain the relationship between frailty and adverse outcomes
3. To study the development of frailty in later life, and factors associated with development

Various researchers from the Longitudinal Aging Study Amsterdam (LASA) research group are involved, as well as international collaborators.

An additional research project has started in December 2019, in which we will study frailty and vitality among the oldest old, funded by the SEW foundation (SeW Fonds). Recently, we have appointed a postdoc - Sascha de Breij - to work on this project.

### **Frailty Series – The Lancet**

#### THE LANCET

Frailty: "the new frontier of medicine"

See: <https://www.thelancet.com/series/frailty>

In October, The Lancet has published a clinical series on frailty, highlighted on the front cover: "Frailty: the new frontier of medicine". Various international experts in the field of geriatric medicine – including members of The Frailty Project - worked together to provide an up-to-date overview of the clinical and public health impact of frailty in older adults, as well as an overview of the evidence base behind interventions for individuals with frailty.

See: <https://www.thelancet.com/series/frailty>

### **Physical frailty: Clinical practice guidelines (ICFSR)**

In October, the task force of the International Conference of Frailty and Sarcopenia Research (ICFSR) published clinical practice guidelines for identification and management of physical frailty in the Journal of Nutrition, Health & Aging. We have participated in the process of the development of the guidelines. The [article is available](#) in Open Access.

## Collaborations

We strongly believe in (international) collaboration and exchange of experiences. We have some longstanding international frailty collaborations, for example with Dr. Elsa Dent in Australia. If you are interested in collaborating or if you need advice regarding any frailty-related project, please do not hesitate to contact us: [e.hoogendijk@amsterdamumc.nl](mailto:e.hoogendijk@amsterdamumc.nl).

Here are some examples of recent collaborations:

**InCHIANTI, Italy:** Using data of the InCHIANTI study, we have developed a frailty index (FI) based on the deficit accumulation approach and validated this FI for all-cause and cardiovascular mortality (collaborators: Sari Stenholm, Marco Inzitari, Luigi Ferrucci, and Matteo Cesari).

**IALSA project – various countries:** Using data from various longitudinal studies, we have studied frailty trajectories (collaborators, amongst others: Graciela Muniz Terrera, Joshua Armstrong, Judith Rijnhart).

**University Medical Center Groningen, Netherlands:** We currently contribute to the development of frailty indexes in two cohort studies in the Netherlands: Lifelines and NESDO (collaborators: PI - Richard Oude Voshaar, Hans Jeurings, Marcus Kiiti Borges, Ivan Aprahamian).

**Medical University of Graz, Austria:** We currently work on several studies that investigate the frailty-mortality relationship (collaborator: Erwin Stolz).

**Toulouse University Hospital, France:** We have investigated the association between central nervous system biomechanical properties and frailty among older adults suspected of normal pressure hydrocephalus (collaborators: PI - Alexandra Vallet, Natalia Del Campo, Eric Schmidt)

**Yale University, USA:** We contribute to a study in which we look at the extent to which frailty modifies the effects of interventions in older adults (collaborators: PI - Zuyun Liu, George Agogo)

## Publications

*Some of our recent frailty publications:*

1. Hoogendijk, E.O., Afilalo, J., Ensrud, K.E., Kowal, P., Onder, G., & Fried, L.P. (2019). Frailty: implications for clinical practice and public health. *The Lancet*, 394, 1365-1375. DOI: [10.1016/S0140-6736\(19\)31786-6](https://doi.org/10.1016/S0140-6736(19)31786-6)
2. Dent, E., Morley, J.E., Cruz-Jentoft, A.J., Woodhouse, L., Rodríguez-Mañas, L., Fried, L.P., Woo, J., Aprahamian, I., Sanford, A., Lundy, J., Landi, F., Beilby, J., Martin, F.C., Bauer, J.M., Ferrucci, L., Merchant, R.A., Dong, B., Arai, H., Hoogendijk, E.O., Won, C.W., Abbatecola, A., Cederholm, T., Strandberg, T., Gutiérrez Robledo, L.M., Flicker, L., Bashin, S., Aubertin-Leheudre, M., Bischoff-Ferrari, H.A., Guralnik, J.M., Muscedere, J., Pahor, M., Ruiz, J., Negm, A.M., Reginster, J.Y., Waters, D.L., & Vellas B. (2019). Physical frailty: ICFSR International clinical practice guidelines for identification and management. *Journal of Nutrition, Health & Aging*, 23, 771-787. DOI: [10.1007/s12603-019-1273-z](https://doi.org/10.1007/s12603-019-1273-z)
3. Hoogendijk, E.O., Rijnhart, J.J.M., Skoog, J., Robitaille, A., van den Hout, A., Ferrucci, L., Huisman, M., Skoog, I., Piccinin, A.M., Hofer, S.M., & Muniz Terrera, G. (2020). Gait speed as predictor of transition into cognitive impairment: Findings from three longitudinal studies on aging. *Experimental Gerontology*, 129, 110783. DOI: [10.1016/j.exger.2019.110783](https://doi.org/10.1016/j.exger.2019.110783)

**NEXT newsletter:** July 2020 - First results of the main study of the Veni project