Read & Watch: Lecture Summary



Prof. Dr. Rodríguez Mañas

Head of the Department of Geriatrics at Hospital Universitario de Getafe, Madrid. Scientific Director of CIBER of Frailty and Healthy Aging (CIBERFES), Madrid, Spain.

Nutritional facts and functional decline in older people: what we know, what we ignore

Speaker biography

Prof Leocadio Rodríguez Mañas is Head of the Geriatrics Service of the Getafe University Hospital (Madrid), Scientific Director of the Spanish Center for Biomedical Research on Frailty and Healthy Aging (CIBERFES) (Ministries of Health and of Economy and Competitiveness), and Co-Director of the Toledo Study on Healthy Aging, carried out in 2,895 elderly people followed over 9 years.

He is the Director of the Global Aging Research Network of the International Association of Gerontology and Geriatrics (GARN-IAGG) since July 2017. He has led more than 40 publicly-funded research projects, many of them focused on frailty and functional decline in older people, including the Joint Action on Frailty (ADVANTAGE) funded by DGSANTE-European Union.

He has published more than 350 originals in indexed journals peer-reviewed articles and written books and book chapters on various aspects of aging, frailty, and diabetes in older people. He has participated in the preparation of technical reports on these topics for national organizations (Ministry of Health, Scientific Societies, Research Organizations, and Agencies) and international organizations (WHO, PAHO, DG-SANTE, DG-Research, IAGG, Governments of Mexico, Costa Rica and Chile, etc) and is an international advisor to WHO and PAHO.



Abstract

As we age, the determinants of our health change, as it does its main components. These changes embrace the manifestation of the diseases, the aim of care, the prognostic significance of several factors, the progressive importance of functional status, and the comparative relevance of disease and life-styles in determining that functional status.

Accordingly, a change in the paradigm of healthy aging has come, promoted not only by international associations (WHO, EU) but also by groups of researchers¹. According to this paradigm, healthy aging is a concept linked to functioning more tigthly than to the abscence or control of diseases, and the aim of promotion, prevention, and treatment is oriented to maintain functional independence as much and as long as possible. So, according to World Health Organization (WHO), heatlhy ageing is "the process of developing and maintaining the functional ability that enables well-being in older age" (WHO, 2021). Intrinsic capacity (IC) has recently been proposed by the WHO as a multidimensional indicator of health. IC framework comprises five domains: Cognitive, Psychological, Sensory (vision and hearing), Locomotor,Vitality/nutrition. All of them are are crucial to: meet basic needs; learn, grow and make decisions; be mobile; build and maintain relationships; and contribute to society.





Inside this conceptual framework, factors associated to the maintenance of functional status or its recovey when it has been lost are of the utmost relevance. Three main factors must be taken into account²: primary aging, with a strong genetic influence, comorbidities, with a moderate role in determinig functional status, and lifestyles, with a high predominance of physical activity and nutrition. The interaction among these three factors will lead the changes in function, and at the same time, the diseases will be increasingly manifested by functional changes³.

What do we know about the role of nutrition in determining maintenance or impairment in functional status? Nutrition has been a classical factor considered when this topic has been addressed. However, the major part of the research has been focused on people with clinical malnutrition/undernutrition) and in specific settings where the prevalence of malnutrition is high but does not represents the usual setting where older people are (own homes, or with family members /community). Thus, data about nutritional factors associated with functional status in older people living in the community are very scarce. Moreover, until very recently, the majority of the studies were cross-sectional, not allowing to discriminate relationships of causality among the different factors shown to be associated.

A good example of this assertion is a systematic review published in 2017⁴, where they only found 19 studies assessing the relationship between nutrition and frailty, being only 5 among them longitudinal ones. Two topics are worthy to be considered when analysing this relationship.

The first one is the role of the global nutritional status (malnourished/at risk/ well-nourished) and incident of frailty, disability, and death, and the second is the association between of some aspects of the diet, ranging from type of diet to the analysis of several micronutrients.

I will review the available data in older people living in the community focused in these two aspects. The role of overweight and obesity will not be mentioned.

Concerning the role of nutritional status as a risk factor for incident of frailty our study (n=1660 older adults; 98% community-dwelling) and a systematic review conducted by Lorenzo-Lopez et at, showed a significantly and positively association between malnutrition and the probability of being frail^{4,5}. Regarding disability, the results are quite controversial. Moreover depending upon the criteria used to assess nutritional status (BMI, abdominal perimeter, waist-to-hip ratio), there is a tendency to find a positive association between undernutrition and incident disability. Data on the effect of being at-risk are more scarce indeed.

Finally in regard to mortality, the Toledo Study showed that Malnutrition was associated with a higher mortality using the Global Leadership Initiative on Malnutrition (GLIM) criteria⁵. These findings highlight the importance of assessing the nutritional status of community-dwelling older adults.



It is noteworthy that in contrast with the few studies analyzing the role of nutritional status in the community, there are many studies analyzing the role of different types of diets, components of he diets, and micronutrients on incident frailty. In summary, different types of a healthy diet (including Mediterranean and Atlantic diet, DASH and some others), virgin olive oil, resveratrol, wine (if taken according to the so-called Mediterranean pattern), and vegetables have shown to protect from frailty.

The role of proteins is controversial. Several studies have shown a short-term benefit while a long-term study found that proteins were associated to the risk of frailty. Three recent studies have thrown some light to this controversy showing a protective role, in combination with physical exercise, of a higher potein intake (Newcastle 85+ study), but conferring this benefit to the consume of protein of vegetal origin, while protein intake comimg from red meat increases the risk (Nurses Health Study)⁶.

It is time to integrated care to help older adults maximize their Intrinsic Capacity and Functional Ability in the community. The ICOPE guidance for person-centred assessment helps community health and care workers put the recommendations outlined in the ICOPE Guidelines into practice. THERE IS NO TIME TO LOSE to regain autonomy in the malnourished older adults.

References

- 1. WHO. World report on aging and health. WHO, 2015
- 2. Seals DR, Justice JN, LaRocca TJ. Physiological geroscience: targeting function to increase healthspan and achieve optimal longevity. J Physiol. 2016; 594: 2001-24
- 3. Angulo J et al. Physical activity and exercise: Strategies to manage frailty. Redox Biol. 2020; 35: 101513.
- 4. Lorenzo-Lopez L et al. Nutritional determinants of frailty in older adults: A systematic review. BMC Geriatrics 2017
- 5. Rodriguez-Mañas et al. Impact of nutritional status according to GLIM criteria on the risk of incident frailty and mortality in community-dwelling older adults. Clin Nutr. 2021;40:1192-1198.
- Struijk EA, et al. Protein intake and risk of frailty among older women in the Nurses' Health Study. J Cachexia Sarcopenia Muscle. 2022 Jun; 13: 1752-1761.



NESTLÉ HEALTH SCIENCE 2022 - ALL RIGHTS RESERVED

Watch the 18 minute conference talk with Prof. Dr. Rodríguez Mañas and hear about NUTRITIONAL FACTS AND FUNCTIONAL DECLINE IN OLDER PEOPLE: WHAT WE KNOW, WHAT WE IGNORE

https://youtu.be/vqVyx4divro



