

Because your grandparents deserve it!

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Abstract

Almost 101 million of the people living in the EU is **65 years old or over** and this amount will keep on incrementing in the coming years. Unfortunately, **the prevalence of malnutrition** in this population tends to increase as well. We hypothesise that the prevalence of malnutrition in elderly might be due to an impaired digestion and absorption of nutrients. Hence, in our project, we evaluated the aging gastrointestinal tract and macronutrient digestion, together with probable physiological and psychological factors influencing elderly malnutrition. Furthermore, we elaborated a survey to be filled out by 190 elderly in order to relate these factors to the prevalence of malnutrition. **Six relevant studies on eating behaviour** of different populations were analyzed and discussed. These studies showed that the prevalence of malnutrition is higher in elderly living in **institutions** compared to elderly living at home. Moreover, **the use of drugs** can affect appetite, thus increasing their risk of malnutrition. Additionally, not eating all the **different food groups**, experiencing feelings of **unhappiness** and having **limited physical activity** could also increase the risk of malnutrition.

Healthy adult vs. elderly

 Good oral hygiene, easy swallowing

 Good smell and taste sensation

 Smooth digestion

 Normal levels and sensitivity to ghrelin, PYY, CCK, insulin & GLP-1

 Social interaction, stable mental health

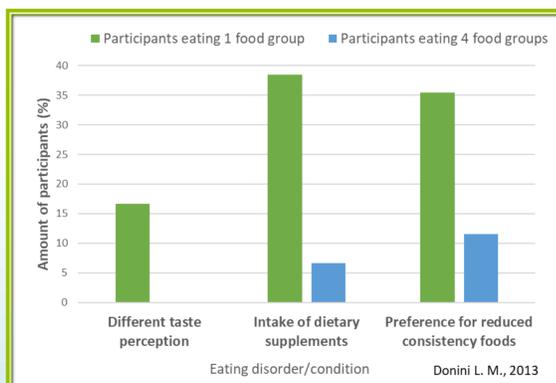
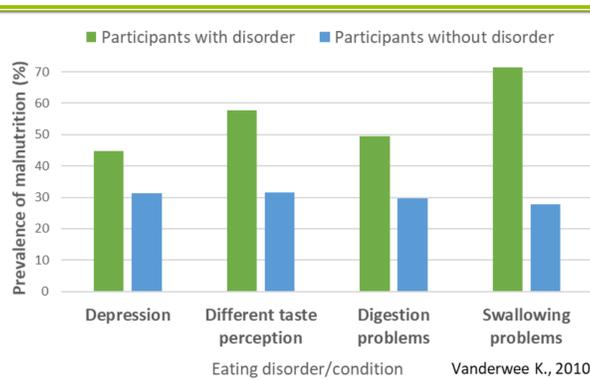
Edentulism, ↓ saliva production, painful swallowing, inflammations 

↓ Smell and taste sensation 

↓ Enzyme secretion, ↑ gastrointestinal diseases 

↓ Ghrelin, ↑ PYY, ↑ CCK, ↑ insulin, ↑ GLP-1 levels 

Social isolation, dementia & grief 



Solutions

Interventions to prevent malnutrition in aging population

- Balanced diet
- ↑ Protein intake
- Nutritional supplements
- Regularly dental check-up
- Additional Zinc intake
- Social services

References

- Donini, L.M. et al. (2013). *Anorexia and Eating Patterns in the Elderly*. PLoS ONE, 8(5), 8p.
- Vanderwee, K. et al. (2010). *Malnutrition and associated factors in elderly hospital patients: A Belgian cross-sectional, multi-centre study*. Clinical Nutrition, 29(4), 469-476.

Survey

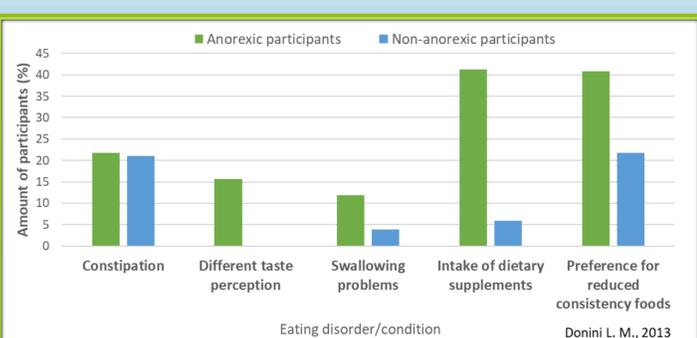
Eating behaviour and food appreciation in elderly

Relating health status, menu consumption, food preferences and avoidances, medicine intake and social environment to eating behaviour

Analysis of other studies (Vanderwee K., 2010)

- 58,6% of institutionalized elderly is malnourished
- 44,8% of depressed elderly is malnourished
- 49,4% of elderly suffering from digestion problems is malnourished

 Due to the COVID-19 measures, the survey could not be performed



Conclusion

Factors that may cause elderly malnutrition

- Home (institution: ↑ prevalence)
- ↓ Olfactory and taste perception
- Swallowing difficulties
- Mental and physical state
- Consumption of limited food groups
- Digestion problems