

# Abstract

**Introduction:** Longevity and the factors influencing it have long been the subject of interest for both laypeople and experts. One approach to studying this issue is the observation of individuals who can be considered long-lived and whose physical and mental condition allows them to continue living a high-quality life. Some factors that determine this quality can be influenced more than others. Lifestyle is one of the modifiable factors, particularly its components such as diet, physical activity, and minimizing harmful habits.

**Aims:** The main aim of the bachelor thesis is to find and describe possible common features in the field of eating habits and physical activity in a group of seniors aged 80 years and above. The first objective is to determine the frequency of consumption of selected foods or groups of foods and beverages. The second is to record the prevalence of selected non-communicable diseases in the sample studied and compare with the general population. The third was then to ascertain the proportion of fat and muscle mass of the respondents.

**Methodology:** Data were collected through questionnaire surveys, direct interviews, and supplementary measurements of body composition. The data were then transformed into numerical form and analyzed using a spreadsheet software. A custom frequency questionnaire was used to assess the frequency of consumption of selected foods and their quantities, along with a brief medical history emphasizing the dietary associations. Bioelectrical impedance analysis was used to determine body composition.

**Results:** No surprising extremes were observed in relation to dietary habits in the studied group. Meat consumption was moderate, but the intake of vegetables and fruits was below average according to WHO recommendations. All respondents were long-term and still active members of a sports association, engaging in regular organized physical activity throughout their lives. Except for four respondents, occasional alcohol consumption was reported. Only two former smokers were present in the sample, while the rest were non-smokers. The frequency and spectrum of serious diseases corresponded to the age of the respondents. Only one case of type 2 diabetes mellitus was unexpected. The majority of respondents lived alone. All participants were self-sufficient and capable of walking. In their family medical history, most respondents reported at least one parent or sibling who lived to at least 80 years of age. Regarding body composition, all respondents, except one, had optimal or higher percentages of muscle mass.

**Conclusion:** In addition to the necessary genetic predisposition, timely engagement in physical activity and socialization appears to be crucial for individuals who reach old age in good condition. In terms of diet, moderation and diversity are important, while avoiding harmful habits such as smoking is also essential.

**Keywords:** Longevity, lifestyle, physical activity, physical fitness of seniors