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Characterization of habitual dietary protein intake among Dutch physically active elderly

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Introduction

Older individuals are at risk for insufficient protein intake. Adequate protein intake is a key factor in the prevention and treatment of sarcopenia. Given the rapidly aging population, insights in dietary protein intake are important in various groups of the elderly. Therefore, the habitual dietary protein intake among Dutch physically active elderly are characterized in this study.

Objectives

- Investigate the habitual dietary protein intake in physically active elderly.
- Gain more insight in the contribution of several protein containing food groups in physically active elderly.

Methods

Data were derived from 1005 Dutch elderly aged ≥ 65 years who participated in the Nijmegen Exercise Study 2015 and completed two online questionnaires:

- a questionnaire about demographics, anthropometrics and physical activity, and
- a validated food frequency questionnaire (FFQ) to estimate habitual dietary intake.

The 2010 Dutch food composition database was used to calculate energy, and protein intake and to categorize food groups.

Results

Participants

- 708 men, 297 women; age 70 ± 4 years; BMI 24.8 ± 2.9 kg/m^2.
- 99.5% met the physical activity guidelines of 600 MET-min/week (median 6126 MET-min/week (IQR 4050-8820)).

Protein intake

- Mean protein intake was 1.1 ± 0.4 g/kg/day (Table 1).
- 80% had a protein intake ≥ 0.8 g/kg/day, and 35% had a protein intake ≥ 1.2 g/kg/day.

Table 1. Energy and protein intake.

Variable	N=1005 (mean ± SD)
Protein intake (g/day)	82 ± 25
men	85 ± 26
women	75 ± 21
Protein intake (g/kg/day)	1.1 ± 0.4
men	1.1 ± 0.4
women	1.2 ± 0.4
Protein (EN%)	15 ± 2
men	15 ± 2
women	16 ± 2
Energy intake (MJ/day)	9.1 ± 2.8
men	9.6 ± 2.8
women	7.9 ± 2.2

Food groups

- The food group 'meat, meat products and poultry' was the most dominant protein source and contributed for 19% to total protein intake (Figure 1).
- Other food groups that contributed ≥ 5% to the total protein intake were 'bread' (18%), 'milk and milk products' (15%), 'cheese' (11%) and 'fish' (6%).

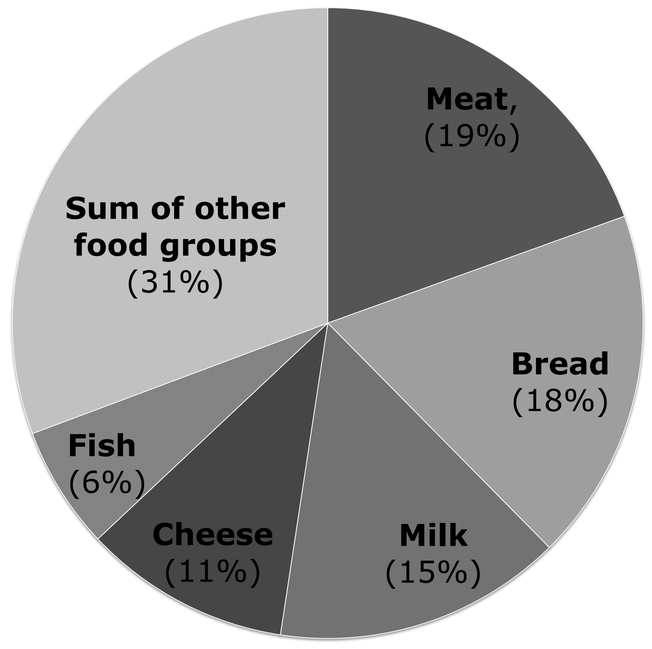

Figure 1. Contribution of protein containing food groups to total protein intake

Conclusion

- Dutch physically active elderly had a mean dietary protein intake of 1.1 g/kg/day, whereas only 35% of the study population met the recommended intake of ≥ 1.2 g/kg/day.
- The main sources for protein intake were meat, bread, milk, cheese and fish.
- This information may be used in the development of strategies to optimize protein intake in the elderly.

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