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Characterisation and protein intake analysis of no- to high meat consumption, based on the Swiss National Nutrition Survey menuCH

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Abstract

Today's high interest for no- or low-meat diets is driven by evidence-based associations between high meat consumption and unhealthy lifestyle factors as well as increased risk of various chronic diseases. This study aims to characterize no-, low- and high-meat consumers and describe their protein intake using data from the Swiss nutrition survey menuCH.This first national survey assessed descriptive factors by a questionnaire and dietary intake by 24-hour dietary recall (24 HDR) across all three linguistic regions, German, French and Italian of Switzerland (N = 2057). Data from the questionnaire (food avoidance) and two 24 HDRs were used to categorize total participants (N) into four subgroups: no meat (4.4%); low (15%), medium (65.6%), or high-meat eaters (15%), based on meat-energy contributions of 0; 0–2.4; 2.4–18.7; 18.7–48.4, respectively. Contributions of overall macronutrients and protein from the different food groups were described for each subgroup to identify quantitative and qualitative differences. Multinomial logistic regression analysis was applied to predict the probability of belonging to one of the four subgroups according to the following sociodemographic and behavioral variables: sex, language region, age, nationality, marital status, education, gross household income, BMI, physical activity, smoking, dietary supplements and overall health status. The subgroups differed in protein intake with 11.5%, 12.8%, 15.4% and 19.1% of total energy intake for no-, low-,medium- and high-meat diets, respectively, weighted for sampling design, non-response, weekdays and season. In general, no- and low-meat consumers included a greater variety of foods contributing to protein intake than meat consumers, including more dairy products and meat-alternatives. None of the subgroups met the Swiss Food-based Dietary Guidelines of three portions of dairy products per day. The regression analysis showed that sex, taking dietary supplements or not and BMI were important determinants of the subgroups: women had a higher predicted probability than men to be no- and low-meat eaters and for these same subgroups, individuals showed higher probabilities for taking dietary supplements. Overweight and obese participants showed higher probabilities to be high-meat eaters.

These findings show considerable differences in protein intake and in variety of protein-food selections, between extremes of meat intake (no- to high meat consumption). Future surveys should include frequency methods to allow conclusions about habitual meat intake or avoidance and health status screening to analyse individuals health data.

Conflict of Interest

There is no conflict of interest