

The 13th European Nutrition Conference, FENS 2019, was held at the Dublin Convention Centre, 15–18 October 2019

## The use of dietary supplements and the frequency of eating food among the soldiers of the Polish Army

Anna Anyzewska<sup>1</sup>, Roman Lakomy<sup>1</sup>, Tomasz Lepionka<sup>1</sup>, Ewa Szarska<sup>2</sup>, Ewelina Maculewicz<sup>2</sup>, Andrzej Tomczak<sup>3</sup> and Jerzy Bertrand<sup>1</sup>

<sup>1</sup>Laboratory of Food and Nutrition Hygiene, Military Institute of Hygiene and Epidemiology, Warsaw, Poland,

<sup>2</sup>Laboratory of Physiology, Military Institute of Hygiene and Epidemiology, Warsaw, Poland and

<sup>3</sup>The War Studies University in Warsaw, Faculty of National Security, Department of Security Education, Warsaw, Poland

### Abstract

**Introduction:** The nutritional supplement market has been growing continuously in the last decades. Dietary supplements have become more and more consumed every day. Epidemiological studies have been shown that supplements users tend to have better health-related behaviors, especially a healthier nutritional intake. The aim of the study was to assess frequency of consumption of selected groups of products depending on the use of dietary supplements by soldiers of the Polish Army.

**Materials and methods:** Six hundred and forty seven male soldiers completed an supplements usage questionnaire and a food-frequency questionnaire assessing information over the previous 12 months. U Mann Whitney test was used to compare food-frequency consumption of 61 groups of products and supplements usage.

**Results and discussion:** From the 647 male soldiers (aged:  $31 \pm 7$ ; years of service:  $9 \pm 7$ ), 38% reported supplements usage. Statistically relevant at an accepted level  $p < 0.05$  supplements usage differentiated the frequency of consumption of 36 of the analyzed 61 groups of products. Compared with supplements non-users, soldiers using dietary supplements were more likely to consume daily fruits such as kiwi fruit and citrus ( $p = 0.003$ ); bananas ( $p < 0.001$ ); avocado ( $p = 0.004$ ); olives ( $p = 0.006$ ); dried fruits (0.004); vegetables – all types ( $p < 0.001$ ); crucifers ( $p = 0.020$ ); yellow-orange vegetables ( $p < 0.001$ ); green leafy vegetables ( $p = 0.001$ ); tomatoes ( $p = 0.010$ ); wholegrain bread ( $p = 0.002$ ); groats ( $p < 0.001$ ); milk and milk drinks ( $p = 0.003$ ); eggs ( $p < 0.001$ ); lean fish ( $p = 0.002$ ); oily fish ( $p = 0.004$ ) and nuts ( $p = 0.003$ ). Sweets such as sugar to sweeten beverages ( $p = 0.001$ ); chocolate, chocolate candies and candy bars ( $p = 0.004$ ); non chocolate candies ( $p = 0.028$ ); biscuits and cakes ( $p = 0.003$ ); salty snacks ( $p = 0.005$ ); white bread ( $p < 0.001$ ); fats such as margarine ( $p = 0.005$ ); cream, sweet or sour cream ( $p = 0.037$ ); mayonnaise and dressings ( $p = 0.002$ ); potatoes ( $p = 0.008$ ), sausages ( $p = 0.048$ ), sugar-sweetened beverages ( $p = 0.001$ ), wine and alcohol drinks ( $p = 0.035$ ) were less often consumed by supplements users than supplements non-users. Diets of supplement users were more in line with current recommendations on healthy eating. Perhaps, soldiers who were using supplements were probably the ones who would least benefit from it. It is necessary to take educational activities in the field of health promotion of soldiers, with a focus on nutrition and the principles for the safe use of, as well as to motivate soldiers to respect basic principles of proper nutrition.

### Conflict of Interest

There is no conflict of interest