

Sport foods and supplements in athletes in the Friuli Venezia Giulia region: study aims and preliminary results

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Sport foods and supplements are gaining popularity both in athletes and in casual gym users. The prevalence of consumption and the type of supplements is extremely variable across sport categories and levels [1]. Sport foods, defined as products attractively marketed with the “high protein” claim or claims of optimizing health, function, and performance, are less studied in the literature.

The present work aims to introduce the study protocol of a broader project and to provide preliminary results from a pilot study.

Study protocol

Aims. 1) to obtain the prevalence of consumption of certain food and supplements in a sample of athletes of different disciplines and levels in the Friuli Venezia Giulia region (Italy); 2) to assess daily intakes of energy and macronutrients using a food frequency questionnaire; 3) to evaluate the awareness on possible side effects and the sources and motivations to their consumption through additional questions. The questionnaire will be administered to all the athletes registered to the regional section of the Italian Olympic Committee.

Methods. A Food frequency questionnaire was specifically modified with sections on sport foods and supplements from two validated questionnaires [2,3] to be analysed with the food composition database for epidemiological studies in Italy [4] and nutritional declarations. This will enable us to estimate the nutritional impact of these products on the habitual diet.

Mean nutritional data of the most popular foods and supplements was obtained from a market search and conducted in local and online specialized shops, supermarkets, and drugstores. Preliminary data showed a great variability on nutrient composition, especially in sport foods marketed with high protein claims.

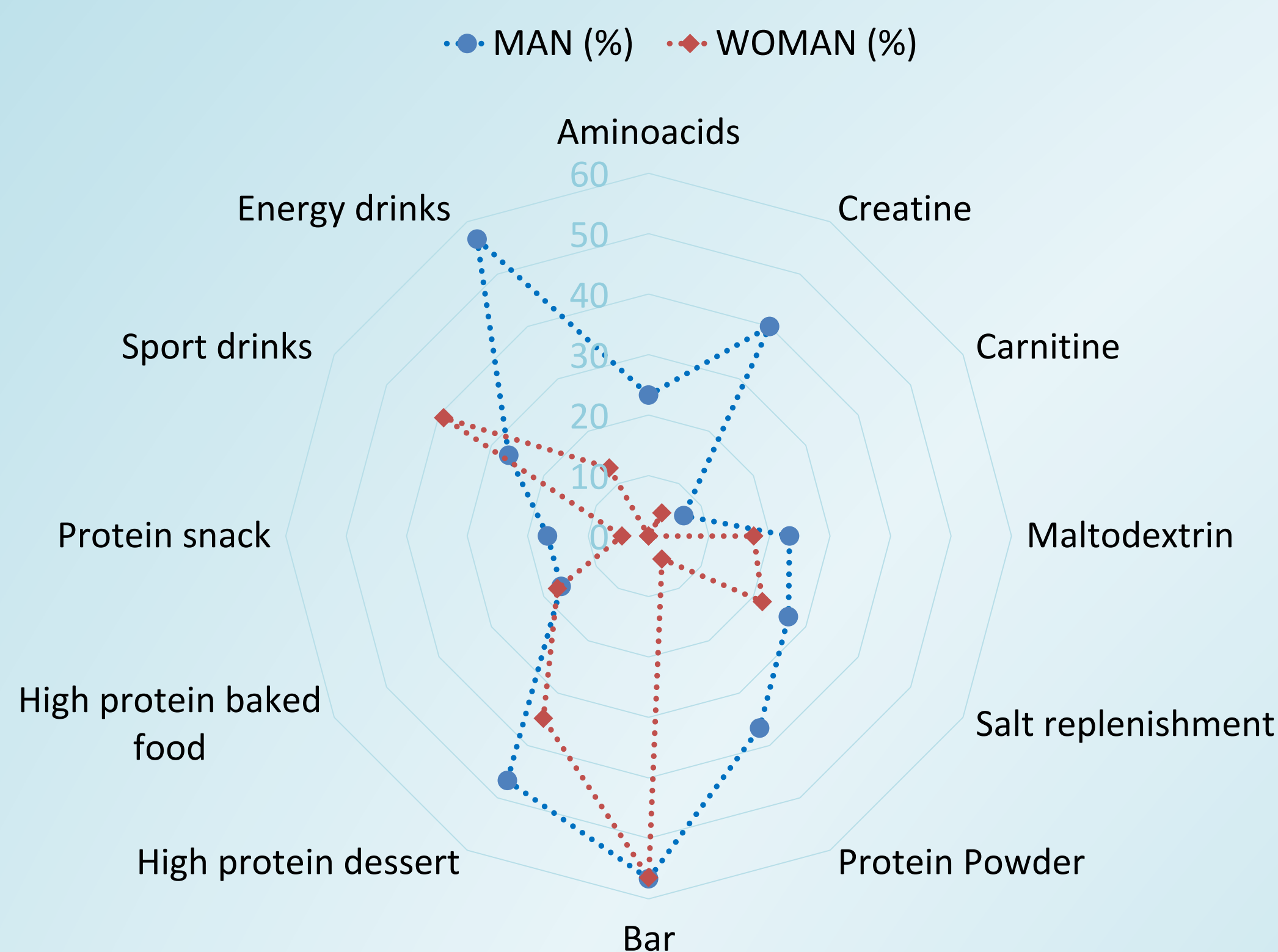


Figure 1: Percentage of supplements and sport foods/drinks use divided by sex in the pilot study.

Table 1: Supplements and sport foods/drinks use by metabolism-related categories of played sport in the pilot study.

	AEROBIC (N=4)	ANAEROBIC (N=6)	MIXED (N=30)	DEXTERITY (N=3)	TOTAL (N=53)
Supplements	4 (100)	4 (66.6)	10 (33.3)	0 (0)	24 (45.3)
Aminoacids	1 (25.0)	2 (33.3)	1 (3.3)	0 (0)	7 (13.2)
Creatine	2 (50.0)	1 (16.7)	5 (16.7)	0 (0)	13 (24.5)
Carnitine	0 (0)	1 (16.7)	0 (0)	0 (0)	2 (3.8)
Maltodextrin	4 (100)	2 (33.3)	4 (13.3)	0 (0)	11 (20.8)
Salt replenishment	4 (100)	3 (50.0)	4 (13.3)	0 (0)	13 (24.5)
Protein Powder	1 (25.0)	2 (33.3)	6 (20.0)	0 (0)	12 (22.6)
Sports foods and drinks	3 (75.0)	6 (100)	20 (66.7)	1 (33.3)	34 (64.2)
Bar	3 (75.0)	5 (83.3)	17 (56.7)	1 (33.3)	30 (56.6)
High protein dessert	2 (50.0)	2 (33.3)	15 (50.0)	0 (0)	22 (41.5)
High protein baked food	2 (50.0)	0 (0)	5 (16.7)	1 (33.3)	9 (17.0)
Protein snack	2 (50.0)	1 (16.7)	3 (10.0)	0 (0)	6 (11.3)
Sport drinks	1 (25.0)	4 (66.7)	8 (26.7)	1 (33.3)	17 (32.1)
Energy drinks	1 (25.0)	3 (50.0)	12 (40.0)	1 (33.3)	20 (37.7)

In a **Pilot study** on 53 students of the sport science area at the University of Udine preliminary results show a prevalence of 45% of sport supplements use and 64% of sport foods consumption. Table 1 shows the prevalence of consumption divided by metabolism-related categories of played sport. The convenience sample was composed by 43% women and 57% men, 81% athletes of different levels and 19% casual gym users, with a median age of 22 years old. Women seemed to consume less sport supplements than men, as shown in Figure 1. The most reported motivations to use foods and supplements were the improvement of physical performance, the reintegration of nutrients loss during physical activity, and, for supplements, the increase of strength/muscular mass (Figure 2).

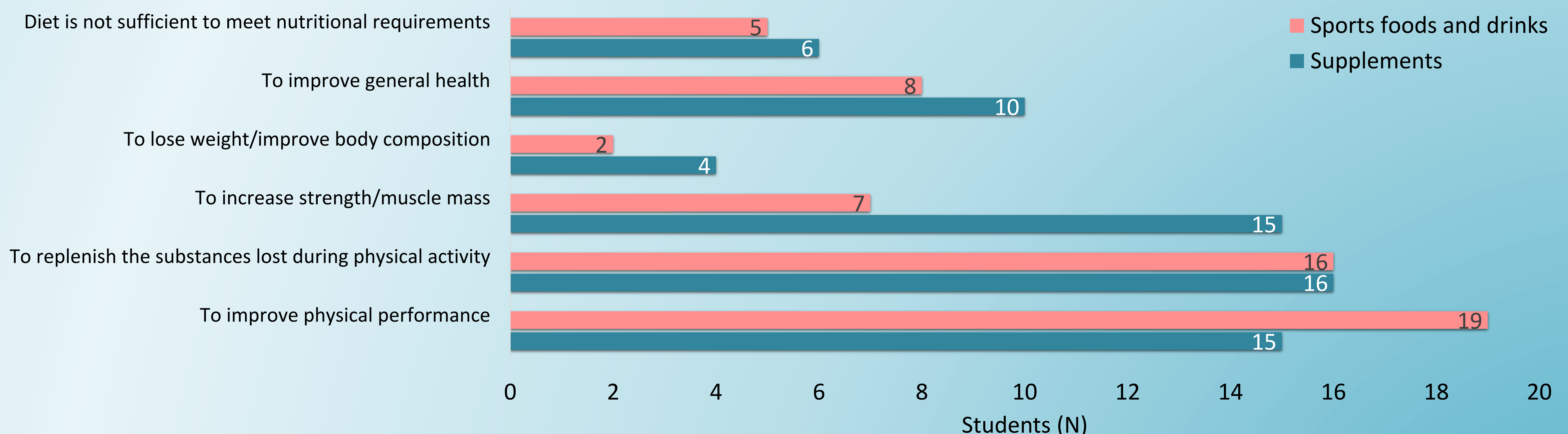


Figure 2: Principal motivations to use supplements or sports foods and drinks in the pilot study.

References:

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