

PREVALENCE, PREDICTORS AND EXTENT OF DIETARY AND NUTRITIONAL SUPPLEMENT USE IN THE AUSTRALIAN ARMY

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INTRODUCTION

Dietary supplements (DSs) can be categorised as multivitamins and minerals, individual vitamins/minerals, protein/amino acids, purported prohormones, herbal (plant-derived) substances, joint health products, combination products, and other DSs. Nutritional supplements (NSs) include sports drinks, energy bars and gels, and meal-replacement beverages (Lieberman et al., 2010; Austin et al., 2016).



Soldiers often use supplements with the aim of helping to meet the physical and mental performance requirements of their occupation (Austin et al., 2016). The purpose of this study was to understand DS and NS use by active-duty Australian soldiers.

METHODS

Surveys were disseminated by e-mail to all active-duty Australian Army members aged 18 years and over (n=22,743). Paper surveys were also distributed to soldiers (n=452) at six regiments, chosen to capture soldiers with differing occupations who don't have regular access to a computer. These included infantry soldiers, combat engineers, and special forces soldiers. The survey investigated the use of any DS and NS in the past 6 months. A total of 70 generic DSs and NSs were listed across 8 DS and 3 NS categories mentioned above. Respondents were asked to indicate the frequency (i.e. never, once a month, once a week, 2–6 times per week or daily) of their use of each listed supplement or others. Regular use was defined as ≥ 1 times per week. Logistic regression was used to test for any significant differences in the proportion of users between the subgroups of each variable.

Table 1. Predictors of use of each category of DS and NS ≥ 1 times/week

Variable	Multi-vitamin/ /mineral	Individual vitamin /mineral	Protein /amino acid	Combination product	Herbal	Purported pro-hormone	Joint Health	Other DS	Any NS	Sports drink	Sports bar/gel
Gender	*	**	X	X	X	X	X	X	X	X	X
Age	**	X	**	*	X	X	**	**	**	**	X
Special Forces vs. others	*	**	X	X	X	X	X	X	X	X	X
BMI range	X	X	X	*	X	**	*	X	X	X	X
Body weight goals	**	**	**	**	X	**	X	*	X	X	X
Rank	X	X	X	X	X	X	X	X	X	X	X
Corps area	X	X	X	X	X	X	X	X	X	X	X
Strength training†	**	**	**	**	*	**	**	**	X	X	X
Cardio in own time**	X	*	**	**	X	X	X	X	**	**	**
Cardio within unit**	X	X	*	**	X	X	X	X	**	**	*
Total cardio**	X	X	X	X	X	X	X	X	**	**	**

Notes: significant predictors are marked with *(P<0.05) and **(P<0.001); X = not a statistically significant predictor; †continuous variable (sessions/week); **continuous variable (hours/week).

KEY POINTS

- Soldiers with more physically and mentally demanding occupations were more likely to use individual vitamin and minerals, and multivitamin and minerals
- The amount of both strength training and cardio exercise undertaken by soldiers was a determinant of the use of several categories of DSs

RESULTS

A total of 2,162 respondents (1833 males; 296 females) were included in the final data set, giving an overall response rate of 9.3%.

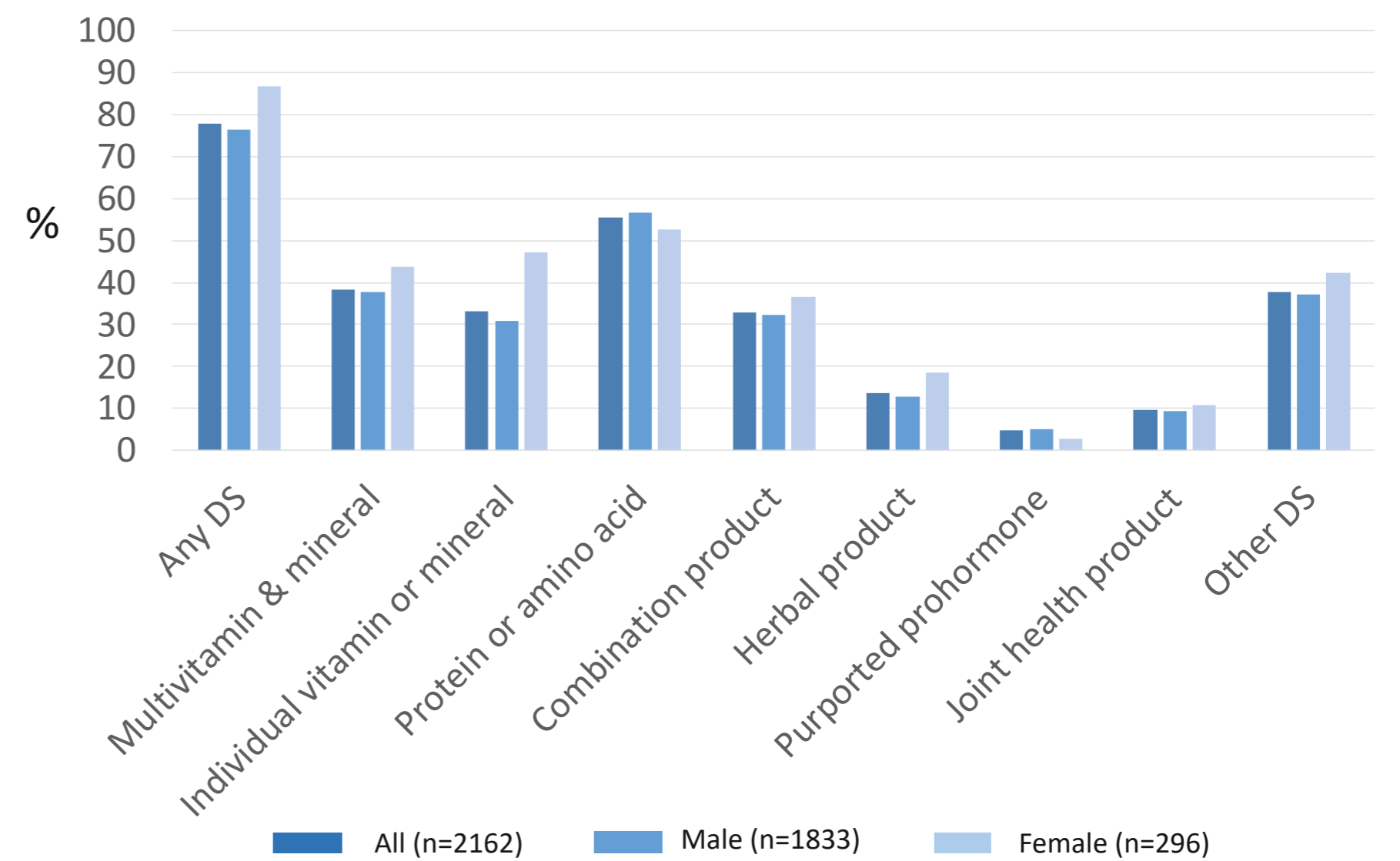


Figure 1. Prevalence of the use of each category of DS ≥ 1 times/week

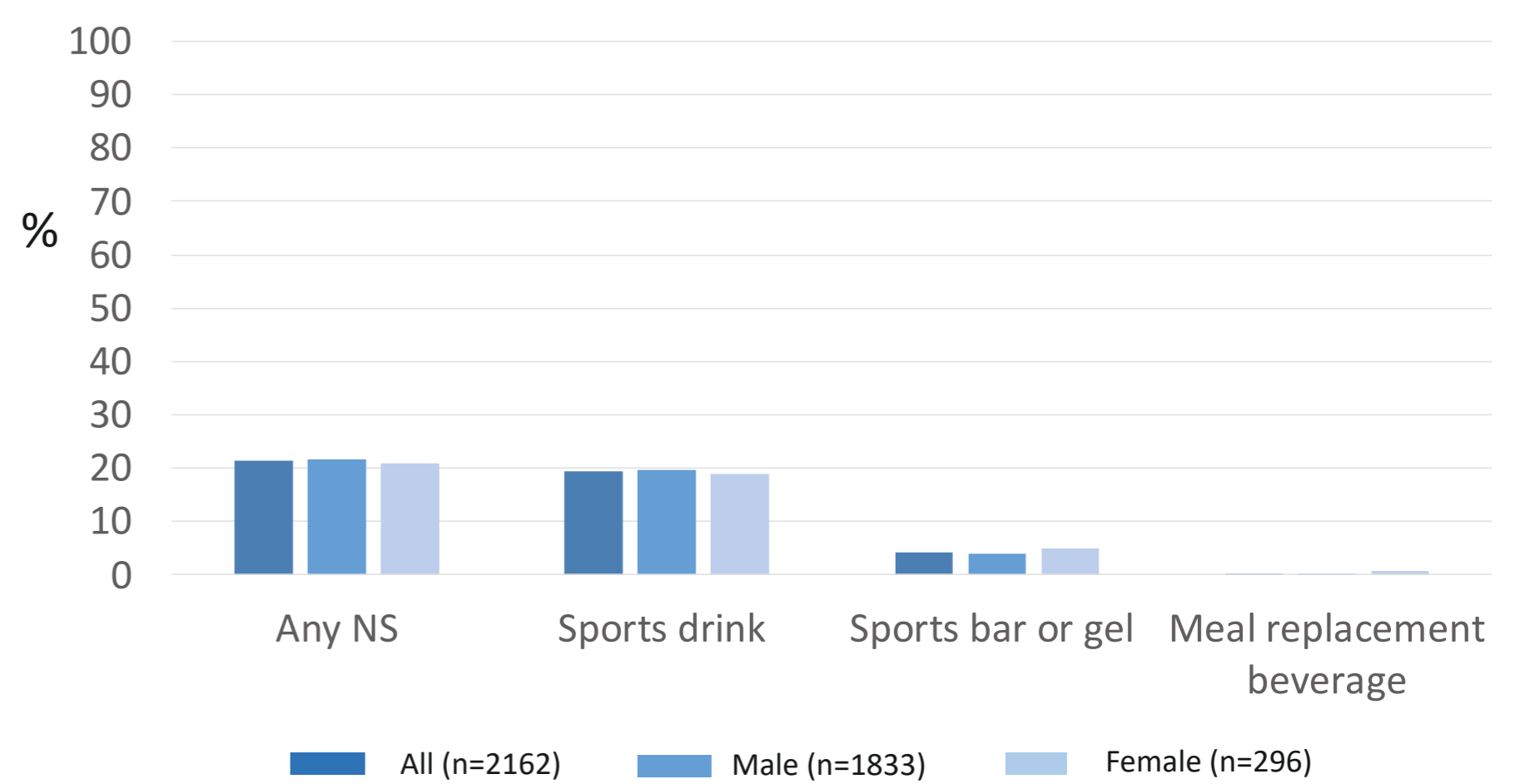


Figure 2. Prevalence of the use of each category of NS ≥ 1 times/week

CONCLUSION

Supplement use by active-duty soldiers is common, however, a number of DSs and usage patterns are potentially harmful. Strategies are needed to discourage harmful DS use and support the use of safe and beneficial DSs and NSs where needed.

1. Austin, K. G., Price, L. L., McGraw, S. M., McLellan, T. M., & Lieberman, H. R. (2016). Longitudinal trends in use of dietary supplements by U.S. Army personnel differ from those of civilians. *Applied Physiology, Nutrition & Metabolism*, 41(12), 1217–1224.
2. Lieberman, H. R., Stavinoha, T. B., McGraw, S. M., White, A., Hadden, L. S., & Marriott, B. P. (2010). Use of dietary supplements among active-duty US Army soldiers. *American Journal of Clinical Nutrition*, 92(4), 985–995