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Background/Aims: The aim of this study was to investigate the knowledge, motivations and occurrence of protein supplement use amongst the adolescent athlete population (13–18 years).

Methods: Eighty-seven adolescent athletes (age: 15.9 ± 1.8 y) based in the Australian Capital Territory, competing in four different sports (Athletics, Swimming, Australian Football and Soccer) were surveyed. Survey questions related to regularity of use, purchasing habits, associated risk knowledge, source of information and beliefs on protein-based sports supplements. Data was analysed using frequency and chi-squared tests.

Results: Fifty-two (60%) adolescent athletes reported using protein supplements, with a positive relationship between age and use. Fifty-five percent of participants ($n = 48$) acknowledged there were risks associated with protein supplement consumption, however, 22% indicated they did not know what the risks were. Adolescents who reported using protein supplements were significantly more likely to believe there are no risks associated with protein supplement use ($p = 0.02$). Coaches were more commonly found to initiate protein supplement use (50%), and were the primary source of information regarding supplements (58%). A further 19% of adolescent athletes obtained information from the Internet and 17% purchased supplements online.

Conclusions: Education for adolescent athletes, coaches and families regarding the purchase and safe use of protein supplements during this vital developmental period is required. Further investigation into the level of nutrition knowledge of sports coaches is also warranted given the key role they play in providing information and advocating the use of protein supplements in this age group.

Funding source(s): N/A.

CONCURRENT SESSION 11: DIETARY PATTERNS.

APPLE INTAKE IN RELATION TO ALL-CAUSE AND DISEASE-SPECIFIC MORTALITY IN ELDERLY WOMEN

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Background/Aims: Higher fruit intake is associated with lower risk of all-cause and disease-specific mortality, but data on specific fruits and the applicability of these findings to the elderly are limited. The objective of this study was to examine the association of apple intake with all-cause and disease-specific mortality over 15 years in a cohort of women aged > 70 years. Secondary analyses explored relationships of other fruit with mortality outcomes.

Methods: Usual fruit intake was assessed in 1,456 women using a food frequency questionnaire. Incidence of all-cause and disease-specific mortality over 15 years was determined through the Western Australian Hospital Morbidity Data system. Cox regression was used to determine the HR for mortality.

Results: Over 15 years of follow up 607 (41.7%) women died from any cause. In multivariate analysis the HR (95% CI) for all-cause mortality was 0.96 (0.87, 1.05) per SD (129 g/day) increase in total fruit intake, and 0.90 (0.82, 0.99), $p = 0.04$ per SD (53 g/d) increase in apple intake. The corresponding HRs, per SD increase in apple intake, for cardiovascular disease, cancer and mortality from other causes respectively were 0.96 (0.83, 1.11), 0.81 (0.66, 0.99), $p = 0.04$ and 0.90 (0.77, 1.06). Our analyses did not provide evidence that pear, orange and banana intakes were protective against all-cause or disease-specific mortality.

Conclusions: In this cohort of elderly women followed for 15 years, apple consumption was inversely associated with all-cause and cancer mortality. Our results support the view that regular apple consumption can contribute to better health.

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VEGETARIAN NUTRITION – COMPARING PHYSICAL PERFORMANCE OF OMNIVOROUS AND VEGETARIAN ATHLETES

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Background/Aims: Humans consuming a vegetarian diet have a reduced relative risk in coronary heart disease, hypertension, diabetes mellitus, obesity and some cancers. Regular physical activity also assists in preventing, and reducing the severity of these conditions. An association between these two factors is being acknowledged with athletes adapting their diet to optimise physical performance. This study aimed to examine the evidence for the relationship between consuming a predominately vegetarian diet and improved physical performance.

Methods: A systematic literature review was undertaken using the SCOPUS database. No date parameters were set. The keywords; vegetarian* OR vegan* AND sport* OR athlete* OR training OR performance OR endurance* were used. Included studies; (i) directly compared a vegetarian based diet to an omnivorous/mixed diet, (ii) directly assessed physical performance, not biomarkers of physical performance, (iii) did not use supplementation emulating a vegetarian diet. Reference lists were hand searched for additional studies.

Results: Seven randomised controlled trials and one cross-sectional study met the inclusion criteria. No distinguished differences between vegetarian diets and omnivorous mixed diets were identified when physical performance was compared.

Conclusions: Limited evidence is available to determine if consuming a predominately vegetarian diet will impact performance in athletes. Further research is warranted though the limited studies of this review did show no impact.

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DIETARY INTAKE PROFILES ASSOCIATED WITH 'FOOD ADDICTION' ACCORDING TO WEIGHT STATUS

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Background/Aims: It has been suggested that addiction to certain types of foods, particularly energy-dense, hyper-palatable foods, could be contributing to overeating and subsequent obesity. However, no studies have investigated possible variations in dietary intake profiles in those displaying addictive-like eating behaviours. The aim was to evaluate differences in dietary intakes of individuals classified as food-addicted (FA) according to the Yale Food Addiction Scale (YFAS), by weight status.

Methods: Australian adults aged 18–35 years were recruited to a 174-item online survey including demographics, anthropometrics, YFAS and the validated Australian Eating Survey food frequency questionnaire to determine usual dietary intake. The YFAS is a 25-item tool which assesses addictive-like eating behaviours according to the diagnostic criteria for substance dependence. Participants were classified as FA according to the YFAS predefined scoring system and were divided into two broad weight status categories according to BMI [underweight/healthy weight (UW/HW), overweight/obese (OW/OB)] for comparison.

Results: A total of 462 participants completed the survey with 14.7% ($n = 68$) classified as FA (96% female, mean BMI 26.4 ± 7.6 kg/m², 46% OW/OB). OW/OB FA participants had significantly higher intakes of take-away (UW/HW = $6.6 \pm 6.1\%$, OW/OB = $13.5 \pm 10.6\%$, $p = 0.001$) and energy-dense, nutrient-poor foods (UW/HW = $31.7 \pm 16.0\%$, OW/OB = $44.9 \pm 14.1\%$, $p < 0.001$), and lower intakes of vegetables (UW/HW = $9.7 \pm 4.1\%$, OW/OB = $6.4 \pm 3.4\%$, $p < 0.001$) and core foods (UW/HW = $68.3 \pm 16.0\%$, OW/OB = $55.1 \pm 14.1\%$, $p = 0.001$) compared UW/HW FA.

Conclusions: This study provides novel data that within a group classified as FA, individuals report differences in dietary profiles that can contribute to differences in weight status, indicating that future nutrition-related treatment strategies for addictive-like eating should be individualised.

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