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Micronutrient intakes of former New Zealand representative athletes over the age of 60 years

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Abstract

Masters athletes tend to have higher intakes of calcium, magnesium, iron, and zinc when compared to Australian national population data from similar age groups[(1)]. However, little is known about the diets of New Zealand Olympians as they get older. This study aimed to describe the micronutrient intakes of New Zealand Olympic and Commonwealth Games athletes over the age of 60 years and make comparisons with National Nutrition Survey data. Thirty-three individuals (mean age 76±8 years, n=27 male) who had represented New Zealand at an Olympic or Commonwealth Games participated in this study. Dietary intake was assessed using three 24-h diet recalls. The first recall was conducted face to face in the participant's home and the second and third were completed over a voice or video call on non-consecutive days following this. All recalls were performed using a multiple-pass technique and entered into FoodWorks dietary analysis software (Version 9, Xyris Software Ltd., Brisbane, Australia). Mean intakes across the three recalls were used to represent the intake of each individual. This study was approved by the University of Otago Ethics Committee (Health; H23/054, April 2023).The mean intakes of iron (males 13.3±5.1 mg, females 9.9±1.9 mg) and zinc (males 10.7±4.0 mg, females 9.6 ±1.9 mg) in Olympians were similar to those reported in those over 70 y in the 2008/09 New Zealand Adult Nutrition Survey, but more than 60% of Olympians had intakes below the estimated average requirements for these nutrients. Intakes of calcium (males 1048±474 mg, females 810±139 mg) and selenium (males 66.7±49.1 µg, females 48.4±17.7 µg) were higher in Olympians when compared to the 2008/09 New Zealand Adult Nutrition Survey data, however 39% and 61% of Olympians still had intakes below the estimated average requirements, respectively. While this group of older New Zealand Olympians did have higher intakes of some nutrients than a representative sample of their peers, a marked number are still at risk of inadequate intakes and may benefit from a nutrition intervention to improve the overall quality and adequacy of their diet.

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