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Nutritional adequacy of menopausal women athletes

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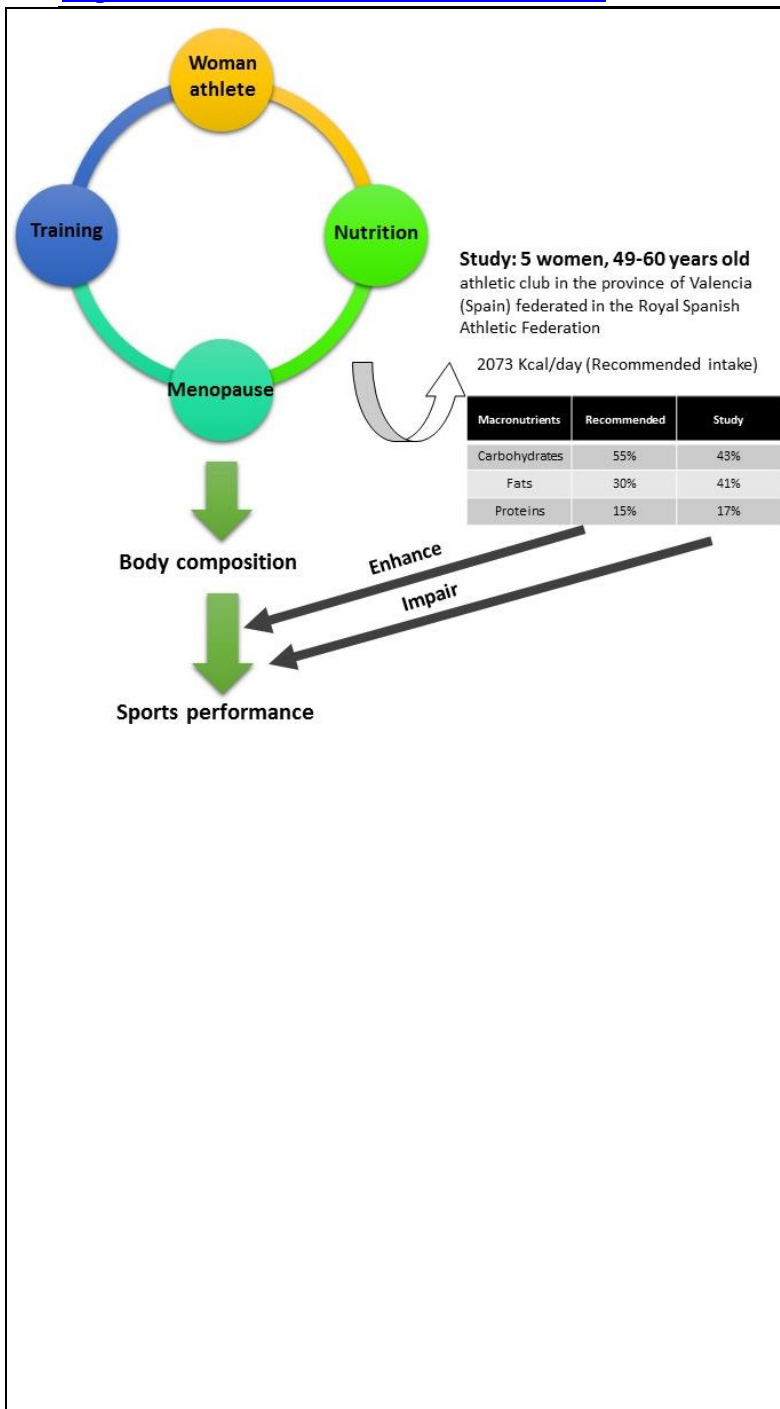
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Graphical Abstract

Abstract.

Menopause is an influential aspect of a woman's life, especially if she is a sportswoman. It is important to consider the role that women play in athletics and have also reached menopause, since the loss of muscle mass and gain of fat tissue influences their sports performance. In this line, nutrition is a fundamental component, so it is relevant to know how it influences the development of a particular somatotype. To improve the performance of menopausal women athletes, a specific somatotype is



required, which should be provided not only by adequate training, but also by optimal nutrition. In the present investigation, a cross-sectional and quantitative observational study was conducted. The population sample consists of 5 women between 49-60 years old who are members of an athletic club in the province of Valencia (Spain) federated in the Royal Spanish Athletic Federation. The average caloric intake of the athletes was 2073 Kcal/day which meet 96% of the recommended intake. However, the distribution of the macronutrients in the diet did not meet the established recommendations: 55% of carbohydrates, 30% of fats and 15% of proteins. Instead, the athletes ingested 43% of carbohydrates, 41% of fats and 17% of proteins. These showed a significant excess in the intake of fats (35% extra) and a deficiency in carbohydrates (22% deficit) which would lead to an abnormal distribution and accumulation of body fat that would be enhanced by the menopausal state of the athletes. All together will influence body composition that will be associated with an inadequate somatotype which would clearly impair the sports performance of the athletes.

References

Aranceta, J.; Ll, S.M. Grupo Colaborativo para la actualización de los Objetivos Nutricionales para la Población Española. *Objetivos Nutricionales para la Población Española 2011. Consenso de la Sociedad Española de Nutrición Comunitaria (SENC). Rev. Esp. Nutr. Comunitaria 2011, 17, 178–199.*

Cuervo, M.; Abete, I.; Baladia, E.; Corbalán, M.; Manera, M.; Basulto, J.; Martínez, A. *Ingestas dietéticas de referencia para la población española; Ediciones Universidad de Navarra, SA (EUNSA): Barañáin, España, 2010.*

Grindler NM, Santoro NF. Menopause and exercise. *Menopause*. 2015;22(12):1351–8.

Papadopoulou SK, Gouvianaki A, Grammatikopoulou MG, Maraki Z, Pagkalos IG, Malliaropoulos N, et al. Body composition and dietary intake of elite cross-country skiers members of the greek national team. *Asian J Sports Med*. 2012;3(4):257–66.

Potter, B.; Schrage, S.; Dalby, J.; Torell, E.; Hampton, A. Menopause. *Prim. Care* 2018, 45, 625–641.

Nereis: <https://www.ucv.es/investigacion/publicaciones/catalogoderevistas/revistanereis>