

A Khorasan wheat-based diet improves systemic inflammatory profile in semi-professional basketball players: a randomized crossover pilot study

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Abstract

Background/objectives: Khorasan wheat is an ancient grain with widely acclaimed beneficial effects on human health. The objective of the study was to examine the effect of a Khorasan-based diet on the wellbeing and inflammatory profile of young athletes.

Results: We conducted a randomized, single-blinded crossover trial involving 20 male young athletes. The participants were randomly assigned to consume products (pasta, bread, biscuits and crackers) made either with Khorasan (KAMUT® brand) or modern semi-whole-grain wheat for 4-weeks with a 4-week washout period before the crossover. Laboratory analyses and fitness tests were performed both at the beginning and end of each diet period. The consumption of Khorasan products was associated with a significant reduction of monocyte chemoattractant protein-1 (MCP-1; mean reduction: -36.15 pg/mL; -25.67%) while the consumption of modern wheat was not associated with significant differences in Interleukin-8 (IL-8) or Interleukin-1 receptor antagonist (IL-1ra). The consumption of the Khorasan-based diet also resulted in a significant improvement in self-rated health status. No statistically significant differences in any athletic performance parameter were observed between the two diets.

Conclusion: The present results suggest that a Khorasan-based diet could be effective in reducing the inflammatory status in young athletes. © 2019 Society of Chemical Industry.

Keywords: Ancient grains; Diet; Inflammation; Sport activity.

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