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Title: Screening for allergy in elite marathon runners

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Body: Background: The prevalence of allergy in athletes is increasing and its risk varies across sports modalities. There are evidences suggesting higher prevalence in swimmers and winter sports athletes; however, this is unknown in elite marathon runners. Objective: to assess the prevalence of allergy symptoms in elite marathon runners. Methods: this cross-sectional study included 230 elite marathon runners (performance time for half-marathon= 70±7min and for marathon 148±19min) that fulfilled the questionnaire Allergy Questionnaire for Athletes (AQUA®). Total AQUA scores ≥5 were used as the threshold for a positive questionnaire.¹ Additional questions about running experience, distance training, and performance in marathon and half-marathon events were also included. Results: Twenty-nine (12.6%) refused to participate mainly due to lack of time. Sixty percent (122/201) of the assessed athletes reported allergy symptoms as defined by a positive AQUA outcome. Symptoms related to physical effort and rhinitis were the most prevalent in the AQUA group (62.3% e 56.6%, respectively). No significant differences (p>0.05) between groups (AQUA+ and AQUA-) were observed for gender, age, running experience, weekly training volume and best performance time in the half-marathon and marathon. Conclusion: We demonstrate that elite marathon runners have a high prevalence of allergy that was mostly related to the upper airways suggesting a possible occupational disease. Our results also suggest that AQUA® questionnaire should be included as part of a routine assessment for elite marathon runners. References: 1. Bonini M, Braidó F, Baiardini I, et al. Allergy Questionnaire for Athletes. Development and validation. Med Sci Sports Exerc. 2009;41:1034-1041.