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PARKRUN DYSPNOEA - ISN'T IT ALL EXERCISE-INDUCED ASTHMA?

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Introduction: A broad differential diagnosis exists for exercise-induced dyspnoea (EID) and wheeze in young athletic individuals, however these symptoms are often treated as presumed exercise-induced asthma (EIA). A key differential diagnosis for EIA is exercise-induced laryngeal obstruction (EILO); a condition characterised by transient closure of the larynx precipitating stridor during exercise. Recent studies reveal a prevalence of 5-7% in Scandinavian adolescents, however the prevalence of EILO in the UK is currently unclear.

Objectives: To assess the prevalence of stridor and EID in a cohort of recreationally active individuals.

Methods: Cross-sectional field-based evaluation of the prevalence of stridor and EID in a cohort of individuals completing a 5km Parkrun event in Northern England. Eighty-five adults (male: n = 43) (mean \pm SD) age: 39 \pm 15 years) were enrolled. Pre-race, respiratory symptoms (Dyspnoea-12 [D12 score: \geq 1-36] in combination with an Allergy Questionnaire for Athletes [AQUA score: \geq 5) and baseline spirometry were assessed. Immediately post-race, breathing was monitored continuously using an audio recording device for 15-min or until full recovery (i.e. resting tidal breathing had resumed). Recordings were analysed retrospectively and coded for signs of the predominant respiratory noise: 0 = nil; 1 = inspiratory stridor; 2 = expiratory wheeze; 3 = combined stridor + wheeze; 4 = cough.

Results: The majority of the cohort (93%) had normal resting lung function. Despite this, the prevalence of troublesome respiratory symptoms was 46% (D12 score: 6 \pm 5 and AQUA score: 13 \pm 6). Almost one third of the cohort (28%) had at least one respiratory sign: inspiratory stridor (n = 9;

11%), expiratory wheeze (n = 7; 8%), combined stridor + wheeze (n = 6; 7%); cough (n = 2; 2%). Of these, over one fifth (21%) had both a symptom and sign of respiratory dysfunction with sign of stridor and EID the most common (14%) (Figure 1).

Conclusion: The prevalence of stridor and EID was 14% in recreationally active individuals completing a Parkrun event. Further work is needed to determine if this relates to objective evidence of EILO however these findings indicate a prevalence in keeping with published series.

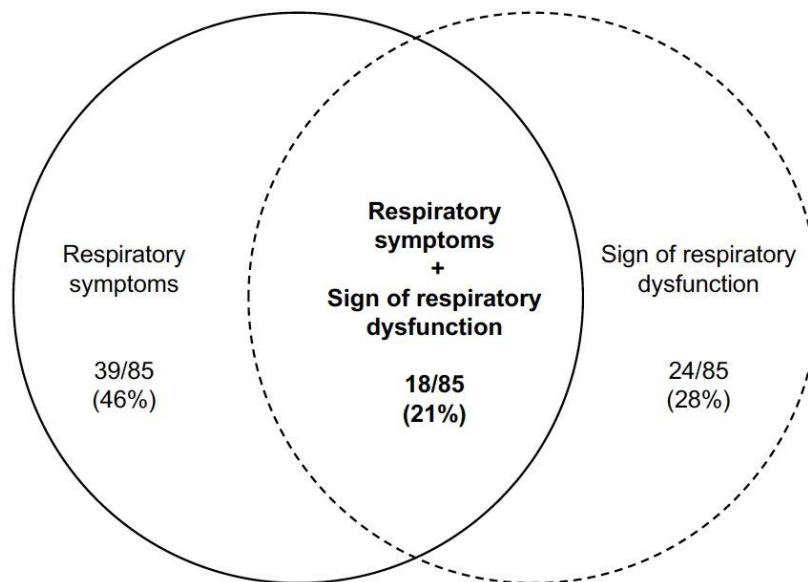


Figure 1. Prevalence of respiratory symptoms and signs of respiratory dysfunction in a Parkrun cohort.

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