

28th ECSS Anniversary Congress, Paris/France, 4-7 July 2023

Athlete heat preparation at the World Athletics Race Walking Team Championships Muscat 2022: a survey to determine elite race walkers' practice and knowledge – worth a practical application?

Galan-Lopez, N.1, Esh, C.1,2, Leal, D.3, Gandini, S.4, Lucas, R.5, Garrandes, F.6,7, Bermon, S.6,7, Adami, P.6,7, Kajeniene, A.8, Hosokawa, Y.9, Christmas, B.10, Stevens, C.11, Taylor, L.1,12

1Loughborough Uni, 2Aspetar, 3Uni of Maia, 4FIDAL, 5BodyCAP, 6World Athletics, 7Uni Côte d'Azur, 8Lithuanian Uni, 9Waseda Uni, 10Qatar Uni, 11Southern Cross Uni, 12Uni of Technology Sydney

INTRODUCTION:

Exercise in the heat can compromise athlete endurance performance and health with acclimation/acclimatisation (HA) providing the best protection against these. HA adoption remains far from universal, despite those athletes who used HA prior to the World Athletics Championships in Doha 2019 placing higher whilst showing lower medical events. Continued sport globalisation alongside global warming increase the likelihood of elite sporting events and championships in extreme heat. Therefore, surveying athlete knowledge and exercise in the heat related practice at the World Athletics Race-Walking Teams Championships Muscat 2022 (WRW) would seem prudent to provide further evidence for practice and stakeholder education. The purpose of this study was to assess elite racewalkers' heat preparation strategies and knowledge during the WRW and explore sex and athletes' climate differences.

METHODS:

Male (n = 42) and female (n = 24) elite racewalkers completed an online survey prior to WRW. Responses were descriptively analysed by sex (male vs. female) and the climate they live/train in (hot vs. temperate/cold). Relationships within sex and climate were determined with logistic regressions for categorical data. Additionally, relationships between ranking (medallist/top 10 vs. non-medallist/non-top 10) and HA preparation were also assessed.

RESULTS:

43% of athletes did not complete specific HA training. Four surveyed athletes were medallists and had all implemented HA before Muscat (3 heat acclimated only, 1 heat acclimatised only). 15 surveyed athletes ranked within the top 10, being more likely to report preparing for the heat specifically prior to the event, compared to those who did not finish within the top 10 [80% vs. 50%; P = .049, OR = 0.25, 95% CI (0.06% - 1%)]. Climate differences existed for heat acclimatization preparation only [59% hot vs. 21% temperate/cold; P = .002, OR = 8.7, 95% CI (2% - 34%)]. Males [(88%) females (38%)] were more likely to acclimatize for >10 days (P = .020, OR = 0.1, 95% CI (1% - 67%)). Females were more likely to not know expected conditions in Muscat [42% vs. 14%; P = .016, OR = 4.3, 95% CI (1% - 14%)] nor what wet bulb globe temperature is [83% vs. 55%; P = .024, OR = 4.1, 95% CI (1% - 14%)]. 83% of athletes were unaware of the World Athletics 'Beat the Heat' leaflet (a previous stakeholder education initiative).

CONCLUSION:

Overall, HA use slightly declined prior to the WRW compared to the Doha 2019 Championships. Athletes who implemented HA before the championships tended to place better than those who did not, highlighting the importance and benefit of HA prior to competition. Previous germane educational resources from World Athletics had initial good impact elsewhere but appear to have waned here. Further efforts to provide continually impactful and penetrative educational resources, to bridge the gap between research and practice, particularly in female athletes, are needed in this (and likely many other) sports.

Topic: Physiology

Presentation Poster

