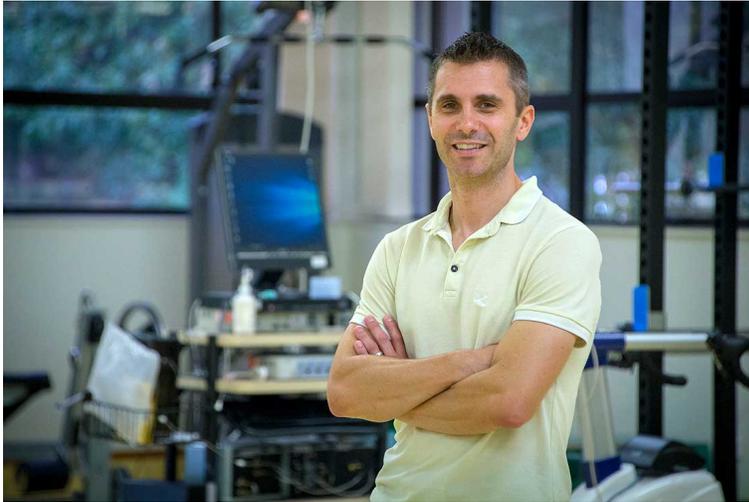


Title: Preparing for the Tokyo Summer: Focus on the Female Athlete



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Abstract. The 2020 Olympic Games are scheduled for the middle of Tokyo's summer that is marked by high ambient temperature (>30 °C) and relative humidity ($>70\%$), which are expected to affect the performance of athletes in many disciplines/events. Surprisingly, data about how athletes respond to this type of heat is lacking. Furthermore, research investigating female athletes is still at its infancy within this field despite the number of female competitors approximating their male counterparts. However, female athletes must often contend with factors that influence their ability to cope with heat stress such as changes in their reproductive hormones brought about by their menstrual cycle (i.e. follicular vs. luteal phases) and use of oral contraceptives. The focus of this presentation will be to summarize recent and current studies from our laboratory that characterize the physiological, perceptual and performance responses to the conditions likely facing athletes at Tokyo 2020. An emphasis will be placed on those that will likely be affected most, namely endurance athletes, with particular focus on the female athlete.

Toby Mündel is an Associate Professor at Massey University's School of Sport, Exercise and Nutrition in New Zealand. Prior to this, Toby earned his PhD examining the physiological and perceptual responses to exercise in the heat at The University of Birmingham (UK), with exercise thermoregulation and in particular environmental heat stress being his primary research platform since. Toby consistently publishes on this topic (70+ journal articles, h -index = 24), has trained 17 graduate researchers (8 PhD, 9 Masters), and been an invited speaker to conferences, symposia and laboratories in New Zealand, Australia, Canada, UK, Malaysia and Taiwan. He has examined 16 research theses across NZ, Australia and Canada, and regularly assesses applications for research funding from bodies in NZ, Australia, Canada, Belgium and Ireland. Toby is an associate editor for 2 journals and an editorial board member for a further 5 journals, and has organized 3 local, national and international conferences in New Zealand.