Special Issue

Second Edition of the Marathon: Environmental and Public Health Aspects

Message from the Guest Editor

This Special Issue revealed the pacing pattern of Eliud Kipchoge, who recently ran a marathon in less than 2 hours. The best marathon times are run at a pace distribution that is statistically inconstant and has negative asymmetry. Marathon performance depends on pacing oscillations between extreme values, allowing recovery and optimisation of the complementary aerobic and anaerobic metabolisms. These findings suggest new ways to approach pacing to optimise endurance performance, even in non-elite runners who must learn how to be connected with their rate of perception of exertion (RPE) to manage their pace without the necessity of running at the constant speed or heart rate. Indeed, although the marathon race has been democratised, it remains complex due to the famous "hitting the wall" phenomenon after the 25th km. To characterise this "wall" from a physiological and Rate of Perceived Exertion (RPE) perspective in recreational marathon runners, one reports the first continuous breath-by-breath gas-exchange measurements during an actual marathon race. This article showed that RPE could be a candidate for controlling marathon pace.

Guest Editor

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Addressing the environmental and public health challenges requires engagement and collaboration among clinicians and public health researchers.

Scientific discoveries and advances in this research field play a critical role in providing a rational basis for informed decision-making toward control and prevention of human diseases, especially the illnesses that are induced from environmental exposure to health hazards.

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