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Jet Lag and COVID-19: Extra Challenges for Athletes during the Tokyo 2020 Olympic Games

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Abstract

Participating in the Tokyo 2020 Olympic Games demanded great efforts and had become extremely challenging compared with previous competitions. In addition to the physical performance of each modality, athletes had to deal with the coronavirus disease 2019 (COVID-19) pandemic and jet lag. The present manuscript pointed out negative factors that encompass the COVID-19 pandemic and the features brought out by the jet lag experienced by the athletes of this last Olympics. The influences of the pandemic and the procedures adopted to reduce transmission risk of the virus may have amplified the weight of jet lag for the athletes of Tokyo 2020 Olympic Games, even more considering the occurrence of this event in the far east of the globe.

Keywords
- sleep
- jet lag
- athletes
- Olympic Games
- COVID-19

Jet lag is a relatively recent problem that has only arisen with the ability of humans to rapidly cross multiple time zones. The more time zones a person crosses in a short period of time, the more pronounced and significant are the effects of jet lag in the body, and the greater the time required to recover from it.[1] International athletes often travel across the world to participate in different competitions, exposing themselves to its potential effects. Competition between elite athletes is intense and even minor errors can result in defeat after years of training. Any ramification from jet lag, and the consequently impaired sleep quality, in the days before the games can have a significant result by affecting training and performance at a crucial moment (particularly if the athletes have not had enough time to fully recover).

The Tokyo 2020 Olympic Games, postponed for 2021 due to the coronavirus disease 2019 (COVID-19) pandemic, was held in Japan, which is located in the Far East. It resulted in some repercussions for the athletes involved in the games, who had to travel from the West, such as desynchronization of the biological clock, and impaired physiological processes, including sleep. It might have been harder for athletes who had to travel East, because advancing the body clock is known to be more challenging than delaying it. Moreover, this edition of the Olympic Games was atypical because of the unprecedented outcomes of the COVID-19 pandemic with which the athletes had to deal. These included physical confinement, fear of being contaminated and the health consequences and repercussions on training for those who were infected, among other problems. Pulmonary function deficit, tiredness, and/or psychiatric disorders expected from patients that have been infected by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), can also affect athletes. As a result of previous infection, or the many other consequences of the COVID-19 pandemic, some athletes taking part in the Olympics were probably more vulnerable to failure in their physical capacity during the competitions.

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Jet lag and COVID-19 are totally distinct conditions, as the first is more manageable, and the second is a disease that was firstly difficult to treat and contain with a number of significant health outcomes. As the pandemic was out of control in 2020, athletes were concerned about the disruption caused to their training schedules and the inability to take part in competitions. Many athletes became worried about their performance, their physical condition, the continued support of their sponsors, and hence their financial security. Some athletes contracted the disease, and although most of them recovered completely, some experienced a continuing range of conditions including respiratory symptoms, metabolic disorders, poor general wellbeing, cardiovascular conditions, gastrointestinal disorders, and increased mental health burden in the same way that some individuals in the general population did.[2] In this adverse scenario, it is worth noting that sleep problems and poor sleep quality can contribute for developing negative emotions and even more drastic thoughts, including depression or suicidal ideations. The stress generated by the pandemic and the confinement was intense. Lack of initiative for activities, anxiety, mental, and sleep disorders were among the outcomes in various populations during the pandemic, and this burden will still be felt in the years following this global health event.[3] It should be observed that the impact of this pandemic, especially in the most critical period, was marked by increasing poor sleep quality and circadian misalignment. Reduction in sleep duration, higher latency of sleep, daily sleepiness, altered immune response, and increased incidence of sleep disorders have been related with the scenario of COVID-19 in the general population;[4] consequently, it may have overcharged athletes. Higher sleep latency, later mid-sleep time, and a decrease in the frequency of training were detected in athletes during this period according to a survey-based study.[5]

In elite international competitions, such as the Olympic Games, the differences in the results between the competitors are usually slight and define the podium. Ideally, all athletes should be exposed to the same conditions to avoid external factors interfering in performance. Western countries were more affected by SARs-CoV-2 in number of registered cases than Eastern countries and this fact might be reflected in the performance of the athletes in the Tokyo Olympics.[6] In Tokyo (2020), Germany had the lower final medal results (ninth position) in an Olympic Games since 1976, which occurred in the Montreal Olympic Games when Germany was in the twelfth position in the final results. Italy also had their worst medal ranking (tenth position) since the Barcelona Olympic Games in 1992. In the opposite direction, Japan had their best final medal results (third position) ever seen in an Olympic Games. Japan's second best position being in the Tokyo Olympics in 1964, when it reached the fourth position. It is possible that the potential for jet lag to have a negative effect on their performance was increased, adding to the psychological and physical consequences of the impact of the pandemic in these European countries.

This letter congratulates all athletes and highlights the repercussions of the pandemic associated with jet lag that some athletes from the Tokyo Olympics (2020) had to deal with to achieve their best sporting performance in an Olympics.

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Conflict of Interests

The authors have no conflict of interests to declare.

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