



Advice for COVID-19 vaccination: get some sleep

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To the Editor,

The global coronavirus disease 2019 (COVID-19) epidemic is showing signs of resurgence even as the public is looking forward to receiving the promising vaccines that are becoming available. In this stressful time, scientists and public health leaders should be aware that sleep disturbances are associated with vulnerabilities to infectious diseases and may affect the efficacy of vaccines. Sleep can enhance antigen (Ag)-specific T helper (Th) cell and antibody (Ab) responses. More slow-wave sleep reportedly results in increased growth hormone and prolactin levels and decreased cortisol release, which facilitates the transfer of antigenic information from antigen-presenting cells (APCs) to Ag-specific Th cells and fosters adaptive immune responses [1]. Repeated sleep restriction leads to lower antibody responses to hepatitis B [2] and influenza vaccines [3]. Even attaining sufficient sleep after vaccination cannot reverse the weakening of vaccine immunity.

It is essential for World Health Organization guidance to highlight the importance of sleep in the ongoing large-scale COVID-19 vaccination efforts across population segments. Jobs that involve shift work (e.g., medical staff, night driver, and police) inevitably lead to acute sleep deprivation. Personnel should be advised to avoid getting vaccinated on shift days. If vaccination is planned during hospitalization, the sleep duration of inpatients should be considered because the change of environment, worries about illness, and medical care

associated activities may affect sleep amount and quality. These factors may also aggravate the symptoms of chronic insomnia. Inpatients with obvious sleep disturbances may consider rescheduling the vaccination. In people with obstructive sleep apnea, telemedicine, and non-contact sleep guidance can ensure effective treatment around the vaccination. Additionally, excessive worries about the pandemic, health conditions, and economic impact contribute to impaired sleep in the general population [4]. Active strategies such as establishing a sleep routine, ensuring a quiet and safe sleep environment, avoiding blue light exposure before bedtime, and limiting alcohol, caffeine, or large meals before bedtime can support better vaccination protection [5], thus leading to a more effective halt in the global spread of COVID-19.

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Declarations

Conflict of interest None reported.

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