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THE EFFECTS OF STRESS ON ASTRONAUTS BODY EXPERIENCED DURING SPACE MISSIONS.

Abstract

As the frequency and duration of human space exploration increases, it is essential to understand the psychological and physiological aspects of these challenges in order to ensure the well-being and optimal performance of astronauts. The stress experienced during space missions is particularly intense during EVAs, as the tasks performed in the vacuum of space are inherently demanding. Astronauts must maintain complete focus and concentration to successfully carry out their spacewalk missions. In this extreme environment, even a minor error can have life-or-death consequences. This study will primarily examine both quantitative and qualitative data on the relationship between increased periods of restful sleep and cognitive performance, as well as stress levels, while operating in a microgravity environment.As NASA begins its ambitious Artemis initiative to return humans to the moon, it becomes crucial to delve into the intricacies of sleep deprivation in high-stress environments and its impact on astronaut performance. The knowledge gained through this research will play a significant role in shaping tailor-made training programs, designing ergonomic spacesuits and equipment, and establishing mission protocols that prioritize the well-being of astronauts both mentally and physically during Extra-Vehicular Activities (EVAs). By addressing these concerns, we not only enhance the success rate of space missions but also open up possibilities for extended exploration beyond the confines of Earth's orbit in the future.