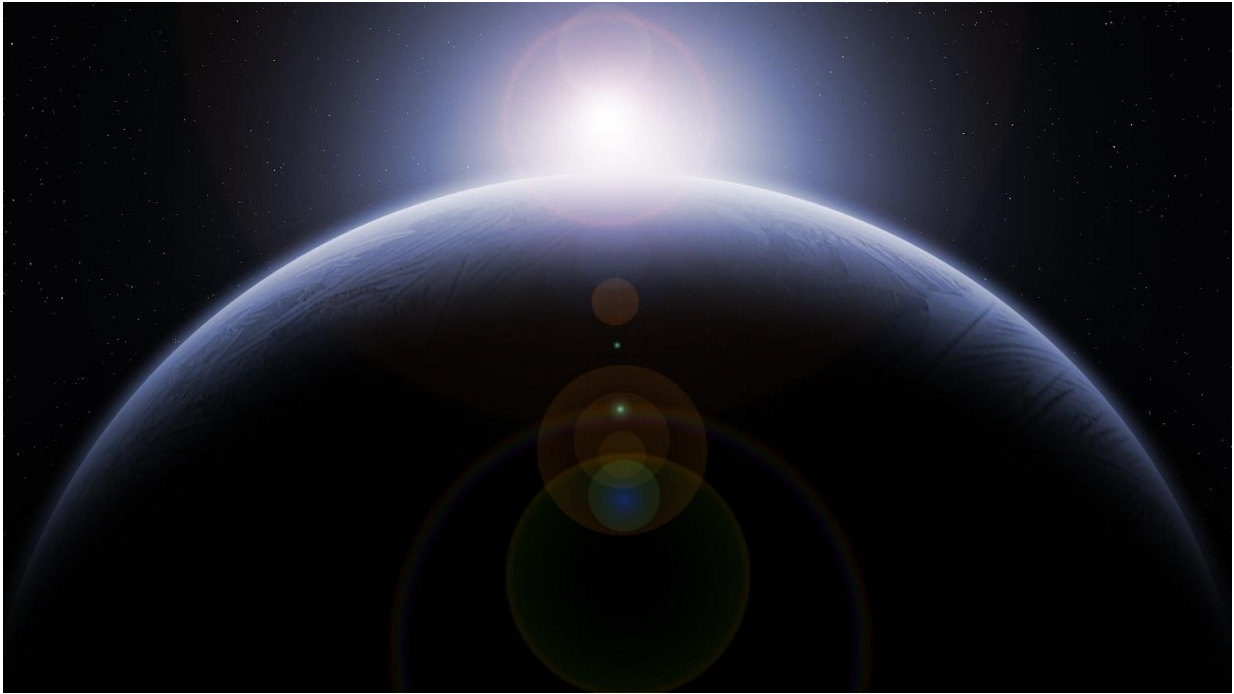


Surgery in space

June 20 2018



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With renewed public interest in manned space exploration comes the potential need to diagnose and treat medical issues encountered by future space travellers. A new *BJS (British Journal of Surgery)* review explores current understanding of human physiology, pathology, trauma and surgery in space.

Known physiological alterations during space travel include fluid

redistribution, cardiovascular changes, and bone and [muscle atrophy](#). In addition to common illnesses and conditions, space travellers may also develop novel pathologies that could arise from prolonged weightlessness, exposure to cosmic radiation, and trauma.

The authors note that the extreme environment of space produces several unique changes in [human physiology](#) that future practitioners of space-surgery must take into consideration.

"Manned space exploration has re-entered the public consciousness thanks to endeavours by SpaceX and Virgin Galactic, amongst others," said lead author Dr. Sandip Panesar, of the University of Pittsburgh. "I became interested in the practical aspects of performing surgery in [space](#). My literature search revealed that potential pathology and trauma situations would differ from those on earth due to specific physiological adaptations to the extraterrestrial environment."

More information: S. S. Panesar et al, Surgery in space, *British Journal of Surgery* (2018). [DOI: 10.1002/bjs.10908](https://doi.org/10.1002/bjs.10908)

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