

## **Spaceflight preparation; an evolving field.**

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### **Abstract:**

Traditionally preparing humans for space travel has involved the preparation of extremely healthy, fit individuals who have undertaken detailed selection and training practices to minimise potential risks to themselves or their missions. With the advent of commercial human spaceflight the nature and quantity of human health conditions and abilities presented by space travelers is increasing. The number of humans travelling into space also increases and will grow exponentially in the near future.

As a consequence, there is a pressing need to properly understand the many effects of space upon not only the physiology and performance of non-professional astronauts i.e. members of the general public, but also the impact of these effects on the myriad of health conditions that may be evident in the next generation of space travelers. Furthermore, the international human Spaceflight community and aligned sectors, will need to provide appropriate mitigations to prevent or minimise those affects which will be adverse.

To facilitate the appropriate pre-flight preparation i.e. training and familiarisation, a suitable quantity and nature of facilities will be required for this burgeoning customer base. This infrastructure will be primarily commercial, established to facilitate the growth of the sector, but equally established in a manner able to ensure that the necessary standards and regulations are adhered to, to optimise Spaceflight preparation of everyone – government, professional-commercial, or lay space travelers.

This talk will address the above, highlighting initiatives and new Space Flight preparation concepts that are under development to address the issues mentioned.