

SPACE LIFE SCIENCES SYMPOSIUM (A1)  
Multidisciplinary Space Life Sciences Research (8)

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MEDICAL, LEGAL AND ETHICAL CONSIDERATIONS FOR COMMERCIAL HUMAN  
SPACEFLIGHT**Abstract**

The onset of commercial spaceflight implicates numerous medical, legal and ethical considerations with regard to the health and safety of spaceflight participants. Nascent and emerging space companies are proposing a diverse range of commercial orbital, suborbital, and point-to-point transportation services. Each activity in turn triggers additional health concerns based on environmental factors, flight profiles and flight duration. Current U.S. regulations stipulate medical certification requirements for commercial pilots and crew, but not spaceflight participants. At the present time, decision-making on fitness to fly remains in the hands of the licensed commercial launch operator.

The current level of knowledge pertaining to adequate fitness levels for general public participation in spaceflight activities is limited secondary to: 1) novelty and diversity of launch activities and their associated risk profiles; 2) lack of knowledge related to the effects of spaceflight on different medical conditions; 3) new ethical considerations; 4) the content of informed consent and full disclosures; 5) flexible adaptation of laws to address these issues.

The goal of this paper is to review the current state of law and practice in order to inform the medical community and potential spaceflight participants on considerations for commercial human spaceflight. As the New Space industry goes forward, continued collaboration and transparency efforts between government, industry and the public are essential. Furthermore, research related to the effects of spaceflight and the space environment on a diverse range of medical conditions will be required.