

# Space Medicine

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## Aerospace Medicine

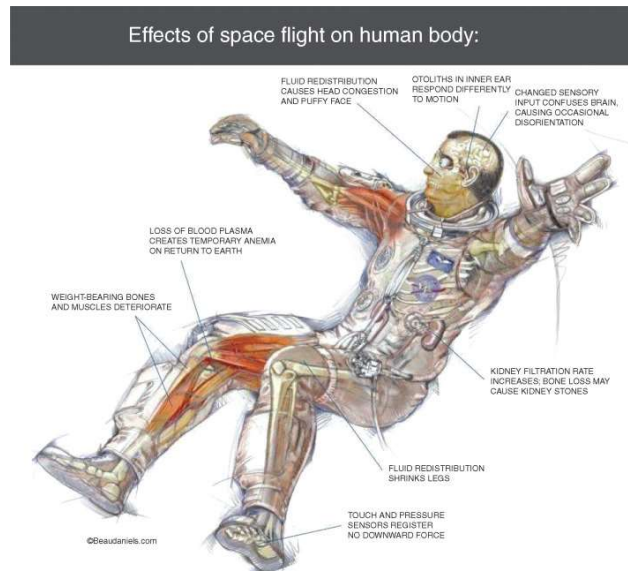
The study of space medicine is at the intersection of exploration, technology and medicine. The discipline of aerospace medicine supports survival, function and performance during aircraft and spacecraft operations. Dr. Cuttino is an Emergency Physician, who worked in aerospace medicine for almost 30 years, from launch and landing operations of the Space Shuttle at Kennedy Space Center to research on suborbital spacecraft, to parabolic flight operations. Dr. Cuttino is a Senior Aviation Medical Examiner for the FAA. This lecture will discuss the key aspects of space medicine and the potential impact of flight operations on human physiology. Highlights from space medicine research will be discussed.

## Physiological and medical effects of spaceflight

The human body undergoes profound changes in response to microgravity. Some are beneficial, and aid adaptation to the space environment but some are maladaptive. The effects of microgravity on the body will be discussed, with particular emphasis on parabolic and suborbital flight regimes. Additional discussion of longer duration spaceflight issues will be presented.

## Parabolic and Suborbital Medicine

In parabolic and suborbital spaceflight the majority of medical effects are the result of acceleration, and dynamic motion changes in the environment. The effects of motion sickness, barometric changes and vibration will be covered.



**Figure Insert:** Effects of spaceflight on the human body. Copyright Daniels and Daniels.