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Medical Care for Humans in Space (3)

Author: Dr. Rawan Alshammari
Kuwait, rawanashammari@gmail.com

Mr. Mohammed Thuwaini
Kuwait, Mohammed.t@atc.com.kw

COLONIZING MARS: PHYSIOLOGICAL AND SURGICAL CHALLENGES.

Abstract

There has been renewed public interest in manned space exploration missions to Mars. With increased duration of missions, medical and surgical events will become inevitable. Ground-based medical support will no longer be adequate when return to Earth is not an option. Space medicine is currently entering an evolutionary phase of incorporating the understanding of the physiological changes associated with human space flight into the prevention, diagnosis and therapy of illness and injury in space. The goals of this paper are three-fold: 1) to review the current physiological issues during spaceflight. 2) to compare minimally invasive procedures (Robotic Surgery) and open surgical procedures in a near-weightless environment. 3) to provide ways in maintaining the stability of patients, surgeons, and equipment and to control fluids in space.