Effects of Microgravity on Teeth and Periodontium: Aeronautic Dentistry

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Abstract

The microgravity experienced in space missions has serious effects on human physiology including teeth and periodontium. According to Wolffe's law the demineralization of bone should occur in the face of the unloading associated with weightless is predictable. The rate and extent of this process is considerable, with losses of 1-2% of bone mass per month in flight$_1$. The osteoporosis associated with space flight has been reported$_2$. The demineralization of alveolar bone of maxillary, mandibular and teeth occur in microgravity it mean prevalence of periodontitis caries risk, fracture of teeth and jaw bones occurs. If unabated over the duration of a mission to mars, occurrence of bone demineralization with its resultant hypercalcaemia and hypercalcuria, would pose increased risk of pathological fractures in astronauts. Hence to avoids and explore changes in oral cavity during mission should be prevented team of Mar society should have a dentist and lab physician to study these changes in oral cavity.

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References

1. Vico L, Collet P, Guignandon A, Lafage - Proust MH, Thomas T, Rehaillia M. Effects of long term microgravity exposure on cancellous and cortical weight bearing bones of cosmonauts. Lancet 2000; 355 : 1607-11.
2. Turner RT. What do we know about the effects of space flight on bone? J appl physiol 2000; 89: 870-7.

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