

# PHYSICS DEPARTMENT COLLOQUIUM

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## Abstract

Bone loss and muscle atrophy are well-established problems associated with musculoskeletal unloading on Earth or during long duration space missions. Conversely, extended physical activities in 1g are typically associated with high bone mineral density and muscle hypertrophy. These associations suggest that there may be a connection between muscle and bone physiology or, more likely, that muscle-induced mechanical forces may result in osteogenic stimuli. This presentation will focus on the physics of bone health in normal and pathological situations, with particular emphasis on mechanical deformations and fluid-solid interactions in the human calcaneus.

**Thursday October 19, 2006**

**12:00pm, SI-147, Physics Seminar Room**

Coffee and snacks served before the Colloquium