

**2.785J/3.97J/BEH.411/HST523J
Spring 2004**

CELL-MATRIX MECHANICS

Homework #3

Effects of mechanical forces on bone *in vivo*.

The figure below shows the stress-strain behavior of bone and the range of maximum stresses applied during the activities of daily living (ADL). How would the stress-strain behavior change in an astronaut who has been in space for a prolonged time? Draw the new curve on the graph. Explain why this change in mechanical properties of the bone has taken place.

