Questions to Ask
What is your exercise plan for yourself? Are you following it?

If you have a pet, what is your exercise program for the pet? Are you helping the pet to follow it?

Space Flight Effect on Bones
In space, astronauts do not experience the effects of gravity like we do here on earth. They float, so there is no weight bearing on their bodies. While in space an astronaut is at very high risk for losing substantial bone mass.

The Veterinary Black Bag Program
Project Goals:
• Develop Veterinarian’s Black Bags (VBBs) of instructional items and pamphlets for middle school teachers to support classroom visits by local veterinarians.
• Provide professional development for veterinarians and teachers on how to use items in the VBBs.
• Promote inquiry-based thinking about health-related subjects while emphasizing the value of biomedical research and promoting careers in science.

PEER
Partnership for environmental Education and Rural Health

Dr. Larry Johnson
Principal Investigator, PEER
979-845-9279
ljohnson@cvm.tamu.edu

Dr. William Klemm
Director, Peer
979-845-4201
wklemm@cvm.tamu.edu

Department of Veterinary Integrative Biosciences
College of Veterinary Medicine & Biomedical Sciences
Texas A&M University, College Station, Tx 77843
MS#4458

http://peer.tamu.edu/VBB/Summary.asp

The instruction in this module includes:
Presentation on Orthopedics
Follow-up lessons on:
Nutrition and Bone
Exercise and Bone
Bone Experiment Design
The lesson begins with a presentation of Wolf’s Law and a description of how bone remodels in response to physical stressors. Bone densities of the following are compared: athletes, the elderly, and astronauts who have been in low-gravity environments for long times.

The lesson also includes exercise recommendations and a video of a dog exercising in a water tank.

This lesson explains how and why bones are dynamic structures, responding to diet, age, and mechanical forces. Special implications are presented for children, athletes, astronauts, and the elderly.