

Make  
**Calcium  
Count**  
For You

## Rubber Bones Experiment

### Objective:

The experiment will illustrate calcium's role in bone strength.

### Materials Needed:

- Two small jars, one with a lid
- White vinegar
- Paper towels
- 2 small clean chicken bones



**What to Do:** Let each student handle a chicken bone and have them describe how it feels. Put one bone in a jar of vinegar and place the lid on the jar. Place the other bone in a clean empty jar. Do not put a lid on the top. After one week, remove the bone from the vinegar. Ask the students to describe the changes they observe. Compare the air-dried bone to the bone soaked in vinegar.

**Discuss:** When your diet does not provide enough calcium for everyday life functions (such as blood-clotting and regulating your heartbeat), your body takes what it needs from your bones. Over time, this can weaken bones to the point where they break easily. Calcium, vitamin D, and other important nutrients provide the raw materials the body needs to make strong bones. Fragile bones have less calcium, which weakens their structure.

Vinegar is an acid. In this demonstration, the acid leached calcium out of the chicken bone, making it soft and rubbery. Calcium is the building material bones need to help them stay strong and hard. What would it be like to live with soft and rubbery bones in your body? Along with physical activity and overall good nutrition, eating calcium-rich foods can help keep your bones strong.

Reference: Western Dairy Association, 12000 North Washington Street, Suite 200, Thornton, CO 80241; 800.274.6455, [www.wdairycouncil.com](http://www.wdairycouncil.com) ~ May be duplicated for educational purposes. 2000.

Developed by: Denise Zimmer, RD, *Eat Smart Be Smart Guide: Lesson 4th—Make Calcium Count for You.*

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