University of Idaho Extension
Gooding County

Health Science Experiment

Topic Title: Bone up on Calcium   Length of project: 1 hour, results done in 3 or 7 days

Research. What does society know. Look it up!

Calcium is a mineral that is needed for good body health. Calcium is important to keep your bones strong.

Words to search: calcium in bones, human calcium requirements edu

Situation. Try something different or document a problem that has now arrived.

Older people who do not have enough calcium in the foods they eat develop weak bones that break easily. Knowing what calcium does for our bones is important, so we eat right.

Hypotheses. Guess what may happen.

Calcium is needed in bone.

1. Water will cause bone calcium to _____ and cause the bone to _____
2. Vinegar will cause bone calcium to _____ and cause the bone to   _____
3. Other?

Equipment. What you need.

Gather the following:

- 2 or more 2-quart jars with lids
- 2 cups water
- 2 cups vinegar
- Measuring cup
- 2 or more chicken leg bones

Methods. Set up a procedure/protocol to test your hypothesis.

- Place a clean chicken leg bone in each jar
- Add two cups of water (this is the control) to one jar
- Add two cups of vinegar (variable) to another jar
- Put the lid on each jar and leave it for at least three days
- Remove the bones and rinse them with water

Experiment. Conduct the experiment.

Conduct the experiment to test how different liquids change calcium in bones. This shows you how important calcium is in bones.

Change one factor and re-do the experiment

    Option 1: Select another liquid found at home such as a soda pop

    Option 2: Leave the bones in your liquids for 7 days, to see more dramatic results.

    Redo or continue the experiment.

Results/Observations. What happened?

Record what happened to bones in water, vinegar or other liquids used.

Record what happened to each of the bones after day 3 and/or day 7

Try to bend each bone. Compare how flexible the bones are.

Conclusion. Apply what you found out.

What did you find out? Is calcium important? Where else is calcium important? How could you use this knowledge?