

Bendy Bones The Calcium Connection

Imagine your body without a skeleton! Without hard bones in your arms, legs, back, and other parts of your body, you would be a shapeless blob—like a jellyfish! Bones are hard because they contain an important mineral called calcium. What would bones be like without calcium? Try this experiment to find out!

You Will Need

- Chicken bone (meat removed)
- Jar with lid
- Vinegar



Directions

1. Have a chicken dinner and save one of the bones. Rinse the bone and let it dry.
2. Notice what the bone feels like. Is it hard? Can you twist or bend it?
Like your bones, chicken bones contain a mineral in them called **calcium**, which makes them hard.
3. Put the bone in the jar and cover it completely with vinegar. Put the lid back on the jar.
4. Place the jar in a place where it will not be disturbed for 3 days.
5. After 3 days, take the bone from the jar and rinse it off with water. Feel the bone. Test it for flexibility. Can you bend the bone?



What's Going On?

You probably discovered that after soaking in vinegar the bone has become soft and flexible. Vinegar is a mild acid, but it is strong enough to dissolve away the calcium in bone. With no calcium, there is nothing in the bone to make it hard--all that is left is soft bone tissue. Now you know why your parents are always bugging you to drink your milk and eat your vegetables. These foods are rich in calcium, a key building block for strong, healthy bones.

Of course, milk and other dairy products are good sources of calcium. But don't overlook these other excellent non-dairy sources of calcium:

- calcium-fortified orange juice (8 ounces; 300 mg calcium)
- tofu fortified with calcium (4 ounces; 260 mg calcium)
- collard greens (½ cup; 178 mg calcium)
- almonds (1 ounce; 80 mg calcium)
- bok choy (½ cup; 80 mg calcium)
- rhubarb, cooked (½ cup; 75 mg calcium)
- broccoli, cooked (½ cup; 35 mg calcium)
- red beans (½ cup; 40 mg calcium)

