Question

I've heard that carbonated soft drinks can keep your body from absorbing the calcium it needs for healthy bones, causing osteoporosis and weak bones. Does drinking carbonated soft drinks hurt your bones?

Answer

No. Drinking carbonated soft drinks does not weaken your bones or cause osteoporosis. The main causes of poor bone health are not taking in enough calcium in your diet, (especially when you're young), changes in female hormones and a lack of weight-bearing physical activity.

Some people claim weak bones occur because too much phosphorus (from phosphoric acid in cola drinks) or too much caffeine in your system keeps your body from absorbing calcium. However, experts have reviewed these claims many times, and have concluded that they are not true.

- In 1994, the U.S. National Institutes of Health (NIH) assembled experts from osteoporosis and bone health at a conference on Optimal Calcium Intake. The experts' independent report stated "phosphate has not been found to affect calcium absorption or excretion significantly." The American Medical Association reviewed the NIH experts' statement and concluded that the effect of phosphate on calcium absorption was "physiologically trivial."
- In 1997, The National Academy of Sciences' Institute of Medicine reviewed the scientific data about phosphorus and found it does not appear to negatively affect calcium absorption, concluding that for most age groups there is no rational basis for relating the amounts of calcium and phosphorus consumed to each other.
- In 2000, the NIH Consensus Development Conference on osteoporosis reaffirmed that dietary phosphorus/caffeine is not an important factor in osteoporosis for individuals consuming a balanced diet.
- In 2004, the U.S. Surgeon General's Report on Bone Health and Osteoporosis reviewed the scientific data, acknowledging the concerns raised about calcium and phosphorus, but also finding that any impact is unimportant in people with adequate calcium intakes.

In fact, soft drinks add only very small amounts of phosphorus to your diet through phosphoric acid, an ingredient that helps give cola drinks their tangy taste. The average daily recommended intake of phosphorus established by the Food and Nutrition Board of the National Academy of Sciences' Institute of Medicine is 1,000 mg; eight ounces (240 milliliters) of Coca-Cola provides 41 mg while eight ounces (240 milliliters) of orange juice provides 27 mg.

Phosphorus is a mineral found widely in nature and is an essential nutrient in the diet for all living things. It plays an important role in energy metabolism in the body and is a major component of bones and teeth. Compared to other dietary sources of phosphorus, soft drinks contribute about 2 percent of the total dietary phosphorus in the U.S. diet. High-protein foods like meats, cheeses, nuts and grains supply about 98 percent of dietary phosphorus.

Sources

- U.S. Surgeon General. Bone Health and Osteoporosis: A Report of the Surgeon General. 2004. http://www.surgeongeneral.gov/library/bonehealth/content.html
- Institute of Medicine, National Academy of Sciences. Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride. http://www.nap.edu/catalog/5776.html
- Office of Dietary Supplements, National Institutes of Health. Dietary Supplement Fact Sheet: Calcium. http://ods.od.nih.gov/factsheets/calcium.asp
- CSDs and Bone Health, Coca-Cola Beverage Institute for Health and Wellness. http://www.beverageinstitute.org/beverages_and_your_health/beverages_and_your_bones.shtml