



Nearly 70,000 infants evaluated REST: The Rotavirus Efficacy and Safety Trial

[Learn more >>](#)

Advertisement

AAP News

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™



[HOME](#)

[SEARCH](#)

[BACK ISSUES](#)

[HELP](#)

[CONTACT US](#)

[◀ Previous Article](#) | [Next Article ▶](#)

AAP News Vol. 27 No. 2 February 2006, p. 20
© 2006 [American Academy of Pediatrics](#)

NEWS AND FEATURES

No bones about it: AAP report says calcium a vital part of children's diets

Erin Verkler
Correspondent

While osteoporosis may seem like a concern reserved for geriatricians, the major preventable risk factor, bone mineralization, must be addressed during childhood.



Dr. Krebs

"It's well-established that a large percentage—some 40% to 50%—of your total bone density is laid down during adolescence," said Nancy F. Krebs, M.D., FAAP, immediate-past chair of the AAP Committee on Nutrition (CON) and co-author of the revised clinical report *Optimizing Bone Health and Calcium Intakes of Infants, Children and Adolescents* (*Pediatrics*.2006 ;117:578 -585 [[Abstract/Free Full Text](#)]). "If you miss that window, it's very difficult to totally compensate for later."

Calcium is essential during bone mineralization, but studies show that calcium intake drops off significantly as children approach adolescence. According to the revised report, only about 30% of boys and 10% of girls between the ages of 12 and 19 meet their daily calcium requirement.

This Article

- ▶ [Alert me when this article is cited](#)
- ▶ [Alert me if a correction is posted](#)

Services

- ▶ [E-mail this article to a friend](#)
- ▶ [Similar articles in this journal](#)
- ▶ [Alert me to new issues of the journal](#)
- ▶ [Add to My File Cabinet](#)
- ▶ [Download to citation manager](#)

Google Scholar

- ▶ [Articles by Verkler, E.](#)
- ▶ [Articles citing this Article](#)
- ▶ [Search for Related Content](#)

Frank R. Greer, M.D., FAAP, CON chair, who also co-authored the report, said the drop in calcium intake is related to the decline in milk consumption over the past few decades.

Americans drank four times more milk than soft drinks in 1945, but drank nearly 2.5 times more soft drinks than milk by 1997, according to a position paper on dietary guidance for children by the American Dietetic Association (ADA).

Soft drinks, however, are not the sole cause, according to Rebecca Reeves, Dr.P.H., R.D., president of the American Dietetic Association.

"A lot of [children] are skipping breakfast and not eating meals at home at night," she said. "These would be opportunities for kids to drink milk."



Dr. Greer

Other sources

Aside from milk and other dairy products, alternative sources of calcium exist. Certain vegetables contain the nutrient, but it is not necessarily bioavailable, as with spinach. Other times calcium is present only in trace amounts.



In contrast, the calcium in calcium-fortified products such as orange juice are bioavailable, but these foods and drinks often come with added sugar and calories.

"[Calcium-fortified foods] provide a different set of nutrients compared to milk," said Dr. Krebs. "Milk has high-quality protein and some other vitamins that you simply won't get from orange juice."

Calcium supplements also can provide adequate amounts of the nutrient, specifically for children who are severely lactose intolerant or vegan, but the supplement has limitations as well.

"When you get [calcium] with a dairy product, it comes bound with the protein and your body absorbs the protein," Dr. Greer said. With a dairy product, once the body absorbs the protein, then it extracts the calcium, according to Dr. Greer. With a calcium tablet alone, one absorbs only about 80% of the available calcium.

Bone health

Drs. Greer and Krebs said they revised the old calcium policy to focus less on the specific nutrient and more on the overall issue of bone health.

"It's not just a matter of maximizing your calcium intake, but rather how do you maximize your bone health," Dr. Greer said.

Calcium, genetics and physical activity all determine bone health, he said, adding that because current research does not fully understand the interaction of all three, pediatricians need to focus on each one. The first step is taking a family history, including incidence of osteoporosis, to determine the genetic piece of the puzzle.

"If there's a strong family history of osteoporosis, then those kids need to have special attention," Dr. Greer said. For them, physical activity and adequate amounts of calcium are even more important.

Encouraging calcium intake

Along with asking about family history, pediatricians need to question parents about a child's diet because there are no physical red flags to signal low calcium intake. The revised report includes a questionnaire for pediatricians to give parents during key developmental periods when calcium intake typically drops—when the child is weaned from formula and during preadolescence and adolescence.

According to the new report, children ages 1 to 3 should consume 500 milligrams of calcium per day, 800 mg for children between 4 and 8, and 1,300 mg for those between 9 and 18. Because the easiest way to get calcium is through dairy products, the Academy says children should consume three servings of dairy products per day, while teens should have four servings.

"The best and easiest way is to promote the consumption of low-fat dairy—that's the most bang for your buck," Dr. Greer said.

To help promote dairy consumption nationally, the Academy supports the 3-A-Day Campaign, which is a nutrition-based marketing and education campaign funded by the National Dairy Council.

"The average American consumes less than one serving of dairy a day," said Anne Marie Krautheim, R.D., vice president of nutrition and health promotion for the National Dairy Council. "We wanted to launch an initiative that would raise awareness of the need and then provide tools and tips for people to help increase their consumption."

On its Web sites www.3aday.org and www.nationaldairycouncil.org, the campaign provides a tool kit for pediatricians to use to educate themselves and their patients on calcium intake and dairy consumption.

Jatinder Bhatia, M.D., FAAP, AAP liaison to the 3-A-Day campaign, said these handouts should not stand alone in a pediatrician's office, but should be used as a follow-up to a discussion between the doctor and parent.

"Often, nutrition takes a back seat," Dr. Bhatia said. "We just hand out a bunch of fliers. We don't really take the time to say: `This is what's going to happen this



year and these are the foods I need to encourage your [child] to eat."

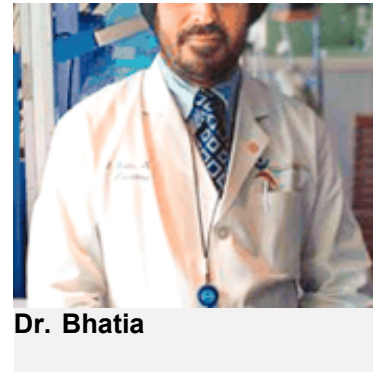
Dr. Reeves of the ADA advised that pediatricians ask their patients what they drink with their meals, after school and when they get thirsty.

"If they're constantly saying no milk, then I think it's a wonderful teaching opportunity," she said.

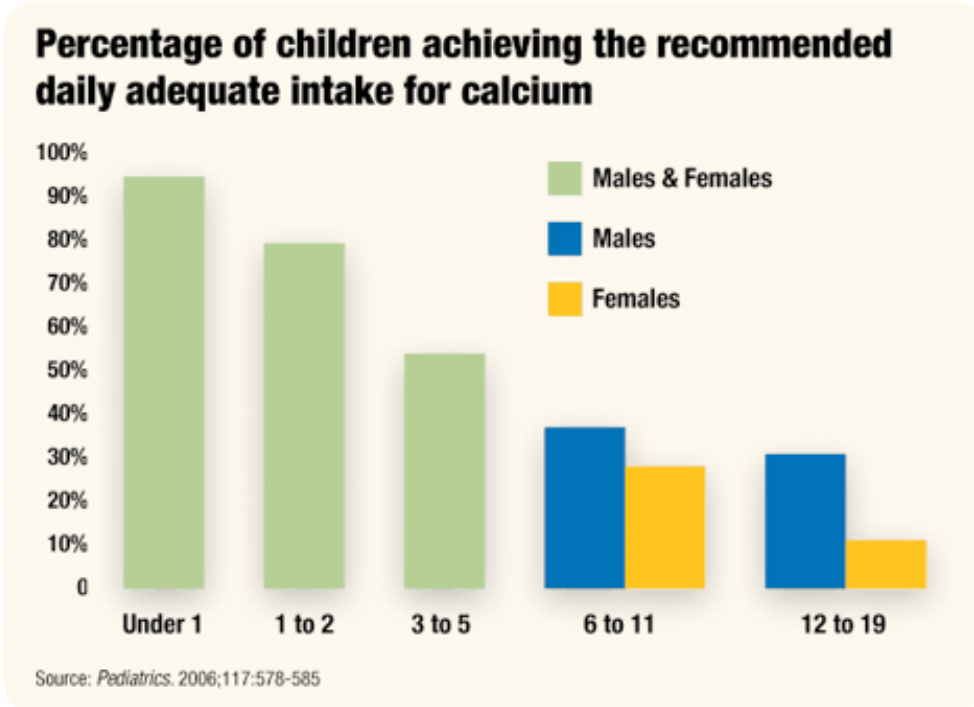
For kids with extremely poor eating habits, allergies or any other condition that limits food choices, Dr. Reeves suggested that pediatricians refer patients to registered dietitians who can help devise a meal plan that works with the child's needs, limitations and preferences.

Lastly, pediatricians can advocate and lobby for low-fat dairy products in school vending machines and lunch lines. Although low-fat flavored milk is criticized for its sugar content, it is a tasty, calcium-filled alternative to soft drinks.

"Since kids spend so much time in schools, make sure these vending machines offer options, whether it's yogurt or cheese sticks or flavored or white milk in attractive containers," Dr. Reeves said. "It's [a matter of] understanding where the kids are and promoting dairy products that they would like."



Dr. Bhatia



This Article

- ▶ [Alert me when this article is cited](#)
- ▶ [Alert me if a correction is posted](#)

Services

- ▶ [E-mail this article to a friend](#)
- ▶ [Similar articles in this journal](#)
- ▶ [Alert me to new issues of the journal](#)
- ▶ [Add to My File Cabinet](#)
- ▶ [Download to citation manager](#)

Google Scholar

- ▶ [Articles by Verkler, E.](#)
- ▶ [Articles citing this Article](#)
- ▶ [Search for Related Content](#)

[HOME](#)

[SEARCH](#)

[BACK ISSUES](#)

[HELP](#)

[CONTACT US](#)