

Calcium for Your Bones

Did you know that the pre-teen and teenage years are critical years for bone development? Building strong bones before the age of 30 can be the best defense against developing osteoporosis, a disease which causes bones to become weak and break easily. Help your children build the strongest, densest bones possible by providing lots of calcium-rich, bone building foods and encouraging plenty of bone building exercise. Calcium plays an important role in maintaining bone mass by adding strength and stiffness to bones. Weight-bearing exercises such as walking, dancing, racquet sports and hiking help to build stronger, denser bones.

Calcium is a mineral found in many foods. An adequate calcium intake is important because the human body cannot produce calcium. The body continuously loses calcium through processes such as hair and nail loss, elimination, and sweating. Thus, it is important for children and teens to maintain an adequate calcium intake during their growing years to achieve peak bone mass. Depending on the child's age, appropriate calcium intake falls between 1000 and 1300 mg of calcium per day. The recommended calcium intake by age is listed in Table I.

The major source of calcium for children and adults is dietary. Calcium rich foods such as milk and dairy products and foods fortified with calcium are readily available and affordable. Table II is a list of foods high in calcium that are appealing to most children.

Food is the best source of calcium, but for children and teens who do not get enough calcium in their diet or are unable to tolerate milk and dairy products, a calcium supplement may be recommended. The amount of supplement needed is based on daily calcium requirements by age and is calculated using the amount of calcium in the supplement which is referred to as *elemental calcium*. The "best" supplement for your child is one that meets an individual's needs based on tolerance, taste, convenience, and cost.

Encourage your child to establish a good calcium intake from an early age by offering choices of several calcium rich foods at each meal and providing snacks that are calcium fortified. Here is a list of a few ways to get more calcium in your diet.

- Choose milk or smoothies instead of soda at restaurants or school cafeterias.
- Boost the calcium in salads with beans (such as garbanzo or kidney), cheese, broccoli, almonds, or tofu.
- Choose yogurt as a light meal or snack.
- Create special drinks with milk. Add flavorings. Make shakes or smoothies.
- Use low-fat yogurt on its own or with fresh fruit. Add it to pancakes or waffles, shakes, salad dressings, dips, and sauces.
- Try calcium-fortified juice and calcium-fortified waffles or cereal for breakfast.

Use calcium supplements for children or teens who dislike calcium rich foods or have milk intolerance. It is important to note that our bodies tend to absorb calcium supplements better when taken with meals and divided into 2-3 doses throughout the day. Table III lists supplements that are preferred by children and teens. If you give your child a supplement it should not exceed the recommended daily calcium intake as stated in Table I, and if your child is between the ages of 9 and 18 years, the dosage should not exceed 1000 mg a day. Remember a healthy lifestyle with plenty of calcium intake and weight-bearing exercise is the best way to build strong, dense bones!

Table I: Recommended Calcium Intakes*

Ages	Amount mg/day
1 – 3	500
4 – 8	800
9 – 18	1300
19 – 30	1000

- Source: National Academy of Sciences (NAS)

Table II: Calcium Rich Foods

Food Source	Serving Size	Calcium (mg)
Milk (skim, 2%, whole)	1 cup (8 oz.)	300 mg
Yogurt	1 cup (8oz.)	300 mg
Cheese (cheddar)	1.5 oz.	300 mg
Calcium-fortified orange juice	1 cup (8oz.)	300 mg
Pudding or custard	½ cup (4 oz.)	150 mg
Ice Cream/Frozen Yogurt	½ cup (4 oz.)	100 mg
Cottage Cheese	½ cup (4 oz.)	60 mg
Pizza	¼ of 12" pizza	250 mg
Broccoli	½ cup	35 mg
Spinach	½ cup	120 mg
Calcium-fortified tofu	3 oz.	600 mg
Almonds	¼ cup	100 mg
Sweet Potatoes	½ cup	44 mg
Corn Tortillas	3 tortillas	100 mg
Instant Oatmeal	½ cup	65 mg
Breakfast Cereal	¾ - 1 cup	100 mg

Table III: Calcium Supplements (Non-prescription)

Calcium Supplement	Serving Size	Elemental Calcium*	Flavor
Tums EX	2 tablets	600 mg.	Assorted Fruit
Tums Ultra	2 tablets	800 mg	Mint
Viactiv Soft Chews	1 soft chew	500 mg	Chocolate/Caramel
Os-Cal Chew Tabs	1 tablet	600 mg	Fruit
Caltrate 600 Plus Chew Tab	1 tablet	600 mg	Mint/Assorted Fruit
One-A-Day Calcium Plus	1 tablet	500 mg	Fruit

*refer to recommended daily calcium intake per age to determine amount and frequency of dose.

For more information, check out these Internet sites:

Dairy Council of California

<http://www.dairycouncilofcalifornia.org/>

National Osteoporosis Foundation

<http://www.nof.org/>

American Academy of Pediatrics

<http://www.aap.org/policy/re9904.html>

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