by Mary Sowa, MS, RD

here are 206 bones in the human body. They help you balance, swing, jump, twist and flip. Building strong bones during the teen years is extremely important. You deposit bone mineral mass into your "bone bank" until the age of 30. Most of the deposits occur by the age of 20. The next ten years are spent topping off your stores.

Optimizing bone density can help prevent osteoporosis. This is a bone thinning disease that predominately effects elderly women. You can decrease your chances for developing osteoporosis by optimizing your bone bank in your teenage years. Sixty to eighty percent of bone mass development is determined by your genetics. The other 20-40% is influenced by nutrition, exercise and other lifestyle habits.

Weight bearing exercise, like gymnastics, helps stimulate bone formation. Tumbling, vaulting and sticking landings all provide the necessary forces to increase bone mass. There have been a number of studies where researchers have compared bone density in gymnasts to other types of athletes (swimmers) or non-athletes. These studies demonstrate that gymnasts have higher bone density than the other participants.

Optimal nutrition is another factor that can help optimize bone mass. Calcium, phosphorus and vitamin D are a few of the nutrients important for bone health. Nutritionists are particularly concerned about teenagers' calcium intake. As children grow older, they often shy away from some of the best calcium sources (milk) and replace them with less nutritious choices (soda). As you get older, your need for calcium increases. You are growing more rapidly and your bone mass is accumulating at a very high rate. This is an important time to ensure that your calcium intake is adequate.

How much calcium do you need each day?
The new Dietary Reference Intakes (DRIs) are:
4-8 years old-800 mg/day
9-13 years old-1300 mg/day
14-18 years old 1300 mg/day
19-30 years old-1000 mg/day

How do you know if you are getting enough?
Take a minute to write down what you ate for breakfast, lunch, dinner and snacks yesterday. Add up the amount of calcium you consumed.

CALCIUM CONTENT IN SOME FOODS:
High Calcium Foods-300 mg/serving
1 cup milk
1 cup yogurt
1 cup reduced lactose milk
1 cup pudding
Medium Calcium Foods-200 mg/serving
1 cup lactose free drink (Soy milk)
1 cup calcium fortified Orange juice
2 slices American cheese
1 cup cottage cheese
1 cup ice cream
4 oz. salmon (canned with bones)
Other calcium sources-50-100 mg
1/2 cup kidney beans
1/2 cup tofu with calcium
1 cup broccoli
1/2 cup spinach
1/4 cup almonds

Are you reaching your target?
If you do not reach the recommended DRIs for your age on a consistent basis, talk to your doctor or registered dietitian to see if a calcium supplement is right for you. The amount of calcium varies in each supplement, so check the labels carefully. Calcium citrate is a fairly common form of calcium and is likely better absorbed than calcium carbonate supplements.

What if you don't like milk or are allergic to milk products?
As you can see from the list above there are a number of non-dairy calcium containing foods. These sources include vegetables, beans, and salmon, and fortified foods like breads, cereals and juices. If you avoid dairy in your diet, you can meet your calcium needs; you just may have to work a little harder at it. Calcium is better absorbed when eaten with vitamin C, which is found in citrus fruits (ex. oranges, grapefruits, strawberries, lemons and tomatoes).

Try this high calcium smoothie!
1 cup Soy milk
2 Tbsp. of OJ concentrate with calcium
1 cup of water
1/2 cup of strawberries
Ice
Blend and enjoy!!