

NEW WAYS TO MAINTAIN HEALTHY BONES

By Larry Trivieri, Jr.



iTHRIVE

Bone loss (thinning bones, or osteoporosis) and loss of bone strength are both problems for an increasing number of Americans who are middle-aged or older. As a result, many men and women in this age group now take prescription drugs to prevent further bone loss and reduce the risk of health problems such as fractures that are associated with osteoporosis. Such drugs, known as bisphosphonates, are only capable of limiting further bone loss, however, rather than restoring healthy bone density.





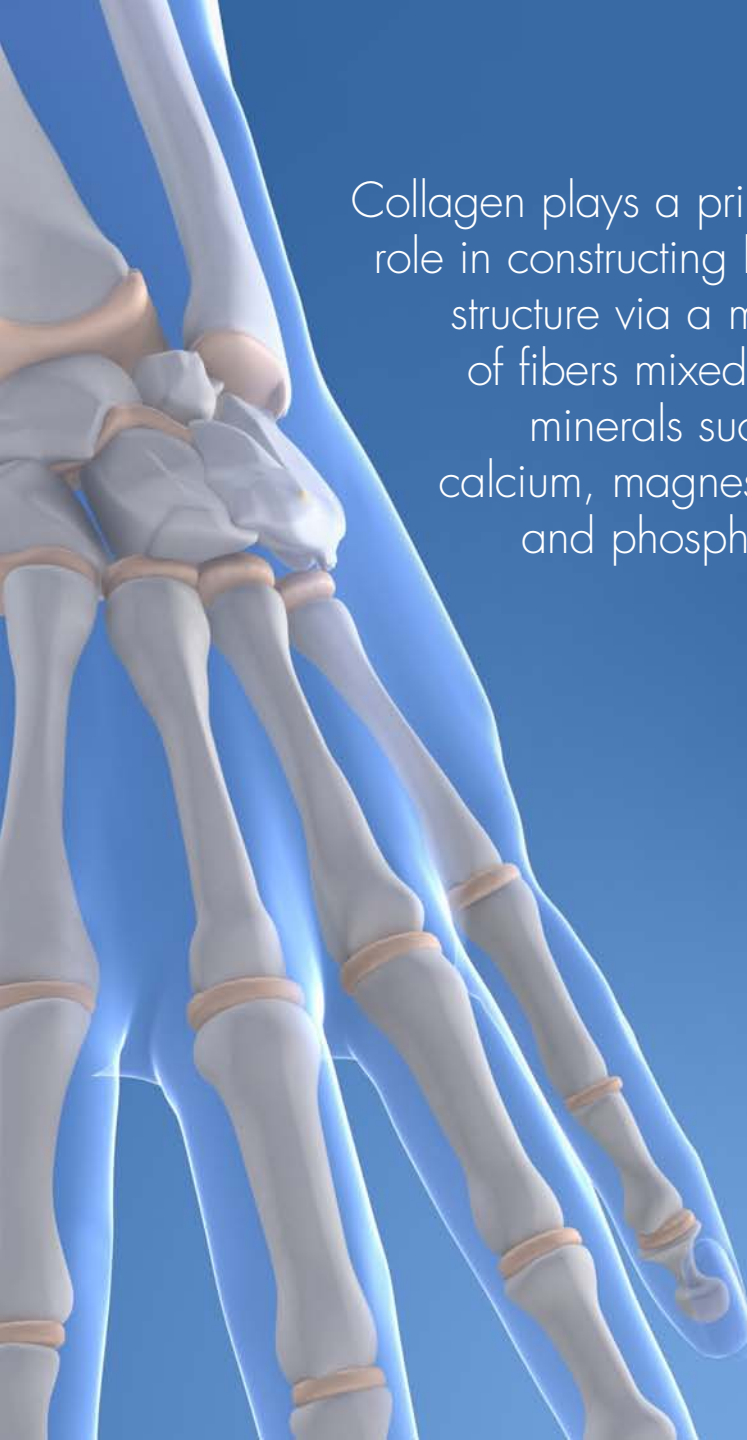
The bones in your body are a lot like the Golden Gate Bridge, since they possess the equivalent of the bridge's cables and tensile supports.

For this reason, a growing number of physicians are advising their patients to make a healthy diet and regular exercise part of the daily routine, and to consider the use of supplements such as calcium, magnesium, and vitamins D3 and K2, all of which have been shown to aid in not only preventing bone loss, but in actually improving bone density through re-mineralization. By following such measures, you too can do much to keep your bones healthy and strong. But maintaining bone strength alone is not enough. You also want to maintain the resiliency of your bones, also known as tensile strength.

The importance of bone tensile strength

To understand why tensile strength is so important to overall

bone strength and health, consider San Francisco's Golden Gate Bridge. This world famous landmark is one of the finest suspension bridges ever built and every hour hundreds, if not thousands, of vehicles pass across it. Collectively these vehicles weigh many tons and are supported by the bridge's massive steel structure. But equally important are the bridge's famed cables. These cables are flexible and able to sway back and forth to absorb the various compression forces that impact on the bridge each day, including wind, heavy traffic, and even earthquakes. The cables' flexibility is an example of tensile strength. Within the main structure of the bridge tensile supports act in a similar manner, combining with the cables to maintain the overall structure and foundation. Without such



Collagen plays a primary role in constructing bone structure via a matrix of fibers mixed with minerals such as calcium, magnesium, and phosphorus.

tensile support, the bridge would soon weaken and eventually collapse.

The bones in your body are a lot like the Golden Gate Bridge, since they possess the equivalent of the bridge's cables and tensile supports. In the bones, these tensile supports are made up of a type of protein known as collagen, and in the last few years, researchers have discovered just how important collagen is for bone tensile strength and overall health.

The collagen connection

Collagen is a fiber-like protein that is highly resilient to forces of compression. In addition to bones, it is found in cartilage, ligaments, skin, and in the area of the jawbone where teeth are attached to their sockets.

Collagen plays a primary role in constructing bone structure via a matrix of fibers mixed with minerals such as calcium, magnesium, and phosphorus. As long as this mix of collagen and minerals remains intact, bones stay healthy and are able to absorb and resist shocks that could otherwise cause fractures. That's because the collagen-mineral matrix helps to deflect and redistribute the impact of otherwise harmful forces

in much the same way that tensile cables keep the Golden Gate Bridge safe and intact. But when bones lose minerals they become brittle and porous, making them weaker and leaving them increasingly susceptible to fractures and breaks.

Maintaining and improving proper bone health

Based on what you've read above, you can see why the integrity of the collagen-mineral matrix is one of the most important keys for keeping your bones healthy and preventing them from thinning. Fortunately, doing so is not difficult in most cases. Like most health-related issues, success starts with healthy diet and regular exercise.

Diet: Research has shown that men and women who have healthy bones well into old age usually follow diets that are rich in fresh fruits and vegetables and whole grains and contain only moderate portions of meat, poultry, or fish. According to Susan E. Brown, Ph.D., a clinical nutritionist and medical anthropologist, in cultures around the world where such dietary guidelines are the norm, osteoporosis, as well as many other degenerative conditions, is virtually nonexistent. The reason this is so, Dr. Brown explains, is because the majority of the foods favored by these cultures have an alkalizing (anti-acidic) effect

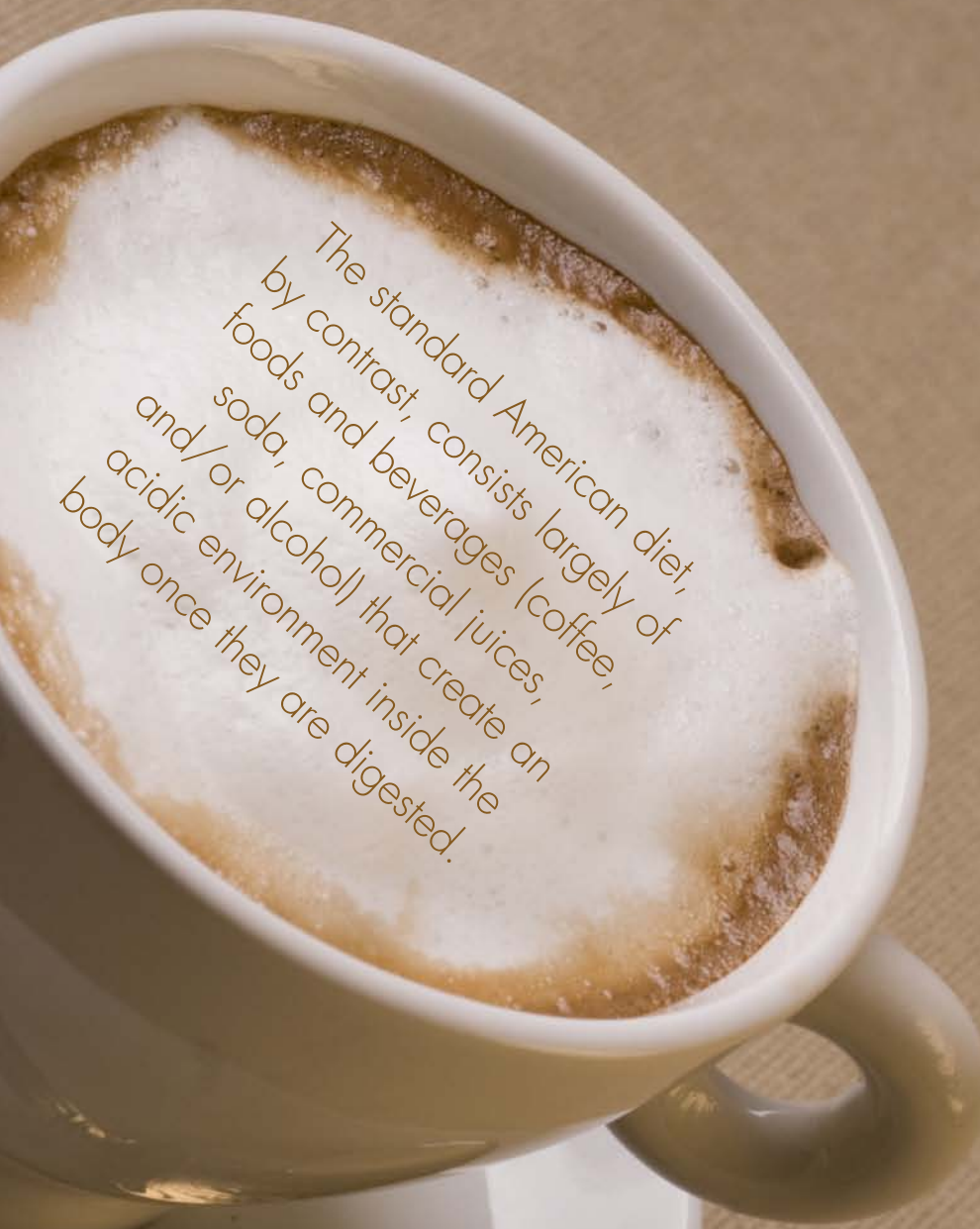
Research has shown that men and women who have healthy bones well into old age usually follow diets that are rich in fresh fruits and vegetables and whole grains and contain only moderate portions of meat, poultry, or fish.




on the body and contain a plentiful supply of minerals that are essential for optimal bone health.

The standard American diet, by contrast, consists largely of foods and beverages (coffee, soda, commercial juices, and/or alcohol) that create an acidic environment inside the body once they are digested. In addition, such a diet is also low in many important vitamins, minerals, and other nutrients. This creates a serious, two-fold problem when it comes to the health of your bones. First, your bones, as well as the collagen they contain, do not receive an adequate supply of the nutrients they need. Second, because of the acid buildup eating such foods leads to, your body is forced to leech minerals such as calcium from your bones in an attempt to buffer and eliminate the acids.

You can avoid these problems by eating meals that consist primarily of alkalizing foods (ideally, 80 percent of each meal should consist of alkalizing foods, according to Dr. Brown) and that do not contain processed foods, sugar, and simple (white) carbohydrates. An example of such a meal is a small portion of fish served with a medley of raw or lightly steamed vegetables, along with a salad and either a serving of brown



The standard American diet, by contrast, consists largely of foods and beverages (coffee, soda, commercial juices, and/or alcohol) that create an acidic environment inside the body once they are digested.

A photograph of a man in a black t-shirt performing a bench press in a gym. He is lying on a bench, holding a barbell with weights above his chest. In the background, other people are also working out, and the gym floor is visible.

Research has shown that weight-bearing, strength building exercises are also important for maintaining healthy bones.

rice or a baked potato. You can find more dietary guidelines by visiting Dr. Brown's website, www.betterbones.com.

Exercise: Research has shown that weight-bearing, strength building exercises are also important for maintaining healthy bones. Engaging in such exercises for 30 minutes two to three times a week will help you improve bone strength and, in conjunction with a healthy diet and appropriate supplementation, replace lost minerals, thus restoring the collagen-mineral matrix.

Nutritional Supplements: Certain nutrients can also pay important dividends when it comes to the health of your bones. Chief among them are the four nutrients mentioned at the start of this article: calcium, magnesium, and vitamins D3 and K2. To determine your need for such supplements, consult with a clinical nutritionist or a physician versed in the use of nutritional supplements.