Researchers Look Into Xylitol for Osteoporosis Treatment

by ANGELA FINLAY

Recent Studies Reveal Effects of Xylitol on Bone Health

The medical community has been interested in xylitol for years, using it to improve dental health, protect against diabetes complications, and sustain people on IV treatment. But lately, more interest has been turned to how xylitol interacts with bone health — and for good reason.

Osteoporosis affects a huge portion of the population, often creeping up with little or no symptoms for years. In the past few decades, studies have shown that xylitol, a naturally-derived sweetener, may help to slow the loss of bone tissue that leads to a brittle, fragile skeleton.

Find out what the medical experts know about xylitol, and why it might be a good idea to include it in an osteoporosis management plan.

What the Studies Report

So far, studies on xylitol and osteoporosis have been limited to animals. In 1998, studies were carried out on rats to find out whether xylitol may be an effective tool for protecting bone mass in women who had had their ovaries removed. The results were good: xylitol appeared to significantly slow down the loss of bone volume.

The success of that original study led researchers to investigate whether xylitol might have similar effects for bone loss due to osteoporosis. Since 2001, research groups have performed long-term trials on groups of aged rats to test how well xylitol protects against bone loss, improves bone biomechanics, and allows bones to withstand more stress.

The most recent study divided the rats into two groups; one was fed a regular rat diet, and the other was fed a regular diet supplemented with 10% xylitol. Twenty months later, the rats that were fed xylitol had more bone volume and more bone mineral content than the rats who didn’t receive any xylitol.

How Xylitol May Fight Osteoporosis

Bones may seem dead or stagnant, but they are made up of living tissue that is constantly decaying and regenerating. Osteoporosis may begin with a slow loss of bone mass, but as your body struggles to keep up the bone building process, your overall bone density will gradually fall lower and lower.

You will need to both protect your bones and build your bone tissue to stay strong and avoid injury in the years to come. Xylitol may be able to help in both regards:

Preventing Bone Decay

As you age, estrogen stores fall, and your bones can begin to lose their density. It becomes increasingly

important to protect your current level of bone mass, and the recent research on xylitol in aged rats suggests that regular supplementation can help slow the rate of age-related bone decay.

Strengthening Long Bones

In the rat studies, the long leg bones (femur and tibia) showed remarkable improvement in the amount of stress and strain they could withstand. Together with other healthy measures — like adequate calcium, vitamin D, and weight bearing exercise — a daily dose of xylitol could help you improve the strength of your bones.

Osteoporosis is sometimes confused with osteoarthritis, but they are different diseases. While osteoporosis affects bone density and bone tissue, osteoarthritis affects the joints and surrounding tissue. Studies haven't found that xylitol has the same success with connective tissue as it does with bone tissue.

Next Page: Guidelines for Xylitol Treatment, Choosing your Source, and Resources

Guidelines for Xylitol Treatment

Unlike many sugar alternatives, xylitol is a very natural substance. Traditionally, it's been extracted from birch bark, though these days it's often taken from corn, and a small amount is present in a variety of fruits and vegetables.

But while xylitol shows promise, and it appears to be safe for therapeutic use, you could experience some uncomfortable side effects. Digestive discomforts are the most common, including:

- Gas
- Bloating
- Loose stools
- Diarrhea

Xylitol contains sugar alcohols, and these compounds can draw water into the intestine, plus they're also prone to fermentation by the bacteria in your digestive tract. Too much water in your intestines generally results in loose bowel movements or diarrhea, and fermentation is responsible for the painful bloating and gas you may feel.

Fortunately, most side effects can be avoided altogether by reducing your dosage. Adults should take in less than 50 grams of xylitol a day to reduce their chances of digestive distress. If you're taking a xylitol supplement, be wary of sugar-free chewing gum and other sweet products that contain no sugar – xylitol is a popular sweetener, and you could be taking in more than you realize if you've been replacing refined sugars with low-calorie alternatives.

Choose Your Source

If you're interested in trying xylitol for your bone health, consult your doctor to get their advice. You can take it in different forms, and your doctor may be able to recommend an appropriate method. If you suffer from dry mouth (a relatively common post-menopausal symptom that may come along with osteoporosis), chewing gum could be the most effective source for you.