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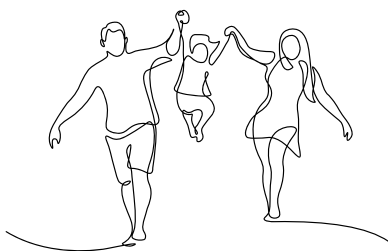
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Osteoporosis – A Silent Disease

Bone is living tissue, just like muscle, and key bone-building years for your body are those when your skeleton is growing – typically through your mid-20s. This is a critical period for bone health because what is built during these years will need to last a lifetime. After age 35, you gradually lose bone as a part of the natural aging process.

Bone in your body is constantly being broken down and replaced. The bone disease, osteoporosis, happens when the creation of new bone is not able to keep up with the loss of old bone. Osteoporosis means “porous bone.” It is another “silent” disease as you can’t feel your bones weakening. The first signs of osteoporosis you may notice are a stooped or hunched posture, you are getting shorter, or a bone breaks. If you have osteoporosis, bones can become so brittle that a fall or even something small like coughing or bending can cause a fracture.

Osteoporosis can cause permanent pain and may limit mobility, leading to feelings of isolation and depression. Bone fractures are a serious complication and the most common ones occur in the hip, wrist, or spine. Hip fractures can also lead to long-term nursing home care for many older patients.

You could be at risk for developing osteoporosis. Risk factors out of your control include: being female, age (risk increases as you get older), you are white or of Asian descent, a family history of osteoporosis, or you have a small body frame (less bone mass to draw from as you age). Hormone levels, your diet, long-term use of steroids and other medications, and medical conditions such as multiple myeloma, lupus, and kidney or liver disease play a role. Lifestyle choices you make can also increase your risk. Excessive alcohol consumption, tobacco use and a sedentary lifestyle make you more likely to develop osteoporosis.

While you need to be aware of personal risk factors for osteoporosis, focus your attention on what you can do — right now — to reduce your risk. Healthy eating and regular exercise are essential for keeping your bones healthy and maintaining quality of life.

Small Hops for Stronger Bones

Did you play hopscotch or jump rope when you were a child? It turns out these might be even better for your health as an adult than they were when you were young.

Regular physical activity will help keep bones strong and slow the rate of bone loss, even if you have fragile bones or osteoporosis. By leading an active lifestyle, you can significantly decrease your risk of falling and breaking a bone.

What type of exercise is good for your bones? The weight-bearing kind, which is anything that forces you to work against gravity. This type of exercise is effective because as you put more tension on your muscles it also puts more pressure or “stress” on your bones. Your body responds by creating fresh, new bone and greater bone strength.

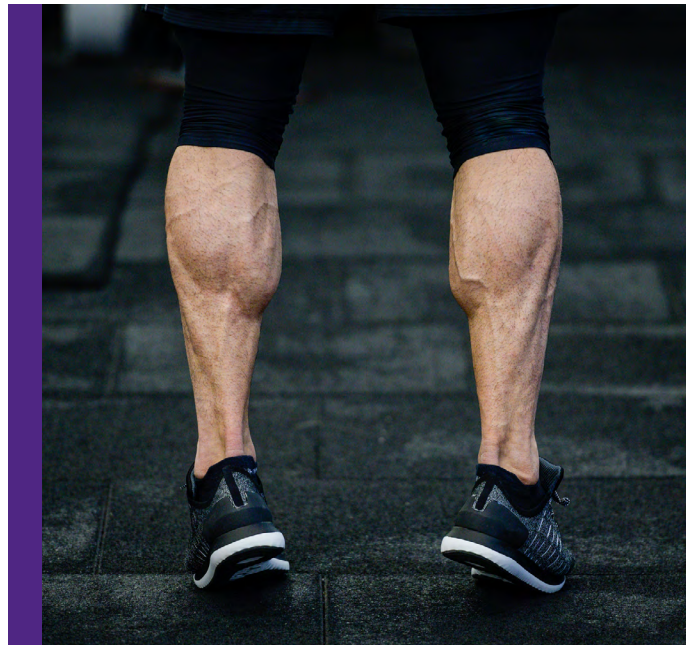
Weight bearing exercise is anything that involves an impact with the floor or earth and requires your feet and legs to support you. Some examples include brisk walking, hiking, jogging, marching, climbing stairs, weight training, dancing, yoga, and tennis. Gardening can be weight bearing if you carry a water can, walk in your yard, etc.

Another way to build stronger bones is to jump, stomp, and hop. These activities jar your bones a little, sending a message that they need to get stronger. So, have a little fun and act like a child again!

A recent study, reported in the American Journal of Health Promotion, reveals that jumping 10 times/ twice a day provides greater bone-building benefits than running or jogging. This is not recommended for anyone who has osteoporosis, but for those who want to be proactive with exercise, this is great news!

If hopping is too difficult, start with marching or doing heel drops. Make sure you warm up your muscles first by walking for a bit or marching in place.

Marching with impact: This movement is basic marching where you push, or stomp, your feet on the ground.



Heel Drop: Hold onto something, about waist high, for stability. Rise up on your toes, then drop your heels down abruptly.

Power Hop: You can hop on both legs or, for maximum benefit, hop on one leg. Hold onto something for stability if needed. Bend your knees for cushion when you land — never land on straight knees. You can do the hops quickly or rest between each hop. Start with 10 and work up to 20 hops, twice daily. Learn how hopping can strengthen bones in this demonstration www.youtube.com/watch?v=ARz_KlwwmJk.



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This newsletter developed by Sharolyn Flaming Jackson, Extension Specialist – Family and Consumer Sciences, K-State Research and Extension

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Nutrition Bone Builders

Good nutrition is also essential for bone health. Nothing beats calcium for your bones, and while you can get plenty of calcium from dairy foods (low-fat options are best), it is also found in vegetables. Choose dark leafy greens such as spinach, bok choy, collard, and turnip greens. If it is difficult for you to get enough calcium from your diet, talk with your physician about taking a supplement.

Vitamin D is essential to help bodies absorb calcium. Your body makes vitamin D when the sun shines directly on your skin, and it only takes 10 to 15 minutes of sunlight a couple of times a week to get what you need. As you age, though, your skin gets thinner and less efficient at synthesizing vitamin D from sunlight. A few foods, like salmon, contain calcium and vitamin D, and some are fortified with both as well, including cereals and orange juice. Research continues to evolve on how much vitamin D you need and for many people, a supplement is a good idea.

Other minerals, like magnesium and potassium, help keep bones healthy. Magnesium helps with vitamin D balance in your body and potassium aids in reducing calcium loss from bones. Good sources include spinach and other dark greens, potatoes, sweet potatoes, bananas, legumes, nuts, seeds, and whole grains.

Protein is a key nutrient for bone health at all stages of life. Most people get plenty of protein in their diets, but not everyone. Older adults don't always eat enough protein and this may be harmful to bones. If you are considering eating more protein, consider plant sources too, like nuts and beans. They offer calcium as well as protein!



Veggie Frittata

Makes 6 Servings

This frittata is a tasty combination of foods that support bone health in many ways. Enjoy with a glass of milk for a calcium boost.

Ingredients:

- 1 large sweet potato, peeled and sliced into $\frac{1}{3}$ -inch thick rounds
- 2 teaspoons canola oil
- 1 small onion, chopped
- 1 cup mushrooms, sliced $\frac{1}{4}$ -inch thick
- 8 eggs
- 2 cups fresh spinach
- $\frac{1}{2}$ cup milk (fat-free used for this recipe)
- $\frac{1}{4}$ teaspoon salt
- $\frac{1}{2}$ teaspoon black pepper
- Salt and pepper, to taste
- $\frac{1}{2}$ teaspoon each of onion or garlic powder, basil, oregano
- Garnish: sliced avocado, fresh veggies

Directions:

1. Wash hands with soap and water.
2. Preheat oven to 350°F.
3. Peel sweet potato and onion. Rinse sweet potato, onion, mushrooms, and spinach by gently rubbing under cold running water. Slice potatoes and mushrooms, chop onion.
4. Add 1 teaspoon canola oil to a medium oven-safe skillet or baking pan, then line the pan with the sliced sweet potatoes. Bake for 20 minutes.
5. Meanwhile, preheat a separate skillet over medium heat. Add the remaining oil and sauté onions for 4 to 5 minutes, until slightly browned.
6. Add the mushrooms and continue to sauté 2 to 3 minutes; add spinach and sauté until wilted (about 2 minutes); remove from heat.
7. In a mixing bowl, combine eggs, milk, salt, pepper, herbs, and spices; whisk ingredients together.
8. Remove the sweet potato pan from the oven and layer the sautéed onions, mushrooms and spinach on top of the sweet potatoes. Pour egg mixture over the vegetables.
9. Bake frittata for 35 minutes.
10. Remove from oven and let cool slightly. Serve with your favorite garnish.

Nutrition Information for 1 serving:

140 calories; 8g fat (0g trans fat, 2g saturated fat); 8g carbohydrates; 10g protein; 1g fiber; 220mg sodium; 89g calcium