Foods for Bone Health

CHANGING BONES AT ALL OF LIFE'S STAGES

You may think that once you stop growing taller, your bones stop growing—but that's not at all true. Bones, which are made up of living tissue, exist in a state of constant change. They cycle through the process of shedding older bone tissue to grow newer, stronger tissue, always working to support the changing needs of our bodies.

BIRTH TO YOUNG ADULT:

Peak bone density is usually reached between ages 18 and 25[1]. Up until then, our bodies work hard to grow and strengthen our bones, a process known as **modeling**, because soon, adding bone density *at an equal rate* to the shedding of older bone tissue won't be possible.

YOUNG ADULT TO EARLY 40S:

After peak bone density is met and into our 30s, the shedding of older bone tissue continues at the previous pace, but bone tissue regrowth, known as **remodeling**, ever so slowly *starts to fail to keep up*. This is when we begin to experience what's known as **bone loss**.

EARLY 40S AND ON:

Rates of bone loss increase as women and men experience decreasing estrogen or testosterone production – hormones that play a critical role in bone modeling and remodeling.

WOMEN: Unless women take preventative steps during those first five to six years ahead of and during menopause onset, they can lose up to 20% or more of their bone density.[2]

MEN: To a lesser but still notable extent, men's bones are also impacted by this hormonal shift; as testosterone production drops, so too does bone density.

CALIFORNIA PRUNES FOR BONE HEALTH

Eating prunes every day is an easy way to be preventative, protective and proactive when it comes to bone health. In addition to fibre, prunes contain *higher levels of polyphenols* than most other fruits, and polyphenols are believed to play an important role in bone growth.[5] Overall, the body of research on prunes and bone health suggests the *unique combination of naturally occurring nutrients* in prunes, including vitamin K, fibre, polyphenols, and minerals like boron work together to protect our bones.[3]

EATING RIGHT AND MOVING OUR BODIES: THE BUILDING BLOCKS FOR HEALTHY BONES

FAMILIAR BONE HEALTH NUTRIENTS:

Foods rich in calcium, vitamin D, protein, potassium, phosphorus, magnesium, vitamin C, and vitamin K are great for bone health.

NEWER RESEARCH:

Scientists are discovering that plant compounds like **fibre, copper, iron, vitamin B6, polyphenols**[3] and **boron**[4] also may play an important role in bone health – and you're never too old to see a benefit.

Good nutrition and exercise remain the best things we can do to ensure lifelong bone health. And yes, it's true that focusing on that in our youth is the most important thing we can do to prevent issues with our bones as we age. What is less known is that making changes to your lifestyle for improved bone health can be beneficial at any age.

california™ prunes
Prunes. For life.

CALIFORNIA PRUNES: DELICIOUS & SURPRISINGLY VERSATILE

Prunes are often underestimated. California grows the best prunes in the world, and this dried fruit is always in season.

They're delightfully delicious, versatile and nutritious with several health benefits. Prunes' positive impact on gut health may help explain why studies have tied them to bone density, heart health, weight management and more. Prunes are also a versatile ingredient in cooking, baking and meal replacements. They can add complexity and subtle sweetness to savory dishes. They can be used whole, diced, pureed or as juice. They can add moisture, colour and depth of flavour — and they can decrease sugar and fat. Prunes can also replace unwanted or unavailable ingredients such as eggs.

Try the delicious recipe below, and for more recipes and cooking tips, visit californiaprunes.ca.

"New evidence suggests these dried plums [prunes] are more than a one-trick pony, boosting not only digestion but bone strength as well…eating five or six prunes a day helped women past menopause to preserve bone mineral density in their hips, which could translate to fewer bone breaks."

-Harvard Women's Health Watch, 1/1/2023

PRUNE NUTRITION

A serving of prunes is 38 to 40 grams (4 to 6, depending on size). For under 100 calories, it provides:

3 g fibre (11% Daily Value)	**23 mcg of vitamin K** (20% Daily Value)	**280 mg potassium** (6% Daily Value)

Vitamins, polyphenols and minerals like potassium, copper and boron

RECIPE:

Crispy Roasted Brussels Sprouts & Sweet Potatoes

This simple recipe results in sweet, caramelized Brussels sprouts and burnished sweet potatoes. The sliced prunes and pomegranate arils add punchy pops of colour and flavour. This makes a delicious, fast, and easy side dish, especially in the fall and winter.

PREP & COOK TIME: 45 minutes

INGREDIENTS:

- 1 lb. small-medium Brussels sprouts, ends trimmed, halved
- 4 - 6 tbsp. extra virgin olive oil, to coat bottom of skillet
- 1 small sweet potato, peeled and cut into 1-inch cubes
- 10 California prunes, halved
- Salt and pepper, to taste
- 1 tbsp. balsamic vinegar
- 1/4 c. pomegranate arils

INSTRUCTIONS:

Preheat oven to 400°F. Heat oil in a large cast-iron skillet over medium-high heat; place Brussels sprouts cut-side-down in a single layer in the skillet. Add sweet potatoes and prunes, and season with salt and pepper.

Cook, undisturbed, until Brussels sprouts begin to brown on bottom, then transfer to oven.

Roast, shaking pan every 5 minutes, until Brussels sprouts and sweet potatoes are golden brown and tender, about 20 minutes.

Stir in balsamic vinegar, sprinkle with pomegranate arils, and serve hot or warm.

[1] Bone Health & Osteoporosis Foundation. "Bone Basics." *Bonehealthandosteoporosis.org*. Accessed on 2/27/24. https://www.bonehealthandosteoporosis.org/preventing-fractures/general-facts/bone-basics/

[2] Ji MX, Yu Q. Primary osteoporosis in postmenopausal women. *Chronic Dis Transl Med.* 2015 Mar 21;1(1):9-13.

[3] Damani JJ, De Souza MJ, VanEvery HL, Strock NCA, Rogers CJ. The role of prunes in modulating inflammatory pathways to improve bone health in postmenopausal women. *Adv Nutr.* 2022 Oct 2;13(5):1476-1492.

[4] Pizzorno L. Nothing Boring About Boron. *Integr Med (Encinitas).* 2015 Aug;14(4):35-48.

[5] Austermann K, Baecker N, Stehle P, Heer M. Putative effects of nutritive polyphenols on bone metabolism in vivo-evidence from human studies. Nutrients. 2019;11(4):871.