

OSTEOPOROSIS AND OSTEOPENIA TREATMENT OPTIONS

Literature supports the following treatments as helpful in either preventing further bone loss or re-densifying it. To what degree you strengthen your bones using this comprehensive approach depends on how much of the program you can accomplish, but also on what biochemical glitches or genetic weaknesses you have with regards to bone density.

Prescription drugs for bone density: there are prescription drugs which re-densify bones, but they sometimes produce abnormal bone which breaks easily. Fortunately, this is uncommon, but there are reports of bone loss in the jaw and the femur (thigh bone). One orthopedic surgeon is observing that artificial joints are loosening too easily in people on bone density meds. Why this might happen in some people and not others is not understood. A more common side effect of these drugs is reflux which can cause esophageal irritation and asthma.

There also are injectable versions of osteoporosis drugs which can be useful if you don't tolerate the oral medications. However, if you have an adverse reaction, which are rare, these drugs do not leave your body for 6 -12 months. With the above concerns in mind, let's proceed with a review of non-drug treatments for optimal bone health. The meds will be reviewed in more depth upon request.

Success with natural therapies- There was an inspiring study reported in 2012, the COMB (Combination of Micronutrients Study) which combined natural substances plus exercise to increase bone density. It was successful in re-densifying bones without using hormones. The average increase in density was 3-6% in one year proving that it is possible to make your bones stronger with a natural approach. This treatment did not work for people who took the supplements inconsistently. Given this inspiring study, let's review these approaches in a bit more depth.

Weight bearing exercise: Whatever you choose to do for exercise, start it gradually. Give your muscles and joints a chance to adapt. Both gravity and the push/pull of muscles on bones is what makes bones get stronger. This is why exercise strengthens bones and sitting does not. Exactly how much exercise is needed to re-densify bones has not been established because each study has used different amounts and types of exercise. However, 3 x wk often worked. Examples

of helpful exercise include step aerobics, dancing, walking, zumba, yoga, calisthenics, weight lifting, pickleball and pilates. The Canadian Airforce Exercises are available online and are a great calisthenic work out for free. Bicycling and aqua aerobics work if you are working out hard enough. In an early study, walking for only 3 days per week worked, but it was part of a larger treatment protocol which included female hormones. You may choose to work with a trainer. If so, make sure they are familiar with your age and health status. If you join a class, do only what you can do, at your speed. Avoid injury.

Weight vests (or a backpack) are one of the most helpful tools to making strong bones. Buy one which has removable weights and start with just 5 lbs. Do your aerobic exercise with it on. If your joints agree, increase to 7 lbs, then 10 lbs. If you can work up to 10% of your body weight, this is one of the most successful single treatments for increasing bone density.

Diet- Many aspects of your diet play an important part in your bone density. Sugar and salt in excess weaken bones. Soft drinks are too sweet as is fruit juice if more than a few ounces. Caffeine in even normal, single doses can cause excess loss of calcium. Tea does not have this effect and is ok. Protein is necessary for bone health. Aim for 60 grams per day for an average sized person. Whole, unrefined foods contain more nutrients than refined foods so focus on a whole foods diet. Not surprisingly, developing countries where people eat whole foods have a lower rate of osteoporosis than developed countries, but this may also be due to a higher exercise rate.

Calcium- Your goal is 1,000mg-1,200mg per day from food or food plus supplements. This does NOT mean 1,200mg of a supplement...plus food. Too much calcium increases your risk of cardiovascular disease and kidney stones. More is not better. You can calculate your dietary intake with a handout from my office or more accurately by using an online dietary analysis such as on mypyramid.gov or myfitnesspal.com or other similar sites and apps.,

Also, there are different types of calcium. Calcium citrate (usually with magnesium) is well absorbed and is what I usually prescribe. However, it may not be tolerated by people whose stomachs are too acidic. In that case, take calcium carbonate such as is in Tums and other chewable forms of calcium. These are, otherwise, less well absorbed.

Vitamin D- In the Pacific Northwest take 2,000 IU per day during short sleeve weather and 4-5,000 IU per day during long sleeve weather. If you have good sun exposure on a summer day, skip the next dose. Preferably take it with a meal for better absorption. You get very little vitamin D from food. Instead, you produce it when you are exposed to the sun. Your liver and kidneys are needed to produce vitamin D so, if these organs are diseased, you may need a higher dose. Check with your physician. Vitamin D is also a decently strong anti-depressant and also lowers your risk of most types of cancer by at least 60%.

Vitamin K- Vitamin K comes in two types, K-1 (from food) and K-2 (from fermented soy or synthetic), both of which have been shown to strengthen bones. I recommend foods high in K1 along with a supplement of K-2 which has two forms, MK4 (synthetic) and MK-7 (from fermented soy). I am presently providing MK4 at a dose of 5mg 2 x day. This can be dosed up to 15 mg twice a day. This form of vitamin K does not increase blood clotting. However, to be on the safe side, I still do not want people who are on a blood thinner to take vitamin K because not enough is known about its drug-drug interactions.

Strontium citrate (not ranelate)-is associated with higher bone density. This was discovered because towns with more strontium in their water have strikingly lower rates of dental cavities and osteoporosis. The dose is 680mg per day until you regain your goal bone density. Strontium should not be taken at the same time as calcium. Separate them by at least 90 minutes. It is very important to tell the radiologist who does your next DEXA (bone density x-ray), that you are taking strontium. They need to make a calculation to account for this.

Hormone replacement therapy (HRT)- Estrogen has been clearly shown to re-densify bones in post-menopausal women, but it is not prescribed for osteoporosis unless there are other indications for its use. Also, some people are not good candidates to use HRT such as if they have had breast or uterine cancer. Estrogen has finally been proven to not initiate breast cancer. However synthetic progesterone called progestin can initiate breast cancer especially after 5 years of use... at a low rate (2 cases in 10,000). Progesterone is not needed in women who have had a hysterectomy. If breast cancer does develop, both of these hormones are stopped.

Other nutrients- The nutrients discussed above are the major nutrients involved in bone density. However, there are other nutrients involved in bone density which are found in whole foods diets. For example, vitamin C, magnesium, manganese, copper help you to form and maintain dense bones.