Are These Osteoporosis Treatment Options Right for You?

by KRYSTINA OSTERMEYER

Osteoporosis Treatment – What's Available?

With contributions from Josh Duvachelle.

If you're reading this, chances are you have osteoporosis. You probably already understand that osteoporosis has no cure. However, lifestyle modifications and medications can slow its progress. Some treatments for osteoporosis may even reverse it slightly and allow the bone to rebuild to some degree.

And you're not alone! According to the *International Osteoporosis Foundation* (IOF), osteoporosis affects over 200 million women worldwide. Osteoporosis is the cause of 8.9 million fractures annually, which equates to an osteoporotic fracture every *three seconds*.

Also, osteoporosis is costly – according to the *National Osteoporosis Foundation* (NOF), fractures related to osteoporosis cost families and the healthcare system an estimated $19 billion annually. And this number is only expected to increase.

What is Your Best Osteoporosis Treatment Option?

According to the National Osteoporosis Foundation, your best strategy for fighting bone loss depends on a few key factors:

Your Age

Some medicines, such as certain estrogen treatments, are more appropriate for specific chapters of life.

For example, the NOF warns: "Osteoporosis medication is not recommended for healthy premenopausal women. However, young women who take medications or have disorders known to cause bone loss and fractures may benefit from osteoporosis treatment."

Your Current Bone Strength Status

Some approaches, such as changing your diet, help to restore calcium to your bones. Others, such as weight-bearing exercise, reduces bone loss. The same is true for different herbal, alternative and conventional medications.

"A person with more severe bone loss or multiple broken bones may be recommended a different medicine than a person with less bone loss or no fractures," reports the NOF.

Your Overall Health

Many women who have osteoporosis may also experience other health issues, such as high blood pressure, stress, diabetes, etc. Your doctor will look at your overall health to find the safest and most effective options for yourself.

Take estrogen-based osteoporosis remedies, for example. If you have had breast cancer or have a family history of breast cancer, your doctor may recommend against taking estrogen.

There is no one-size-fits-all approach to managing osteoporosis. But by looking at the big picture, and understanding your many treatment options, you can put together a plan with your doctor that helps you live our life to the fullest and enjoy optimal bone health and wellbeing.

Osteoporosis Medication Options and Information

Some medications are hormonal and are only approved for women. These medications include calcitonin (Fortical and Miacalcin), estrogen, and estrogen agonists/antagonists (Evista).

Other medications are available for men and women. These include bisphosphonates (Actonel, Atelvia, Fosamax, and Reclast), denosumab (Prolia) and teriparatide (Forteo).

Bisphosphonates

Bisphosphonates can be given to both men and women, and they work by slowing bone loss. Depending on the drug, they may be given once weekly or once monthly.

This drug class is the most commonly prescribed for osteoporosis. According to *News Medical,* “Bone is constantly undergoing a turnover process in which osteoblasts create bone and osteoclasts destroy it. Bisphosphonates inhibit the actions of osteoclasts by promoting their apoptosis (programmed cell death), which, in turn, slows bone loss.”

The benefit of bisphosphonates, aside from the fact that they slow down bone loss, is that they can also decrease bone pain associated with osteoporosis. Also, in cancer patients with bone damage, bisphosphonates are known to reduce the need for radiation and lower the risk of fracture.

Bisphosphonates can be broken down into two subclasses, which differ based on their mechanism of action:

1. Nitrogenous bisphosphonates: pamidronate, alendronate, and zoledronate.
2. Non-nitrogenous bisphosphonates: etidronate, clodronate and tiludronate.

The downside to bisphosphonates is that they must be taken correctly — if they are not taken correctly, they are known to cause esophageal ulcers.

Next page: More osteoporosis medication options and herbal/natural remedies for osteoporosis treatment.

Estrogen Agonists/Antagonists

Estrogen agonists/antagonists have a mechanism of action similar to estrogen when it comes to protection of bone, but without some of the side effects of hormonal therapy.

Evista is known to build bone mass, similar to estrogen. Unlike estrogen, it does not increase the risk of breast or uterine cancer. However, it does increase the risk of blood clots.

Evista belongs to a drug class called *selective estrogen receptor modulators* (SERMs); SERMs are FDA-approved for the prevention and treatment of osteoporosis in postmenopausal women, as well as reduce the risk of invasive breast cancer in postmenopausal women at risk or with osteoporosis.

SERMs act like estrogen, but without the potential side effects. Evista helps to protect bone density but does not affect the uterine lining – meaning it does not cause uterine cancer. It was also shown to lower LDL cholesterol.

As discussed, those taking Evista are at increased risk of blood clots, including deep vein thrombosis and pulmonary embolism – but this side effect affects less than 1% of women without a prior history of blood clots. The most notable side effect is hot flashes.

Forteo

Forteo is a synthetic form of parathyroid hormone (PTH). PTH is responsible for regulating calcium metabolism in the body. Thus, Forteo increases bone density and causes new bone to grow. It is the only FDA-approved medication that is approved to rebuild new bone.

Forteo is given only to men with osteoporosis, or to women who are postmenopausal. It is given via injection. The downside to this medication is that the injection is daily, as opposed to some of the other medications, which are much less frequent. Long-term studies have not been performed, so it can only be prescribed for up to 24 months.

Side effects include itching and redness at the injection site, heartburn, depression, and leg cramps.

Hormonal Replacement Therapy (HRT)

The use of HRT to treat osteoporosis has been studied vastly, from observational studies, case-control studies, randomized clinical trials, and meta-analyses. The same conclusion has been met – HRT is highly effective at decreasing the risk of fractures (in some research, a reduction in fracture risk up to 25%!) and discontinuing HRT shows a loss of the anti-fracture efficacy as well as a decreased risk of colon cancer.

However, the studies also indicate that there are other health risks associated with HRT. For example, the use of HRT increases the risk of endometrial cancer. It also increases the risk of cardiovascular events such as unstable angina (USA), venous thromboembolism, and thromboembolic stroke. It can also increase the risk of myocardial infarction, ovarian cancer, and overall cognitive function.

HRT should be considered if other treatment modalities are not tolerated or are contraindicated, and then at the lowest dose possible.

Natural/Herbal Remedies for Osteoporosis

Drugs from your doctor aren't your only options. From supplements to herbal remedies, talk to a medical professional if the following strategies are right for your lifestyle and your current bone health status.

Take Omega 3s

Omega-3 fatty acids are healthy fats the may improve bone health, especially when combined with foods that are also high in calcium. Omega-3s are also linked to a wide range of additional health benefits, such as improved cardiovascular health, better cognition, and enhanced mood.

Look for Herbal Options

Herbal medicine has been used for centuries to treat maladies such as osteoporosis. One promising area is in the realm of traditional Chinese medicine (TCM).

In a report published in the Journal of Traditional and Complementary Medicine, researchers did a review of current studies done on TCM, specifically looking at the safety benefits of TCM herbs compared to modern drugs that have potentially negative side effects.

"Many medicinal herbs used in Traditional Chinese Medicine, known as kidney tonics, have been tested for their

effects on bone metabolism in the laboratory and clinically," notes the study. Three specific herbs were tested successfully:

- Herba epimedii (???, Yín Yáng Huò)
- Fructus ligustri lucidi (???, N? Zh?n Zi)
- Fructus psoraleae (???, B? G? Zh?)

"Bone mineral density protection was obvious among those women with the onset of menopause beyond ten years," concludes the report. "A general protective trend was observed among all women under trial. [...] Our study supports more research and trials in this area, while we are looking for safe and effective agents to keep the bone metabolism in a balanced state."

Meanwhile, a recent study from the University of British Columbia found that another TCM herb called red sage helps block an enzyme that leads to the breakdown of bones during osteoporosis.

Talk to your doctor if TCM could be an appropriate option for you.

Next page: Alternative osteoporosis treatment options and lifestyle changes for living better with osteoporosis.

Alternative Health Treatments for Osteoporosis

Alternative medicine is commonly confused with complementary medicine, but there are key differences.

Complementary medicine is used together with conventional medicine with your doctor, while alternative medicine is used in place of traditional medicine.

Because not everyone responds to every type of treatment, working with your doctor to explore alternative options may benefit you. However, you should talk to a medical professional before replacing conventional medicine with an alternative approach.

Acupuncture

More research needs to be done.

When you get acupuncture, small thin needles are gently inserted into strategic points on your body. According to traditional Chinese medicine, acupuncture is thought to stimulate specific nerves, muscles or organs.

When it comes to osteoporosis, numerous studies have been done to investigate the impact that this alternative health method offers women with bone loss. However, some preliminary research shows promising results.

One study even found that acupuncture improved bone mineral density better than taking some name-brand calcium supplements.

Tai Chi

Tai chi is an ancient form of exercise that originated in China thousands of years ago. It's a series of postures and body poses that you flow gently into one after the other. You may have seen groups of people in parks and public spaces practicing this gentle, rhythmic form of exercise.

Because it's a whole-body workout and also a very gentle form of exercise, women of all ages can partake in tai chi. It may build muscle strength and bone strength through the physical movement.

More importantly, some of its poses hone your flexibility, balance and posture, which in turn helps reduce the risks of falls that contribute to osteoporosis-related fractures and injuries.

What Else Can Be Done?

As with all drugs, there are pros and cons to medication therapy. You should weigh the pros and cons carefully with your doctor when selecting a medication for your osteoporosis treatment.

That being said, there are a variety of other self-care measures that can be undertaken to preserve bone density.

Lifestyle Changes for Osteoporosis

Your daily habits can have a big impact on your bone health and your osteoporosis prognosis, starting with the foods you eat (or don't eat). From food to movement, the choices you make every day can help keep you feeling and looking your best.

Eat More Calcium-Rich Foods

If you or a loved one has osteoporosis, you likely have a cupboard or medicine cabinet stocked to the brim with calcium supplements and pills. And while these are a common go-to for women who want stronger bones and reduced bone fractures, it isn't the magic pill many people think it is.

For example, an analysis published in the *British Medical Journal* found that calcium supplements do nothing to reduce fracture risks in adults over the age of 50.

But that doesn't mean calcium does nothing for your osteoporosis. New research has found that women who get their calcium through food instead of supplements have healthier, stronger bones.

Some of the best calcium-rich foods if you have osteoporosis include:

- **Fatty fish:** It's high in calcium as well as vitamin D, a vitamin that may help improve calcium absorption.
- **Beans:** Beans are rich in calcium, as well as fiber. Some studies show that a fiber-rich diet may assist in preventing osteoporosis by slowing down the process where your bones lose calcium.
- **Kale:** Kale and other dark-green leafy vegetables, such as spinach, are high in calcium. Many of these veggies are also a great way to increase your vitamin K intake. This essential vitamin enhances calcium absorption, and studies suggest that it may also lower the risk of bone fractures in some women who already have osteoporosis.

If those options don't interest you, you may also try dairy products such as milk, yogurt and cheese, tofu, salmon, broccoli, cauliflower, and leafy green vegetables.

Lift Weights

Don't worry; you won't bulk up like a bodybuilder. But you will bulk up your bones!

Research reveals that weight-bearing exercise increases bone strength. This includes lifting free weights, using rubber exercise bands, or even stepping onto an exercise machine.

Plus, regular workouts promote balance and posture. Improving posture and balance can reduce your risk of a fall, which in turn can decrease your risk of a fracture.

Quit Smoking

If you smoke, here's one more reason to consider quitting the habit: Smoking doesn't just increase your risks of a variety of types of cancers and chronic conditions, but it also speeds up bone loss.

Studies indicate that current smokers lose bone at a much faster rate than non-smokers. By the age of 80, the average smoker can have up to 6 percent less bone density than someone who doesn't smoke!

According to the World Health Organization, “Hip fracture risk among smokers is greater at all ages but rises from 17 percent greater at age 60 to 71 percent at age 80, and 108 percent at age 90.”

Avoid Ingredients That Zap Your Calcium

Many common ingredients in the modern Western diet can contribute to bone loss and osteoporosis risks. This includes:

- **Eating excessive salt.** Sodium speeds up how much calcium your bones lose.
- **Drinking phosphorous.** It’s a common ingredient in soft drinks/sodas, and it can minimize how much calcium your body can absorb.
- **Alcohol and caffeine.** Excessive amounts of either of these substances can raise your risks of fractures. Take alcohol as an example. It reduces your body’s levels of vitamin D, which in turn impacts how much calcium you can absorb.

Ensure You’re Getting Enough Vitamin D

Vitamin D helps the body to absorb calcium better. We can get vitamin D from food sources or supplementation.

Doctors recommend the following amounts of vitamin D each day, for the average person:

- Age 1-70: 600 IU
- Age 71 and older: 800 IU

Your needs may be higher if you aren’t taking in enough vitamin D through diet or supplementation. Your physician will let you know if you need to ingest more vitamin D – but it doesn’t hurt to ask!

Food sources of vitamin D include:

- Egg yolks
- Fatty fish, such as tuna, mackerel, and salmon
- Fortified foods, such as milk, cereal, and orange juice
- Beef liver
- Cheese