



NOF Online Community Frequently Asked Questions

Nutrition

Are calcium supplements safe to take?

You should try to get the daily recommended amount of calcium from food first, but calcium supplements are safe to take to make up any shortfall from your diet. In general, you shouldn't take supplements that you don't need. There is no added benefit to taking more calcium than you need and doing so may carry some risks. Check the supplement label to ensure the product meets US Pharmacopeia Standards and avoid supplements that contain oyster shell (dolomite).

Clinical trials have found no strong evidence that links calcium supplementation to an increased risk of cardiovascular events.

Are there harmful effects or benefits to taking more than 1,200 milligrams of calcium?

There is no added benefit to taking more calcium than you need. When you take too much calcium from supplements, the excess calcium is excreted through your kidneys into your urine, which increases the risk of kidney stones in some people. To be safe, NOF recommends trying to meet your daily calcium needs by eating calcium-rich foods and only supplementing to make up the estimated amount you do not get through your diet.

Are calcium supplements linked to heart disease?

In light of the evidence available to date, NOF has concluded that calcium intake from food and supplements that does not result in an individual exceeding the 2000-2500 mg/d tolerable upper intake levels (UL), as defined by the National Academy of Medicine, should be considered safe from a cardiovascular standpoint. Obtaining calcium from food sources is preferred. Supplemental calcium can be safely used to make up any shortfalls in intake. Discontinuation of supplemental calcium for safety reasons is not necessary and may be detrimental to bone health in situations where intake from food is suboptimal.

You can find more information and evidence on this topic here: <https://www.nof.org/nof-aspc-calcium-position-statement-electronic-media-kit/>.

Is vitamin D good for bones?

Yes, vitamin D plays an important role in protecting your bones, both by helping your body absorb calcium and by supporting muscles needed to avoid falls. Children need vitamin D to build strong bones, and adults need it

to keep their bones strong and healthy. If you don't get enough vitamin D, you may be more likely to break bones as you age.

How much calcium and vitamin D are needed daily?

The amount of calcium you need every day depends on your age and sex. The amounts include both dietary sources AND supplements:

Women

Age 50 & younger: 1,000 mg daily

Age 51 & older: 1,200 mg daily

Men

Age 70 & younger: 1,000 mg daily

Age 71 & older: 1,200 mg daily

The amount of vitamin D you need every day depends on your age:

Women and Men

Under age 50: 400-800 international units (IU) daily

Age 50 and older: 800-1,000 IU daily

Does Strontium help increase bone density?

Some supplement companies promote the benefits of strontium, but there isn't enough research at this time to show that taking strontium (those formulations that are available in the US) is safe and beneficial to bone health. In addition, strontium may interfere with interpretation of bone density results.

Do dairy foods leach calcium from the bones?

The short answer is no. There is much confusion and controversy about dairy, and milk in particular, and the role it plays in skeletal health. The scientific evidence shows that dairy is an excellent source for dietary calcium and does contribute to better bone health, not only because of the calcium, but other important nutrients found in dairy foods. The suggestion that dairy products "leach" calcium from the bones is due in part to people's confusion about pH balance in the diet and acid and alkaline levels in foods. The important thing to note is that as long as you're getting the recommended daily amount of calcium in your diet, your body will manage the pH balance and you will not be excreting calcium from your bones. Additional Resources on this topic can be found here: <https://www.ncbi.nlm.nih.gov/pubmed/28404575>; <https://www.ncbi.nlm.nih.gov/pubmed/22081694>; <https://www.ncbi.nlm.nih.gov/pubmed/21102327>

Is milk a safe type of dairy?

Milk is a top food source for calcium, vitamin D and potassium and there are many research studies supporting the benefits of milk. If you are lactose intolerant or have trouble digesting milk, look for lactose-free dairy products that contain calcium as an alternative to regular milk.

Exercise

What data supports the moderate-intensity exercise guidelines that say not to lift heavy weights, not to lift weights overhead and not to lift too much from above?

The “Too Fit to Fracture” recommendations (PDF of the study results attached) include evidence on exercise guidelines for patients at a moderate to high risk for fracture. Some key exercise recommendations from this research include:

- Resistance or difficulty should be selected to create an intensity of around 8–12 repetitions at an intensity rating between five and eight on a scale of 0-10 (with 10 being maximum intensity). Persons previously sedentary, unfamiliar with resistance training, at high fracture risk or with conditions that affect activity participation may need to train at lower intensity, at least initially.
- Progressive overload over time is necessary to see improvement. Progression can occur in the form of increased repetition, sets, resistance, or exercise difficulty.
- Avoid making absolute restrictions about amount of weight allowed, instead place emphasis on safe movement recommendations, e.g., use hip hinge instead of spine flexion; avoid rapid, repetitive, weighted, or end-range flexion or rotation of the spine; avoid lifting from or lowering to the floor.
- In individuals with a history of vertebral fracture:
 - A consultation with a therapist with training in exercise prescription for osteoporosis is highly recommended. In the absence of such consultation, it may be advisable to limit resistance exercises to those that use body weight, the floor, or the wall to provide resistance.

Is jumping good for your bones?

Jumping is a high-impact weight-bearing exercise that helps build bones and keep them strong. If you have broken a bone due to osteoporosis or are at risk of breaking a bone, you may need to avoid high-impact exercises though and should talk to your healthcare provider before starting an exercise program that includes jumping.

Is it okay to lift heavy weights if you have osteoporosis? Response to Belinda Beck’s LIFTMOR trial.

In the recent LIFTMOR trial (Watson, et al. 2018), researchers looked at high intensity resistance training for people with osteoporosis. In this study, healthy older adults with osteoporosis did supervised high intensity resistance training. An improvement in lumbar spine and femoral neck bone density was seen compared to the control group (who participated in regular exercise) as well as improvement in some other parameters. Spine fractures were not measured, however. It is also important to realize that this was a highly supervised program by trained experts and individuals may not be able to replicate such exercise in a safe way at home. More research is needed to determine if this is safe for the general population with osteoporosis.

Is self-traction (pushing the top half of the body up and forward, which curves the spine backward) safe with osteoporosis?

As long as the individual exercising is prone (lying face downward) on his/her elbows, self-traction (pushing the top half of the body up and forward, which curves the spine backward) is a safe exercise.

Is walking good for your bones?

Walking is a good weight bearing exercise to help maintain general health, cardiac health and bone health. The benefits gained in muscle strength and balance that come from regular walking can reduce the risk of falls, which are a common cause of fractures.

Research has shown that walking may slow age-related decline in bone density and may impact factors that preserve bone strength. According to the [Nurses' Health Study](#), walking volume (more is better), pace (faster is better) and stride (longer is better) were associated with reductions in hip fracture risk by 40-60 percent.

Is yoga/pilates safe for people with osteoporosis?

Yoga and Pilates can help improve your strength, balance and flexibility, but certain positions may not be safe for people with osteoporosis or those at increased risk of broken bones. If you have osteoporosis, you should avoid any movements that require you to bend forward from the waist. When you bend forward from the waist, your shoulders and back become rounded, also known as spine flexion, which can increase the risk of a spine fracture. People with osteoporosis or at risk of breaking bones in the spine, should also avoid twisting to the point of strain. Before starting any new exercise program, ask your healthcare provider or a physical therapist what types of exercises and movements are safe for you.

What are the benefits of OsteoStrong?

It has long been known that high-intensity resistance exercise and impact increases osteogenic loading and facilitates bone mineral density acquisition. Several of the manuscripts and abstracts shared by OsteoStrong™ describe the effects of high-intensity resistance exercise using the BioDensity equipment on force production, leg muscle strength, HA1C diabetes marker and bone mineral density (BMD) outcomes in small uncontrolled studies of adults (sample sizes ranged from n=9 to n=21). The larger published studies they shared examined levels of impact loading on BMD outcomes in adolescents, assessed sex differences and learning effects in maximal force production and reported in an abstract that the underweight adults only were able to produce adequate force production for osteogenic loading. None of the studies were adequately powered randomized controlled trials investigating the effects of the OsteoStrong™ exercise program on BMD outcome, and none compared the effectiveness of the BioDensity program to a more generic, high-intensity resistance exercise program. The studies to date do provide preliminary data for this type of large effectiveness trails which are needed in order to change guidelines or make recommendations.

In summary, the scientific community has long known the benefits of high-intensity resistance and impact exercise on BMD. While the high-intensity BioDensity exercise program may be beneficial for increasing BMD in adults, the evidence presented does not demonstrate efficacy of the OsteoStrong™ program on BMD outcomes. Furthermore, we do not know how it compares to the benefits of the current NOF recommendations for weight bearing and resistance exercise. Further research is warranted before the benefits of the OsteoStrong™ program can be determined.

General

Can osteoporosis be treated with nutrition, supplements, and exercise, alone?

Unfortunately there is no cure for osteoporosis, but the good news is when people are armed with the right information, the disease is highly treatable. Eating a healthy, balanced diet, getting enough dietary calcium, taking vitamin D, exercising regularly, fall-proofing your home and avoiding smoking and excess alcohol can go

a long way toward preventing fractures and maintaining bone strength. But, if you've had fractures or are diagnosed with osteoporosis, it's best to talk to your doctor about medication options. There are more choices becoming available every year and taking medication as recommended in combination with the lifestyle modifications mentioned above is the best way to prevent fractures. Working with your healthcare provider, you can come up with a comprehensive plan to effectively treat your osteoporosis and help you stay active and independent.

Do weighted-vests help bone health?

Before purchasing a weighted vest, check with your healthcare provider to see if it is safe and appropriate for you to wear one. Your healthcare provider knows of your individual situation – including your bone mineral density and any other health-related issues you may have.

There are some weighted vests that are not safe for people with osteoporosis. These include vests that sit on the shoulders and only have weights on the upper part of the trunk. This could increase the stress on the spine, causing increased kyphosis (curvature of the spine). A safer vest is weighted throughout the trunk. These are especially good when they are well fitted at the waist. This should spread stress evenly around the trunk, reducing the weight from the top of the shoulders. They must fit very well, be tightened around the waist, and should not be used in people with kyphosis.

Do vibration therapy machines work?

According to the Agency for Healthcare Research and Quality (AHRQ), further research is needed to validate the claims of benefits about whole body vibration therapy for the prevention and treatment of osteoporosis. For more information, see the AHRQ report here: <https://effectivehealthcare.ahrq.gov/topics/osteoporosis-vibration-therapy/technical-brief>.

Treatment

Are there osteoporosis treatments with no side effects?

While there are many medications available to treat osteoporosis and reduce the risk of fracture, they come in a range of formulations from daily tablets to yearly intravenous infusions, and the side effects vary from person to person. There is no best medication for everyone. The one that works best for you will depend on many factors. Talk to your healthcare provider about your concerns and overall health history and you can work together to find the best treatment option to meet your needs.

What are the best drug-free, natural treatments for osteoporosis?

We understand many people prefer not to take drugs or medications and want to treat their osteoporosis naturally, but at this time, there are no herbal supplements or “natural” treatments that are proven to be both safe and effective to treat osteoporosis and prevent broken bones. NOF reviews the results of many research studies that look at the possible bone health benefits of certain vitamins, minerals, herbs and foods. But before supporting a claim about an alternative or natural treatment, we must see scientific evidence and consistent study results proving the benefits.

It's also important to note that the FDA is not able to approve health claims for dietary supplements. Manufacturers and distributors of dietary supplements and nutrients do not need approval by the FDA to sell their products. The FDA does not regulate or evaluate dietary supplements in the same rigorous way as prescriptions medicines from either an efficacy (how well it works) or safety perspective.

What are the risks of not taking a prescribed osteoporosis treatment?

Like any medication, osteoporosis drugs can only work if they are taken as prescribed. Although you can't feel your bones getting stronger when you take osteoporosis medication, the biggest risk of not taking it is that your bones will continue getting weaker, putting you at increased risk of breaking a bone.

The most important thing you can do is to take your medication once it's been prescribed and take it consistently. Talk to your healthcare provider if you have any trouble following your treatment plan or are concerned about side effects. There are many different treatment options available and your healthcare provider can help find one that meets your needs.

Do the benefits of osteoporosis treatment outweigh the risks?

In most cases, the benefits of osteoporosis treatment outweigh the risks. Fragility fractures from osteoporosis are very common. Out of 1,000 women, 500 will suffer a fracture during their lifetime unless they get treatment for osteoporosis. The FDA-approved osteoporosis medications all have been proven to reduce the likelihood of suffering a fragility fracture.