

# The Man's Guide *to Osteoporosis*



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# Introduction

If you think you're not at risk of getting osteoporosis because you're a man, think again. While it is true that women are more likely to develop osteoporosis than men, many men are at risk too. And as our population ages, even more men will develop osteoporosis. Now is a good time to learn everything you can to recognize your risk factors for osteoporosis and to start taking steps to protect your bone health.

*What exactly is osteoporosis?* Osteoporosis is a disease that makes your bones weak and more likely to break. When you have osteoporosis, sometimes it doesn't take much to break a bone. Broken bones are also called fractures. A minor fall, a sneeze or even bumping into furniture could cause you to break a bone. Breaking a bone is serious and painful. Men are more likely to break bones from osteoporosis later in life, making it more difficult to recover. In fact, men are more likely than women to die within a year of breaking a hip.



Together, the following five steps can improve bone health and help prevent osteoporosis:

1. Get the calcium and vitamin D you need every day.
2. Do regular weight-bearing and muscle-strengthening exercises.
3. Don't smoke and don't drink too much alcohol.
4. Talk to your healthcare provider about your chance of getting osteoporosis, and ask when you should have a bone density test.
5. Take an osteoporosis medicine when it's right for you.

*Osteoporosis can sneak up on you!* You can't feel your bones getting weaker and you may not know you have osteoporosis until you break a bone. That's why it's important to do things now to prevent osteoporosis from developing in the first place. If you already have osteoporosis, there are things you can do to manage the condition and reduce your chance of breaking a bone in the future.

## Chapter 1: Start with bone healthy behaviors

### *Calcium and vitamin D recommendations for men*

- Men under age 50 need a total of 1,000 milligrams (mg) of calcium\* and 400-800 international units (IU) of vitamin D\*\* every day.
- Men age 50-69 need a total of 1,000 mg of calcium\* and 800-1,000 IUs of vitamin D\*\* every day.
- Men age 70 and older need a total of 1,200 mg of calcium\* and 800-1,000 IUs of vitamin D\*\* every day.

*\*This includes the total amount of calcium you get from both foods and supplements.*

*\*\*Some men may need more vitamin D.*

Eating healthy, exercising and not smoking or drinking too much alcohol can help reduce your risk of getting osteoporosis. If you already have the disease, adopting these healthy behaviors can help reduce your chance of breaking a bone.

### Get the calcium and vitamin D you need every day

*Everyone knows it's important to eat well, but did you know that the foods you eat can affect your bones?* It's true, calcium and vitamin D play a big role in maintaining strong bones. Many people also don't know how much of these nutrients they need and the best sources to get them.

*How can you get enough (but not too much) calcium for your bones?* You can start by eating low-fat or fat-free dairy products, calcium-rich vegetables and foods that are fortified with calcium. See the chart on the following page for additional examples of foods that are good for your bones.

## What foods are good for your bones?

Dairy Products	Estimated Calcium***
Milk, skim, low-fat and whole, 1 cup	300 mg
Yogurt, plain, fat-free or low-fat, 6 oz.	300 mg
Cheddar and mozzarella cheese, 1 oz.	205 mg
Cottage cheese, low-fat, ½ cup	70 mg
Parmesean cheese, 1 tbsp.	55 mg
<b>Fruits and Vegetables</b>	
Collard greens, cooked, 1 cup	266 mg
Kale, cooked, 1 cup	95 mg
Broccoli, fresh, cooked, 1 cup	60 mg
Oranges, 1 whole	50 mg
<b>Fish</b>	
Sardines (canned w/bones), 3 oz.	325 mg
Salmon (canned w/bones), 3 oz.	180 mg
Shrimp, canned, 3 oz.	125 mg
<b>Fortified Foods</b>	
Cereal with added calcium, 1 cup	100-1,000 mg
Soy milk, rice milk and almond milk with added calcium, 1 cup	300 mg
Fruit juice with added calcium, 6 oz.	200-345 mg
Waffles with added calcium, 2 pieces	200 mg

\*\*\*Calcium content listed for most foods is estimated and can vary due to multiple factors.

### *Osteoporosis: It's not just a woman's disease*

- Up to one in four men over age 50 will break a bone due to osteoporosis.
- Men older than age 50 are more likely to break a bone due to osteoporosis than they are to get prostate cancer.
- Approximately two million American men already have osteoporosis. About 12 million more are at risk.
- Each year, about 80,000 men will break a hip.

*When should you take a calcium supplement?* Sometimes, you can't reach your daily calcium goals from foods alone. In that case, you may want to consider taking a calcium supplement. Try to estimate the amount of calcium you get from foods first and only supplement the approximate amount you don't get from your diet. Too much calcium is not beneficial and may even be harmful.

*How can you get enough vitamin D for your bones?* Many individuals need to take a supplement to get enough vitamin D. If you currently take a multivitamin or calcium supplement, check the label to see if either product contains vitamin D. Vitamin D supplements can be taken with or without food. While your body needs vitamin D to absorb calcium, you do not need to take vitamin D at the same time as a calcium supplement. Talk to your healthcare provider about how much vitamin D you should take.

In addition to taking supplements, you can get small amounts of vitamin D from fatty fish, such as wild-caught mackerel, salmon and tuna, as well as from fortified milk and other fortified foods. But it is difficult for most people to get enough vitamin D from these sources alone.

Your skin also makes vitamin D when it is exposed to the sun. However, sunscreen prevents your body from making enough vitamin D from sunlight and it's important to wear sunscreen to reduce your risk of skin cancer. So it's safest to choose other sources for your daily dose of vitamin D.

For more information about calcium and vitamin D, visit the [NOF website](#).



## Do regular weight-bearing and muscle-strengthening exercises

Weight-bearing and muscle-strengthening exercises are two forms of exercise that are important for your bones.

*Weight-bearing exercises* make you work against gravity while standing. When you do these exercises, your bones support the weight of your body. These exercises should be done for a total of 30 minutes on most days of the week. Aim for 30 minutes at one time or break it up during the day. Examples include:

- Hiking
- Jogging
- Brisk walking
- Racquet sports
- Basketball
- Soccer

*Note:* Biking and swimming are not weight-bearing exercises and do not provide much benefit to your bones. If you enjoy these exercises, make sure to also perform weight-bearing exercises as part of your weekly program. Always check with your healthcare provider before starting a new exercise program.

*Muscle-strengthening or resistance exercises* are activities where you move your body, a weight or some other resistance against gravity. These exercises should be done two to three days per week. Try to work all of the major muscle groups each week. Examples include:

- Lifting weights
- Using elastic exercise bands
- Using weight machines
- Lifting your own body weight

A physical therapist (PT) can teach you how to exercise safely to protect your spine and help you prevent broken bones. To see a PT, you will probably need a referral from your healthcare provider.

For more information about bone healthy exercises, visit the [NOF website](#).

## Learn how to move safely and prevent falls

If you have osteoporosis, you'll need to modify or avoid certain movements and exercises to protect your spine. You may need to avoid activities that involve excessive twisting motions, such as golf or tennis. You should also avoid bending forward from the waist (for example toe-touches, abdominal crunches and sit-ups) and stay away from high-impact sports that involve running and jumping.

For more information about moving safely, visit the [NOF website](#).

Each year about one-third of all persons over age 65 will fall. These falls often result in broken bones. Luckily you can help prevent falls by:

- Doing exercises to strengthen your legs and challenge your balance.
- Getting your hearing and vision checked each year.
- Finding out if any of the medicines you take could affect your balance and increase your risk of falling.
- Taking measures inside and outside your home to reduce your chance of falling.

For more information about preventing falls, visit the [NOF website](#).



## Chapter 2: What puts men at risk?

### Risk factors for osteoporosis and broken bones

There are many factors that increase a man's risk of developing osteoporosis and broken bones. Here are some things to think about:

- As men age, bone density decreases, especially around age 70.
- If you have a family history of osteoporosis or broken bones, you may be at risk.
- If you are age 50 or older and have broken any bones or lost an inch or more in height, you may already have osteoporosis and not know it.
- If you take certain medicines or have certain medical conditions that can cause bone loss, you may develop osteoporosis.

Talk to your healthcare provider about your risk of developing osteoporosis, what you can do to protect your bones and ask when you should have a bone density test.

### *Low Hormone Levels and Osteoporosis*

Testosterone and estrogen are hormones that help you maintain strong bones. Some men lose testosterone as they age. Others may develop low testosterone levels after receiving androgen deprivation therapy (ADT) to treat prostate cancer. Estrogen is also present in small amounts in men. Low levels of either of these hormones can contribute to bone loss and osteoporosis in men.



## Conditions that can cause bone loss

- AIDS/HIV
- Depression
- Diabetes
- Digestive disorders like celiac disease, Crohn's disease and ulcerative colitis
- Hyperparathyroidism
- Leukemia
- Low estrogen and testosterone levels
- Lymphoma
- Multiple Myeloma
- Multiple sclerosis (MS)
- Organ transplants
- Parkinson's Disease
- Prostate cancer
- Rheumatoid arthritis
- Scoliosis
- Sickle cell disease
- Stroke
- Weight loss and weight loss surgery

For a more complete list, visit the [NOF website](#).



## Medicines that can cause bone loss

- Aluminum-containing antacids
- Antiseizure medicines (only some) such as Dilantin<sup>®</sup> or Phenobarbital
- Cancer chemotherapeutic drugs
- Cyclosporin A and FK506 (Tacrolimus) (used after organ transplantation)
- Gonadotropin releasing hormone (GnRH) such as Lupron<sup>®</sup> and Zoladex<sup>®</sup> (androgen deprivation therapy)
- Heparin
- Methotrexate
- Proton pump inhibitors (PPIs) such as Nexium<sup>®</sup>, Prevacid<sup>®</sup> and Prilosec<sup>®</sup>
- Selective serotonin reuptake inhibitors (SSRIs) such as Lexapro<sup>®</sup>, Prozac<sup>®</sup> and Zoloft<sup>®</sup>
- Steroids (glucocorticoids) such as cortisone and prednisone
- Thiazolidinediones such as Actos<sup>®</sup> and Avandia<sup>®</sup>
- Thyroid hormones in excess

Consult with your healthcare provider about any medicines you take. Never stop taking your medicine without first discussing it with your healthcare provider.

For a more complete list, visit the [NOF website](#).

## Chapter 3: What tests can help you learn about your bone health?

### Bone density tests

A bone density test can diagnose osteoporosis and measure the amount of bone in different parts of the skeleton. NOF recommends a bone density test of the hip and spine using a central DXA machine to diagnose osteoporosis. DXA stands for dual energy x-ray absorptiometry. There are several reasons why you might consider having a bone density test. Some of these include:

- You are under the age of 70 and have one or more risk factors for osteoporosis and broken bones
- You are age 70 or older, even without risk factors for osteoporosis and broken bones
- You are receiving androgen deprivation therapy to treat prostate cancer
- You have broken a bone after age 50
- You have a medical condition or take a medicine that is associated with osteoporosis and broken bones
- You are being treated for osteoporosis
- Your healthcare provider is considering prescribing an osteoporosis medicine
- Your healthcare provider suspects that you have a spine fracture due to height loss, back pain or curvature of your spine
- You are taking or are planning to take steroid medicines such as cortisone or prednisone in a daily dose of 5 milligrams or more per day for three or more months

For more information about bone density testing, visit the [NOF website](#).

## Other tests you may need

Your doctor may want to run other tests to help predict your risk of osteoporosis and broken bones. These tests may include:

- 25-hydroxyvitamin D test to determine whether your body has enough vitamin D
- Spine x-ray or vertebral fracture assessment (VFA) to look for broken bones in your spine
- FRAX® test to estimate your risk of breaking a bone in the next 10 years
- Blood calcium level and 24-hour urine calcium measurement tests to see how much calcium is in your blood and/or urine
- Thyroid function tests to check for hyperthyroidism
- Parathyroid hormone levels to see if you may be at risk of hyperparathyroidism
- Testosterone levels to see if your levels are too low
- Biochemical markers of bone turnover tests to make estimates about how quickly you are losing bone (examples are CTX and NTX)

## Chapter 4: How is osteoporosis treated?

Sometimes healthy lifestyle choices are not enough to prevent or treat osteoporosis and broken bones. If you have been diagnosed with osteoporosis or are at an increased risk of breaking a bone, your healthcare provider may prescribe an FDA-approved medicine to reduce your chance of breaking a bone. Although there is no cure for osteoporosis, medicines can sometimes slow it or stop it from getting worse.

People at high risk of breaking a bone should always speak with their healthcare provider about treatment options. Individuals at highest risk are those who have already broken bones of the hip or spine (vertebral fractures). Almost all people with these types of broken bones need treatment for osteoporosis. People with other fractures may also need treatment and those who have never broken a bone. On the following page is a chart describing the osteoporosis medicines approved for men.

## FDA-approved osteoporosis medicines for men

Generic Name	Brand Name	Form
Alendronate	Generic alendronate, Fosamax <sup>®</sup> and Fosamax Plus D <sup>®</sup> (with 2,800 IU or 5,600 IU of vitamin D <sub>3</sub> )	Oral (tablet)
Risedronate	Actonel <sup>®</sup> and Actonel <sup>®</sup> with Calcium	Oral (tablet)
Zoledronic Acid	Reclast <sup>®</sup>	Intravenous (IV)
Teriparatide	Forteo <sup>®</sup>	Subcutaneous injection (under the skin)

*\*Medicines are up-to-date as of 2011. Please visit [NOF website](#) for the most detailed and up-to-date information about FDA-approved osteoporosis medicines.*

All medicines have benefits and risks of side effects. A doctor or other healthcare professional can discuss with you the benefits and risks of starting a medicine. If you have osteoporosis or an increased chance of breaking a bone, ask your healthcare provider about the available treatment options.



## Summary

- If you break a bone, don't assume that it's because you are clumsy. Ask your healthcare provider if it could be osteoporosis.
- If you smoke, stop. This will help your bones, but will also lower your chance of getting cancer, emphysema and heart disease.
- Keep your alcohol intake to no more than two drinks per day. Alcohol damages bones and can lead to accidents and falls which can cause serious injury in people with osteoporosis.
- Ask your healthcare provider when it is time for you to have a bone density test.
- Get enough calcium and vitamin D and take supplements if needed.
- Engage in regular weight-bearing and muscle-strengthening exercises on most days of the week. This benefits all of your body systems, not just your bones.
- If your healthcare provider prescribes a medicine to help strengthen your bones, do not stop taking it without first discussing it with him or her.
- If you aren't getting the guidance you need to take good care of your bones, NOF may be able to help you find an experienced osteoporosis healthcare provider.

For more information about the prevention, detection and treatment of osteoporosis, please visit the [NOF website](#).



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