

Chapter 1 : Risk factors | Osteoporosis Australia

Osteoporosis makes you more likely to break bones because you lose bone mass and density. You may not have any symptoms or pain. The first sign might be a bone fracture. Things that make.

In terms of numbers, an estimated 80 percent of patients with osteoporosis are women. Although patients 50 and older are considered most at risk for developing the condition, women who are 65 and older and men who are 70 and older should be screened regularly as they are at a heightened risk for having undiagnosed osteoporosis and could sustain greater injuries from a fall. Due to the gradual weakening of the bones, a simple fall or bump can lead to broken wrists, femurs, fingers, the spine and more, which might indicate the presence of this condition. Low levels of this important sun-derived nutrient can lead to weaker bones and the development of osteoporosis. Thankfully, we also have supplements and foods enriched with vitamin D, which can help protect our bones in the absence of regular sunshine. Due to high rates of bone fracture, skeletal size and, for Asian women, low calcium intake, these two ethnic groups have a higher chance of developing this condition. Not only is RA a culprit, but the medications used to treat it, as well as the inactivity that results from joint damage, are all linked to the development of osteoporosis. Measuring bone-specific alkaline phosphatase, osteocalcin, urinary N-telopeptide of type-1 collagen and more are ways to determine associated illnesses and see if a patient is at risk for developing osteoporosis. Primarily affecting women, this condition can become considerably painful and permanently disfiguring. If either parents have osteoporosis, or have experienced hip or spine fractures, the chances of their child developing osteoporosis is much higher. The good news is that a doctor can begin early intervention for at-risk patients, helping to minimize their risk or the damaging effects of the condition. Affecting an estimated 34 million people annually primarily women, the condition is caused when the body fails to regenerate new bone as quickly as it reabsorbs older ones. Naturally petite women tend to have thinner bones, which are associated with an increased likelihood for developing the condition. Women who aggressively diet or struggle with eating disorders that may cause missed periods can also increase the risk of osteoporosis, due to a dip in the bone-protecting hormone, estrogen. A long list of meds, including steroids like Prednisone, cancer and chemo drugs, injectable contraceptives like Depo-Provera, thyroid hormone replacements and even opioids and over-the-counter pain relievers like acetaminophen have all been linked to a reduction in bone mass. Likewise, heavy alcohol intake, especially during adolescence and young adulthood, is also linked with increased bone mass loss and deterioration. Even more surprising, young women who experience an abnormal absence of their period may also be at risk. Thankfully, with the right treatment, which may include hormone replacement therapy, osteoporosis caused by hormonal changes can be avoided. Due to the malfunctioning thyroid gland producing excess levels of the parathyroid hormone PTH, which controls the level of calcium in the bloodstream, bones release more calcium than normal, causing the skeletal structure to deteriorate at accelerated rates. Thankfully, successful parathyroid surgeries are shown to significantly reduce this risk. Certain strength training exercises can help retrain muscles to compensate for a weakened spine. Since bone mass peaks in our 20s, not getting enough physical activity especially weight-bearing exercises that are proven to increase and protect bone density in our 30s and beyond can contribute to the significant deterioration of our bones.

Chapter 2 : Osteoporosis - Wikipedia

Some risk factors for osteoporosis are out of your control, including: Your sex. Women are much more likely to develop osteoporosis than are men. Age. The older you get, the greater your risk of osteoporosis. Race. You're at greatest risk of osteoporosis if you're white or of Asian descent. Family history.

Risk Factors White and Asian women, aged 50 and over. While men and women of all races can develop osteoporosis, post-menopausal white and Asian women are at highest risk. Men with low testosterone levels. Testosterone helps keep bones strong. Smokers and heavy drinkers more than two drinks a day on most days. Anyone who weighs less than pounds. Petite adults have a smaller frame and lower peak bone mass; therefore, any loss of bone with age is more likely to result in a lower-than-normal bone mineral density. People who have undergone bariatric surgery. Anyone with a parent who suffered a hip fracture as a senior. People who take oral corticosteroids on a daily basis, or other high-risk medications e. Women and Osteoporosis The National Osteoporosis Foundation estimates that half of all women over the age of 50 will eventually develop osteoporosis and that 80 percent of Americans with osteoporosis are women. Women also sustain percent of all hip fractures. For older people, a hip fracture often marks the end of independent living and admission into a nursing home. Women live longer than men. Age is a risk factor for incurring an osteoporotic fracture. Estrogen helps the body maintain healthy bones. Rib fractures are the most common clinical fracture in senior men. Men with diabetes who are using insulin are at increased risk of fractures not related to the spine. Loss of height is a risk factor and marker for osteoporosis in men. Lower than normal testosterone levels in men are associated with greater fragility and vulnerability to fractures.

Dietary habits can increase one's risk of developing osteoporosis. Luckily, this is a risk factor that can be controlled. A diet without enough calcium and vitamin D can contribute to weak bones.

Print Causes and Risk Factors for Osteoporosis The more risk factors for osteoporosis that a person has, the greater the chance of fracture. Women with small body frames, a family history of osteoporosis, and early onset of menopause are at the highest risk. In the most severe cases, the disease also affects teeth and jawbones, resulting in periodontal disease and tooth loss. Genetic risk factors include the following: After age 50, the rapid and severe decrease in estrogen production that occurs during and after menopause increases the risk for osteoporosis. **Modifiable Osteoporosis Risk Factors** Although optimal bone mass is determined mostly by genetics, other factors are involved. The amount of calcium, phosphorus, and vitamin D in the diet affects bone formation. Additionally, regular exercise, which increases bone mass, helps determine whether a person obtains optimal bone mass. Several risk factors can be modified or eliminated by changing diet and habits: Cigarette smoking decreases estrogen production. Excessive alcohol use inhibits osteoblast activity and increases risk for falling. High caffeine intake increases loss of calcium in urine. Inactive, sedentary lifestyle eliminates physical activity that stimulates bone remodeling. Calcium and phosphorus deficiencies decrease formation of hydroxyapatite, the major mineral in bone. Lack of vitamin D reduces intestinal absorption of calcium and phosphorus. **Medication** Prolonged use of certain medications can induce or speed up the rate of osteoporosis, including: Antiseizure medications Gonadotropin releasing hormone GnRH analogs Heparin Thyroid hormone Excessive amounts of antacids containing aluminum e. **Diseases** Diseases caused by hormone imbalances e. Early onset menopause brought on by the removal of the uterus hysterectomy and the complete removal of the ovaries oophorectomy is associated with osteoporosis. Results of a study supported by the National Institutes of Health NIH and released in June indicate young men between the ages of 14 and 25 who are undergoing treatment for HIV infection may have an increased risk for low bone mass. Participants in the study had been diagnosed with HIV an average of two years earlier and, according to researchers, also had several other risk factors for osteoporosis, including smoking, alcohol use and low dietary intake of calcium and vitamin D. More research is needed to determine how HIV treatment might affect bone density. People being treated for HIV should be monitored for bone loss, should exercise regularly and should get recommended amounts of calcium and vitamin D through diet and supplements.

Chapter 4 : Osteoporosis: Risk Factors, Treatment, Diet, and Exercise | Everyday Health

Some of the most common osteoporosis risk factors are often unavoidable; that is, you can't control their occurrence. These factors include: being female: Osteoporosis is more common in women than in men—about 80% of cases affect women.

Sign up now Osteoporosis — What are your risks? But others are things you can control. Multimedia Osteoporosis weakens bone You might not think of bones as being alive, but they are. Every day, your body breaks down old bone and replaces it with new bone. As you get older, however, the ratio becomes unequal: If too much is lost, then you can develop the bone disease osteoporosis. Osteoporosis can cause bones to become weak, brittle and prone to break. Due to loss of bone tissue, bones that were once dense and strong can be unable to withstand the stress of even normal activity, such as bending over or coughing. Osteoporosis-related fractures most commonly occur in the spine, wrist and hip. In addition to bone fractures, osteoporosis can cause bone pain, loss of height and a stooped posture. All of these symptoms can lead to feelings of anxiety and depression. No one can say for sure which individuals will develop osteoporosis. But research has revealed what makes some people more likely than others to develop it. Bone health basics Generally speaking, the risk of developing osteoporosis and being more prone to bone fractures depends on your bone health — the size and strength of your bones and the condition of your bone tissue. Bone health is a result of how well your skeleton developed during childhood and early adulthood, as well as your peak bone mass — the maximum amount of bone tissue you have. Most people achieve peak bone mass in their late 20s to early 30s. Bone health is also affected by how rapidly bone mass is lost as you get older. You can monitor your bone health for early signs of abnormal bone loss and take steps to prevent osteoporosis or to slow its development. These are common risk factors for osteoporosis: The older you are, the more likely you are to develop osteoporosis and the more likely you are to break a bone because of it. This happens because new bone formation slows with age, while bone breakdown stays the same or increases. The internal structure of bones also begins to weaken, and the outer shell thins. Women usually have lower peak bone mass than men do. Women also tend to live longer. So, in effect, women have less bone to lose but more time to lose it. In addition, during menopause, women experience a drop in estrogen levels, which usually accelerates bone loss. Osteoporosis is most common among postmenopausal women. Caucasians and Asians are at greater risk of osteoporosis; Hispanics and Native Americans appear to have an intermediate risk, while African-Americans have the lowest risk. These various levels of risk are based in part on differences in bone mass and bone density. Family history is a strong predictor of low bone mass. By taking steps to lower your risk, osteoporosis can be prevented. Men and women with small body frames tend to have a higher risk because they usually have less bone mass to draw from as they age. Health-related risk factors Individual health circumstances, including health conditions and medications, can influence osteoporosis risk. Pregnancy builds stronger bones by raising estrogen levels and increasing weight. Bone density decreases slowly during pregnancy and more rapidly while nursing a baby, but this bone loss recovers within six months after stopping nursing in most women. Certain medications can accelerate bone loss and increase your risk of osteoporosis. If you take any of the following medications, then talk to your health care professional about what you can do to counteract their effects on bone health. Long-term use of corticosteroids, including prednisone Rayos , cortisone, prednisolone Orapred, Prelone, others and dexamethasone Maxidex, Tobradex, others , lowers bone mass. If you take one of these medications for more than a few weeks, then your doctor will likely monitor your bone density and recommend preventive measures. If you take a medication to control seizures anticonvulsants over a long period of time, then your liver begins to metabolize vitamin D in a way that causes a deficiency of the vitamin. If you take an anticonvulsant medication, such as phenobarbital Lumina , carbamazepine Carbatrol, Tegretol, others or phenytoin Dilantin, Phenytek, others , then your health care professional may recommend vitamin D and calcium supplements. When used in excessive quantities, thyroid medications such as levothyroxine Synthroid, Tirosint, others can cause high thyroid hormone blood levels that accelerate bone loss. These drugs prevent fluid buildup in your body. But by doing so, certain diuretics can cause the kidneys to excrete too

much calcium, leading to weaker bones. Certain blood thinners, such as heparin, can cause bone loss when used over a long period of time. So can aromatase inhibitors, a class of drugs used to treat breast cancer, and drugs that are used to treat endometriosis and prostate cancer gonadotrophin-releasing hormone agonists. Certain medical conditions can increase the risk of osteoporosis by slowing bone formation or speeding up bone breakdown. Surgery to reduce the size of the stomach or to remove part of the intestine limits the ability of these organs to absorb nutrients, including calcium. Low calcium and vitamin D intakes. A lifelong lack of calcium plays an important role in the development of osteoporosis. Low calcium intake contributes to diminished bone density, early bone loss and an increased risk of fractures. Because vitamin D is essential for calcium absorption, chronically low levels can contribute to osteoporosis. Some studies suggest that large portions of the U. But the data is difficult to interpret, because the definition of what constitutes deficiency can vary. Severely restricting food intake and being underweight can weaken bone. Lack of physical activity. Regular physical activity is key to preventing osteoporosis and fractures. Lack of exercise accelerates bone loss; whereas, weight-bearing exercises such as walking and resistance training can increase or at least maintain your bone density at any age. Smoking interferes with the production of estrogen and testosterone, which are needed to build bone. Smoking also disrupts calcium absorption. Alcohol delivers a double whammy to your bones, putting a damper on bone building and stimulating the bone loss process. If you choose to drink alcohol, do so in moderation. For healthy adults, that means up to one drink a day for women of all ages and men older than age 65, and up to two drinks a day for men age 65 and younger.

Chapter 5 : Risk Factors For Osteoporosis - Modern Medic

It is important to talk with your healthcare provider about your risk factors for osteoporosis and together you can develop a plan to protect your bones. A woman's risk of breaking a hip due to osteoporosis is equal to her risk of breast, ovarian and uterine cancer combined.

Lifestyle choices Some bad habits can increase your risk of osteoporosis. People who spend a lot of time sitting have a higher risk of osteoporosis than do those who are more active. Any weight-bearing exercise and activities that promote balance and good posture are beneficial for your bones, but walking, running, jumping, dancing and weightlifting seem particularly helpful. Regular consumption of more than two alcoholic drinks a day increases your risk of osteoporosis.

Complications **Compression fractures** Compression fractures The bones that make up your spine vertebrae can weaken to the point that they crumple, which may result in back pain, lost height and a hunched posture. **Bone fractures**, particularly in the spine or hip, are the most serious complication of osteoporosis. Hip fractures often are caused by a fall and can result in disability and even an increased risk of death within the first year after the injury. The bones that make up your spine vertebrae can weaken to the point that they may crumple, which can result in back pain, lost height and a hunched forward posture.

Prevention Good nutrition and regular exercise are essential for keeping your bones healthy throughout your life. **Protein** Protein is one of the building blocks of bone. And while most people get plenty of protein in their diets, some do not. Vegetarians and vegans can get enough protein in the diet if they intentionally seek suitable sources, such as soy, nuts, legumes, and dairy and eggs if allowed. Older adults may also eat less protein for various reasons. Protein supplementation is an option. **Body weight** Being underweight increases the chance of bone loss and fractures. Excess weight is now known to increase the risk of fractures in your arm and wrist. As such, maintaining an appropriate body weight is good for bones just as it is for health in general.

Calcium Men and women between the ages of 18 and 50 need 1, milligrams of calcium a day. This daily amount increases to 1, milligrams when women turn 50 and men turn Good sources of calcium include: Low-fat dairy products Canned salmon or sardines with bones Soy products, such as tofu Calcium-fortified cereals and orange juice If you find it difficult to get enough calcium from your diet, consider taking calcium supplements. However, too much calcium has been linked to kidney stones. Although yet unclear, some experts suggest that too much calcium especially in supplements can increase the risk of heart disease. The Institute of Medicine recommends that total calcium intake, from supplements and diet combined, should be no more than 2, milligrams daily for people older than A good starting point for adults is to international units IU a day, through food or supplements. For people without other sources of vitamin D and especially with limited sun exposure, a supplement may be needed. Most multivitamin products contain between and IU of vitamin D. Up to 4, IU of vitamin D a day is safe for most people.

Exercise Exercise can help you build strong bones and slow bone loss. Combine strength training exercises with weight-bearing and balance exercises. Strength training helps strengthen muscles and bones in your arms and upper spine, and weight-bearing exercises “ such as walking, jogging, running, stair climbing, skipping rope, skiing and impact-producing sports “ affect mainly the bones in your legs, hips and lower spine. Balance exercises such as tai chi can reduce your risk of falling especially as you get older.

Chapter 6 : Osteoporosis – What are your risks? - Mayo Clinic

Certain risk factors are linked to the development of osteoporosis and may contribute to an individual's likelihood of developing the disease. Many people with osteoporosis have several risk factors, but others who develop the disease have no known risk factors.

Written by Pauline M. But there are certain risk factors that may make you more susceptible to developing osteoporosis. As we age, our bones naturally lose some density and become weaker. Studies show that if either of your parents had osteoporosis, then you are more likely to get it, too. People with lighter, thinner bones are more prone to osteoporosis. However, having a larger frame is not a defense against the disease. Osteoporosis affects all races and ethnicities, but if you are white or of Asian or Latino descent, you have a higher risk. Menopause is marked by a steep drop in estrogen, which is a female sex hormone that protects bones. When estrogen levels decrease, bones may lose density and become prone to fractures. While there are many uncontrollable factors that may contribute to your osteoporosis risk, there are certain lifestyle behaviors that you can control that will also impact your chances of developing the disease. Eating a diet low in calcium and vitamin D: Calcium promotes healthy bones, and vitamin D helps your body effectively absorb calcium. Exercise helps ward off osteoporosis by strengthening your bones, just as it strengthens your muscles. Strong bones are less likely to fracture. If you smoke, your risk for osteoporosis increases for a number of reasons. First, the chemicals found in cigarettes interfere with the normal functioning of your bone cells. Also, smoking may inhibit proper calcium absorption. And finally, smoking prevents estrogen in women from protecting their bones as it should. Consuming large amounts of alcohol: If you consume alcohol, do so in moderation less than 2 drinks a day. Certain medications, particularly steroids, can weaken your bones. In most cases, you have to use these medications for a long time and in very high doses for them to become a threat to your bones. Eating a healthy diet and getting plenty of exercise will help maintain strong bones that will support you as you age. Mayo Clinic Health Information Web site. Accessed April 29, You May Also Like:

Chapter 7 : Osteoporosis - Symptoms and causes - Mayo Clinic

Ethnicity is another risk factor for osteoporosis that is uncontrollable. Caucasian and Asian women are at the highest risk for the development of osteoporosis. According to the National Osteoporosis Foundation (NOF), an estimated percent of Caucasian women and percent of Asian women age

Signs and symptoms[edit] Illustration depicting normal standing posture and osteoporosis Osteoporosis itself has no symptoms ; its main consequence is the increased risk of bone fractures. Osteoporotic fractures occur in situations where healthy people would not normally break a bone; they are therefore regarded as fragility fractures. Typical fragility fractures occur in the vertebral column , rib , hip and wrist. Fractures[edit] Fractures are the most dangerous aspect of osteoporosis. Debilitating acute and chronic pain in the elderly is often attributed to fractures from osteoporosis and can lead to further disability and early mortality. The most common osteoporotic fractures are of the wrist, spine, shoulder and hip. The symptoms of a vertebral collapse " compression fracture " are sudden back pain , often with radicular pain shooting pain due to nerve root compression and rarely with spinal cord compression or cauda equina syndrome. Multiple vertebral fractures lead to a stooped posture, loss of height, and chronic pain with resultant reduction in mobility. Hip fracture , in particular, usually requires prompt surgery, as serious risks are associated with it, such as deep vein thrombosis and pulmonary embolism , and increased mortality. Fracture risk calculators assess the risk of fracture based upon several criteria, including bone mineral density , age, smoking, alcohol usage, weight, and gender. Falls risk[edit] The increased risk of falling associated with aging leads to fractures of the wrist, spine, and hip. The risk of falling, in turn, is increased by impaired eyesight due to any cause e. Collapse transient loss of postural tone with or without loss of consciousness leads to a significant risk of falls; causes of syncope are manifold, but may include cardiac arrhythmias irregular heart beat , vasovagal syncope , orthostatic hypotension abnormal drop in blood pressure on standing up , and seizures. Removal of obstacles and loose carpets in the living environment may substantially reduce falls. Those with previous falls, as well as those with gait or balance disorders, are most at risk. In addition, osteoporosis is a recognized complication of specific diseases and disorders. Medication use is theoretically modifiable, although in many cases, the use of medication that increases osteoporosis risk may be unavoidable. Caffeine is not a risk factor for osteoporosis. Women lose bone mass more rapidly than men. While osteoporosis occurs in people from all ethnic groups, European or Asian ancestry predisposes for osteoporosis. At least 30 genes are associated with the development of osteoporosis. A small stature is also a nonmodifiable risk factor associated with the development of osteoporosis. A positive association exists between serum 1,25-dihydroxycholecalciferol levels and bone mineral density, while PTH is negatively associated with bone mineral density. Many studies have associated smoking with decreased bone health, but the mechanisms are unclear. Tobacco smoking has been proposed to inhibit the activity of osteoblasts, and is an independent risk factor for osteoporosis. Nutrition has an important and complex role in maintenance of good bone. Excess sodium is a risk factor. High blood acidity may be diet-related, and is a known antagonist of bone. Imbalance of omega-6 to omega-3 polyunsaturated fats is yet another identified risk factor. Research has found an association between diets high in animal protein and increased urinary calcium , [36] [37] [38] and have been linked to an increase in fractures. Bone remodeling occurs in response to physical stress, so physical inactivity can lead to significant bone loss. In female endurance athletes, large volumes of training can lead to decreased bone density and an increased risk of osteoporosis. A strong association between cadmium and lead with bone disease has been established. Low-level exposure to cadmium is associated with an increased loss of bone mineral density readily in both genders, leading to pain and increased risk of fractures, especially in the elderly and in females. Higher cadmium exposure results in osteomalacia softening of the bone. Some studies indicate soft drinks many of which contain phosphoric acid may increase risk of osteoporosis, at least in women. Many diseases and disorders have been associated with osteoporosis. For example, localized osteoporosis can occur after prolonged immobilization of a fractured limb in a cast. This is also more common in active people with a high bone turn-over for example, athletes. Other examples include bone loss during space flight or in people who

are bedridden or use wheelchairs for various reasons. Hypogonadal states can cause secondary osteoporosis. These include Turner syndrome , Klinefelter syndrome , Kallmann syndrome , anorexia nervosa , andropause , [55] hypothalamic amenorrhea or hyperprolactinemia. Bilateral oophorectomy surgical removal of the ovaries and premature ovarian failure cause deficient estrogen production. In males, testosterone deficiency is the cause for example, andropause or after surgical removal of the testes. Malnutrition, parenteral nutrition [4] and malabsorption can lead to osteoporosis. Other micronutrients such as vitamin K or vitamin B12 deficiency may also contribute. People with rheumatologic disorders such as rheumatoid arthritis , [55] ankylosing spondylitis , [55] systemic lupus erythematosus and polyarticular juvenile idiopathic arthritis are at increased risk of osteoporosis, either as part of their disease or because of other risk factors notably corticosteroid therapy. Systemic diseases such as amyloidosis and sarcoidosis can also lead to osteoporosis.

Chapter 8 : Risk Factors for Osteoporosis

Risk Factors for Osteoporosis. Risk Factors for Osteoporosis (PDF) Osteoporosis is a silent disease that causes bones to become thin and weak, and increases the risk for broken bones. It can happen to anyone; the disease has no age, gender or ethnic boundaries.

For example, you can change your diet, reduce your alcohol consumption, and quit smoking. However, there are some risk factors you cannot control, including gender and ethnicity. Many people with osteoporosis have several risk factors, but others who develop the disease have no known risk factors. There are some risk factors you can change, and others you cannot.

Risk Factors You Cannot Change There are a number of risk factors for osteoporosis that you cannot change, including: Your chances of developing osteoporosis are greater if you are a woman. Women have less bone tissue and lose bone faster than men because of the changes that happen with menopause. The older you are, the greater your risk of osteoporosis. Your bones become thinner and weaker as you age. Small, thin-boned women are at greater risk for developing osteoporosis than larger women. Caucasian and Asian women are at the highest risk of developing the disease. African-American and Hispanic women have a lower, but still significant, risk. Your risk for fractures may be due, in part, to heredity. People whose parents have a history of fractures also seem to have reduced bone mass and may be at risk for fractures themselves.

Risk Factors You Can Change The good news is that there are a number of risk factors for osteoporosis you can change, including: Abnormal absence of menstrual periods amenorrhea , low estrogen levels menopause , and low testosterone levels in men can bring on osteoporosis. Characterized by an irrational fear of weight gain, this eating disorder increases your risk for osteoporosis. Calcium and vitamin D intake. A lifetime diet low in calcium and vitamin D makes you more prone to bone loss. An inactive lifestyle or extended bed rest tends to weaken bones. Cigarettes are bad for the bones as well as the heart and lungs. Excessive consumption of alcohol increases the risk of bone loss and fractures.

Chapter 9 : Osteoporosis Risk Factors at UC San Diego Health

Osteoporosis is a disease in which bones deteriorate or become brittle and fragile due to low bone mass and bone tissue loss. The condition is often referred to as a "silent disease" because.

Fosamax alendronate Reclast zoledronic acid Actonel risedronate Boniva ibandronate Prolia denosumab Calcitonin Osteoporosis Prevention About 85 to 90 percent of adult bone mass is acquired by age 18 in girls and 20 in boys, so building strong bones during childhood and adolescence can help prevent osteoporosis later in life. Not Smoking In addition to being harmful to the heart and lungs, smoking is also bad for bones, since those who smoke may absorb less calcium from the foods they eat. Avoiding Drinking Alcohol in Excess People who drink a lot of alcohol are more prone to bone loss and broken bones due to poor diet and risk of falling. Following a Healthy Diet Following a nutritious diet that is rich in calcium and vitamin D is critical to bone health. Performing Weight-Bearing Exercise Physical activities that force you to work against gravity, such as walking and hiking, strengthen your bones and your muscles. Calcium and Vitamin D While a broad range of nutrients contribute to bone health, two in particular merit discussion: Calcium A lack of calcium in the body over time contributes to the development of osteoporosis. Researchers have shown that low calcium intake is connected to low bone mass, rapid bone loss, and high fracture rates. Throughout life, the body needs different levels of calcium. Pregnant women and those breast-feeding also need a lot of calcium, as do postmenopausal women and older men. As you age, your body becomes less efficient at absorbing calcium and other nutrients. Plus, the older you are, the more likely you are to take medication for various health conditions, and those drugs can interfere with calcium being absorbed into the body. Talk with your doctor about the right amount to take for your body. Vitamin D Vitamin D helps your body absorb calcium from both food and supplements. It helps your muscles move, because nerves need vitamin D to carry messages from your body to your brain. Your immune system also needs vitamin D to fight against bacteria and viruses. But studies show that vitamin D production decreases in the elderly and those who are housebound, as well as in all people during the winter. Food sources that provide vitamin D include: The best activities for someone who has osteoporosis are low-impact, moderate-intensity forms of exercise, such as walking, hiking, dancing, step aerobics, or using the elliptical machine, recumbent bicycle, or stair-step machine at the gym. Strength-training, using weights, exercise bands, or your own body weight, also helps to preserve bone density and build muscle strength. And balance exercises can help you feel more stable on your feet. Use a cane or walker to give you stability. Wear rubber-soled shoes to help with traction. Walk on grass when sidewalks are slippery. Carry salt or kitty litter to throw on slippery sidewalks in bad weather. Keep your home uncluttered, and remove or put away things you could trip on. Walk slowly on polished or wet floors. If you use plastic or carpet runners to protect your floor, buy those with skid-proof backing or tack them to the floor. Install enough lights in your home so you can see well. Keep a flashlight with working batteries next to your bed. Install handrails and grab bars in your bathroom or other areas of your home to reduce slipping. Use a rubber bath mat in your shower and bathtub. If you have a landline phone, consider getting a cordless phone that you can keep near you. A variety of lifestyle precautions can also help you stay safer: Impaired vision can affect your balance and cause you to fall. Wear glasses or contacts with up-to-date prescriptions that allow you to see as best as possible. Keep your thigh muscles strong through exercise to help with stability. Take note of all medication you take that could cause drowsiness or dizziness, such as sedatives, antidepressants, and more. Discuss with your doctor and loved ones any chronic diseases you have that affect mental or physical functioning. Numerous organizations offer advice on maintaining your bone health through diet, exercise, and professional help, when necessary. Sign up for our Living with Chronic Pain Newsletter! Thanks for signing up for our newsletter! You should see it in your inbox very soon. Please enter a valid email address Subscribe We respect your privacy. An estimate of the worldwide prevalence and disability associated with osteoporotic fractures.