Continue

The following information should help you understand what your BMD test results mean but you should always discuss your results with your healthcare provider.Your first BMD test tells you the density of your bones at that specific time. However, it can not tell you if you have lost bone or are losing bone. The only way to diagnose bone loss is to have a repeat BMD test, usually two years later. Your healthcare provider can determine if you are losing bone by comparing the initial and repeat BMD test results.There are two scores used to interpret bone density test results, the T-score and the Z-score.What is a T-score and what does it mean?The World Health Organization (WHO) uses T-scores to define normal bone mass, low bone mass (or osteopenia), and osteoporosis. The T-score compares your bone density to the average bone density of young healthy adults of your same gender. By using the diagram below, you can see how T-scores are used to define the status of your bone health.What is normal bone mass and how is it diagnosed?Normal bone mass is when your bone density, or bone thickness, is within the normal range of the average bone density of young healthy adults of your same gender Normal bone mass is diagnosed when your T-score is -1.0 and above, for example, -1.0, 0, +1.0, and above.What is low bone mass and how is it diagnosed?Low bone mass, often called osteopenia, is not a disease but a condition in which your bone density, or bone thickness, is lower than the average bone density of young healthy adults of your same gender. Low bone mass is diagnosed when your T-score is between –1.0 and –2.5. If you have been diagnosed with low bone mass, it is important to speak to your healthcare provider about your results and take action to promote strong bones.What is osteoporosis and how is It diagnosed?Osteoporosis is a disease that causes bones to become thin and weak, often resulting in fractures (broken bones). A BMD test can diagnose osteoporosis when your T-score is –2.5 or below, for example -2.5, -2.6,…-3.0….-3.5 and below. The lower your bone mass, the greater your risk for fracture. Osteoporosis can also be diagnosed if you have a history of a broken bone in your hip or spine without major trauma (such as a motor vehicle accident or a fall from a high surface).What if I have low bone mass or osteoporosis?If your BMD test results indicate that you have osteoporosis, your healthcare provider may prescribe a medication for osteoporosis treatment. If you have low bone mass along with strong risk factors for osteoporosis and/or fracture, your healthcare provider may prescribe a medication to prevent further bone loss and reduce the risk for fractures. After an osteoporosis medication is prescribed for you, repeat BMD tests may be used to monitor how your bones have responded to the treatment.It is ideal to have follow-up BMD tests performed on the same machine, at the same location, as your first bone density test. However, if you are not able to return to the same location, select a center that has the same model of DXA machine. This is necessary in order to make accurate comparisons and to be able to monitor the effectiveness of treatments for osteoporosis.What is a Z-score and what does it mean?The T-score, as discussed above, is used to diagnose normal bone mass, low bone mass, or osteoporosis. Sometimes healthcare providers get important information about your bone health by evaluating another result of the BMD test called the Z-score. The Z-score is used to compare your bone density to the average values for a person of your same age and gender. For example, if you are a 65 year old woman, a Z-score compares your bone density to that of other 65 year old women. A low Z-score below -2.0 is a warning sign that you have less bone mass and/or may be losing bone more rapidly than expected for someone your age. If your Z-score is low, your healthcare provider may recommend additional tests to better understand why your bone mass is so low or she/he may refer you to an osteoporosis specialist.Will a BMD test alone tell me my risk for breaking a bone?Your BMD is one of the best predictors of your risk for breaking a bone. In addition to your BMD results, your healthcare provider will also consider several other factors. There is a computer program (FRAX) that can be used by your healthcare provider to help determine your risk for fracture in the next ten years if you meet the following criteria:you have low bone densityyou are a postmenopausal woman or a man age 50 or older, andyou are not currently taking osteoporosis medications or have not taken osteoporosis medications in a 1 to 2 year period of time (depending on the medication)The risk factors used in FRAX include:Personal history of fracture (you are more likely to break a bone if you have already broken one)Family history of hip fracture (if your parent broke their hip, you are at greater risk for a hip fracture)Low body weight for heightCurrent cigarette smokingDiagnosis with certain diseases or use of certain medicationsIn some cases, your healthcare provider may recommend additional tests to better understand your fracture risk. Research is helping us to better understand other risk factors for fracture. How to interpret your bone density scan results So, your GP has had you get a scan to assess your bone density. You might even have a copy of this scan and a brief explanation of what it means, but let's be honest – sometimes the numbers can be a little confusing. Let's take this a step further and work out what your results really mean! Your bone density is measured via a DEXA scan, which stands for Dual-Energy X-Ray Absorptiometry. This is a non-invasive exam that utilises low dose x-rays at two different energies to distinguish between bone and soft tissue. This test can also measure your body composition, such as body fat and muscle mass, but primarily is utilised as the gold standard in diagnosis for risk of osteoporosis and fractures. The exam is usually performed at the most common fracture sites: the spine, hip or wrist. I believe it is important for all women over the age of 50, and men over the age of 60, to have a DEXA scan so that you have a baseline for your bone density that can be monitored as you are getting older. This is also the same if you have any risk factors including family history, early menopause, hormonal treatments such as a lot of cancer medications, or conditions such as coeliac disease that affect your calcium absorption. If this sounds like you, have a chat to your GP about checking your bone density. Osteoporosis is common, affecting around two out of every three women, and one in six men, over the age of 60. Osteopenia is when your bone density is low, however not low enough to be classified as osteoporosis, with nearly two-thirds of Australian's over 50 affected. But let's delve into what your DEXA results are telling you… The locations These are some of the locations that your DEXA scan might show: AP spine L1-L4: This is a snapshot of the entire segment of your lower back (or lumbar spine). You might also see L1/L2/L3/L4 with their own row, which looks specifically at those vertebrae. Femoral neck: Despite what the name might suggest, this is actually not in your neck but in your hip. As you will see below, this is the narrow part of your femur that lies just underneath the head of the femur (which forms our ball and socket joint). The reason this particular location is assessed because it is strong predictor of hip fracture susceptibility. Total hip: This looks at the entire hip region (including the femoral neck). Wrist: Sometimes the wrist is utilised as a site if access to the spine or hip is restricted (e.g. had a hip replacement or other metal structures in the spine). T-Score The T-score indicates how your bone density compares to that of a healthy 30 year old. The reason for this is because peak bone density is reached by age 30 and should ideally be maintained at this level throughout your life. The T score shows whether your bones are more dense (+) or less dense (-) than those of an average 30 year old. This is the most important value and the one that is used to classify as normal, osteopenia or osteoporosis. T-score 0 to –1 is considered normal. T-score –1 to –2.5 is considered osteopenia. T-score –2.5 is classified as osteoporosis. The lower your T-score is below –2.5, the greater your risk of fracture. Z-Score This compares your bone density to that of an age-matched person. There are no specific categories for our Z score and it is not used in the diagnosis of osteoporosis, however it can give you a bit of an indication as to whether your bone density is common for someone of your age. The closer this number is to zero, the closer it is to what we might expect for someone of your age. If this number is above zero (+), you have more bone than this baseline, and if the number is below zero (-), it is below this baseline. So I now know my classification, what does this mean for me? Firstly I think it is incredibly important to have this education and understanding so that you can make informed, proactive decisions about your bone health. Being told you have osteopenia or osteoporosis is one thing, but when you can truly understand your risk it allows you to be involved in the management of your condition. Exercise is one of the most effective strategies to manage bone health and prevent further loss in bone, however not all exercise is equal when it comes to bones. So, if you have been diagnosed with osteopenia or osteoporosis, please ensure to book in with our Accredited Exercise Physiologists to have a chat about how we can support you. We can also help you interpret your bone density scans! Tamika Hassum Accredited Exercise Physiologist Introduction A special computed tomography (CT) scan can determine the bone density of the hip or spine. Decreased bone mass leads to more brittle bones that are prone to pathological fractures. To diagnose osteopenia and osteoporosis, a bone density test is done, thus helping determine the future risks of fracture. The procedure measures the bone density of the spine, lower arm, and hip bones. Portable testing methods may use the radius, wrist, fingers, or heel, but the results are questionable. The X-ray images may show weakened bones; however, the bones may be well on their way to more significant damage by the time a radiographic interpretation is possible. How Is Bone Density Tested, and What Do the Results Show? A bone density is used to determine the bone mineral density, abbreviated as BMD, which is compared to 2 norms; Healthy young adults (T-score) Age-matched adults (Z-score). BMD result is compared with that of 25 to 35-year-old adults of the same sex and ethnicity. The standard deviation (SD) is calculated as the difference between the BMD of the tested person and healthy young adults, which is the T-score. When T-scores are positive, it indicates that the bone is more robust than average, whereas a negative T-score means the bone is weaker than average. The World Health Organization defines osteoporosis on the following bone density levels; A T-score within 1 SD indicates bone density to be within normal limits. A T-score of -1 to -2.5 SD shows low bone mass and is prone to future osteoporosis and osteopenia. A T-score of -2.5 SD or below indicates the presence of established osteoporosis. The risk for pathological fractures doubles with every SD below normal. Thus, a person with a T-score of -1 has twice the risk for bone fracture. BMD is also compared to an age-matched norm called Z-score, where comparisons are made to someone of the same age, sex, race, height, and weight. When Is Bone Density Testing Needed? A bone density test is done to diagnose osteoporosis, which causes thin, weak bones, and osteopenia, which causes a decrease in bone mass. The complications of osteoporosis-related pathological fractures are often severe, particularly in elderly patients. Early diagnosis of osteoporosis leads to prompt treatment, and this can either improve the condition or at the very least keep it from deteriorating. Decreased bone mass makes it more brittle and is prone to pathological fractures. To diagnose osteopenia and osteoporosis, a bone density test can be performed, thus helping determine the future risks of fracture. The procedure measures the bone density of the spine, lower arm, and hip bones. Portable testing methods may use the radius, wrist, fingers, or heel, but the results are questionable. A bone density testing is thus done for the following reasons; Diagnose osteoporosis if there is a history of bone fracture. Predict the chances of fracturing a bone in the future. Determine the rate of bone loss. Evaluate the success of the treatment. What Are the Risk Factors for Reduced Bone Density? Aged women not taking estrogen supplements. Aging, women over 65 and men over 70. Smoking tobacco. Family history of hip fracture. Using long-term steroids or certain other medicines. Rheumatoid arthritis. Type 1 diabetes mellitus. Liver disease. Kidney disease. Hyperthyroidism. Hyperparathyroidism. Excessive alcohol consumption. Low BMI (body mass index). What Is Peak Bone Mass? The maximum bone size and strength reached during an individual's lifetime is called peak bone mass. The role of genetics is significant in determining the peak bone mass, alongside lifestyle factors like diet and exercise. It influences the peak bone mass of an individual. The ideal time to build up bone density is during the phase of rapid growth in childhood, adolescence, and early adulthood. Activities such as smoking, poor nutrition, inactivity, and excessive alcohol intake can decrease the potential for reaching this peak bone mass. Most individuals reach peak bone mass between the ages of 25 and 30. By age 40, the body slowly begins to lose bone mass. However, several steps to avoid severe bone loss over time can be taken, and the rate of bone loss can be significantly retarded through a regimen of proper nutrition and regular exercise. People who develop higher peak bone mass during their early years are better protected against osteoporosis, osteopenia, and related pathological fractures. However, specific individuals are more prone to bone loss and osteoporosis because of the altered bone remodeling process, which removes old bone and replaces it with new bone. A regimen of healthy diet and strengthening exercises can help, but the rate of bone loss cannot be compensated. However, recent advances in medications have been developed to treat this metabolic problem, and in some cases, bone loss may even be reversed. How Does Gender Influence Peak Bone Mass? Men have higher peak bone mass than women as they accumulate more skeletal mass during growth, and the bone width and size are more significant than that of females of the same age and race. Women have smaller bones with thin cortices and smaller diameters, which causes them to be more vulnerable to developing osteoporosis in later years. However, men have higher peak bone mass but are not spared from the risk of osteoporosis. Around 70 years, the risk of bone loss and pathological fractures increases significantly among men. Purchasing walking boot for broken foot can be useful in fractures of the leg. Conclusion Dual-energy X-ray absorptiometry, often known as DEXA or DXA, is a technique that uses X-rays to measure the density and mineral content of bones. The density of the spine's or the hip's bone can be assessed using a specialized computed tomography (CT) scan. Less bone mass makes bones fragile and more vulnerable to pathological fractures. A bone density test can be used to identify osteopenia and osteoporosis and assist or predict future fracture risks. The procedure evaluates the spine, lower arm, and hip bones' bone densities. The outcomes of portable testing procedures using the radius, wrist, fingers, or heel are dubious. Introduction A special computed tomography (CT) scan can determine the bone density of the hip or spine. 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Technology including smart scales have become affordable enough to have all types of it in households and gyms, and these devices can provide us with a little more insight into your body composition.Body composition refers to the percentages of fat, bone, water, and muscle in the body—all numbers that show up on your smart scale or other body scan tests. Here, we break down these percentages, and why they matter.What should my body fat percentage be? FAT PERCENTAGE CONSISTS of both essential body fat and storage body fat. According to Harvard Medical, normal ranges for fat mass are as follows:Ages 20-39: 8-19 percent for men, 22-33 percent for womenAges 40-59: 11-21 percent for men, 24-34 percent for womenages 60-79: 13-24 percent for men, 25-36 percent for women"As a general rule, a lower percentage of body fat is indicative of better health," says Eric Pham, M.D., a bariatric surgeon and weight loss expert with St. Joseph Hospital in Orange, California. "Generally speaking, an average adult male has 18 to 24 percent of total body weight as fat mass, while an average female has 25 to 31 percent. Athletes' body fat percentages can be much lower, somewhere between 6 percent and 13 percent for men and 14 to 20 percent for women."Why It Matters: Men and women with higher body fat percentage are at greater risk for cardiovascular disease, hypertension, diabetes, strokes, and some cancers, says Pham.WithingsWhat should my bone mass be? THIS IS THE total mass of skeletal bone in the body. Normal bone mass for men is between 3 and 5 percent of your weight. This changes with age, as our bones reach peak mass in our late 20s, according to the National Institutes of Health.Why It Matters: Low bone mass may increase the risk of fractures, says Pham. Weight-bearing exercise and proper calcium intake will increase bone mass, peaking around age 30. After that, it slowly decreases as you age. What should my total body water percentage be? THIS IS THE percentage of the body's mass that is fluid. The human body is 50 to 75 percent water, and how much you have at any given time hinges on age, sex, and hydration. Most men will have between 50 to 65 percent; women 45 to 60 percent. Why it Matters: Body impedance analysis (BIA—more on this in a bit) can determine the total percentage of water that's found inside our cells and the percentage outside of the cells, called extracellular water, says Pham. "Generally, too much extracellular water may be indicative of heart, liver, malnutrition, or kidney disease." WithingsWhat should my muscle mass be? THIS IS THE total mass of body skeletal muscle. The body has three types of muscles: skeletal, smooth, and cardiac. Skeletal muscle is under voluntary control (think biceps), smooth muscle contracts autonomously (or without any thought), and cardiac muscle makes up the main tissue of the heart's walls. Normal ranges for muscle mass are: Ages 20-39: 75-89 percent for men, 63-75.5 percent for womenAges 40-59: 73-86 percent for men, 62-73.5 percent for womenages 60-79: 70-84 percent for men, 60-72.5 percent for womenWhy It Matters: Higher muscle mass increases metabolic rate and prevents falls and illnesses, according to Pham. For example, a person who has a higher amount of their weight as muscle mass will burn more calories at rest compared to someone with a lower percentage of muscle mass. A higher level of muscle mass can also protect against developing diabetes, according to research published in the Journal of Clinical Endocrinology and Metabolism."Fat mass causes hypertension and diabetes due to insulin resistance," says Pham. "As we age, we lose muscle mass and are more prone to falls. Loss of muscle mass causes loss of balance and strength as commonly seen in the elderly. This is why exercise is critical."How can I measure my body composition? WE'RE GLAD YOU asked. There are loads of scales on the market right now (including 5 of our favorites, here!) that you can purchase with the technology that gives you a body composition readout, which is called Bioelectrical Impedance Analysis (BIA). BIA sends a very low, safe electrical signal through your feet and into the body. This signal meets resistance when it hits fat tissue, and passes quickly through water in the body. The resistance, known as impedance, is what the device uses to determine your body composition percentages. It's important to note, though, that BIA isn't perfectly accurate. Many things, including your hydration levels and skin temperature, may effect its accuracy. If you choose to use one, it's important to use it when you're well hydrated, and before any strenuous workout. Scanning yourself the same time of day from scan to scan will also be helpful. Before you get too hung up on your numbers, remember that this is just one part of the bigger picture. Make sure that you're dedicating time to other aspects of a healthy routine and lifestyle, like what you're putting into your body and the amount of sleep you're getting (both factors that can affect these readouts, as well)."BIA is best used in conjunction with a medically supervised weight loss program," says Pham. "Use the first BIA measurement as a baseline measurement. Over time, as you might lose weight, BIA can be used to determine their body's changes in fat and muscle mass."Emily AbbateEmily Abbate is a freelance writer, certified fitness trainer, and host of the podcast Hurdle. You can find her work in GQ, Shape, Runner's World, and other health and fitness publications. Cori Ritchey, C.S.C.S.Associate Health and Fitness EditorCori Ritchey, C.S.C.S., is an Associate Health & Fitness Editor at Men's Health, a certified strength and condition coach, and group fitness instructor. She reports on topics regarding health, nutrition, mental health, fitness, sex, and relationships. You can find more of her work in HealthCentral, Livestrong, Self, and others. Bone mass is measured against a standard average bone mass of a healthy young adult. Image Credit: AleksandarGeorgiev/E+/GettyImages Strong bones are crucial for good health and aging well. Maintaining a healthy bone mass percentage helps prevent osteoporosis and broken bones. While childhood is the most important time for building bone health, it's never too late to take care of your bones. Bone mass is measured against a standard average bone mass of a healthy young adult. The farther you are below that number, the lower your bone mass. Like all living tissues in your body, your bones are constantly changing. Old bone is broken down and new bone is constructed in a process called bone remodeling. Bone mass, also sometimes called bone density, is a measure of the amount of bone tissue in the skeleton at any given time. This changes throughout your lifespan and depends on many factors, including your age, gender, diet and health. Childhood and adolescence is the period of greatest bone density. During this time, the body builds more bone than it breaks down; the size of the skeleton grows, and the bones become denser. Bones can keep growing throughout a person's 20s. At this time, the bones have reached their potential for strength and density. From 30 onward, bone still rebuilds itself; however, the pace of bone breakdown may exceed the formation of new bone. The bigger the difference between breakdown and buildup, the lower your bone mass or density becomes. It's not possible to see or feel if your bone mass is decreasing. Doctors can use a bone mineral density test to measure the amount of the minerals calcium and phosphorous that your bone contains. This gives them an accurate picture of your bone mass and bone health. A central dual-energy x-ray absorptiometry, or central DXA, test is the most commonly performed type of bone density test, according to the National Institutes of Health. The DXA test measures bone density at the hip and lower spine. Just like having an X-ray, the procedure is painless. The results of your bone density test are compared to an average bone mineral density of a healthy young adult, after which you will be given a score, called a T score. A T score of zero means you have ideal bone mass, according to the NIH. A score below -2.5 indicates very low bone mass and a condition called osteoporosis. A bone mineral density test can tell you only your current bone mass; it can't show whether you are currently losing bone or building bone. In order to measure bone loss, you need to take two tests spaced about two months apart, according to the New York State Department of Health. Caucasian and Asian women have the highest rates of osteoporosis, with an estimated 20 percent over the age of 50 developing the condition, according to the National Osteoporosis Foundation. More than half of Caucasian and Asian women have low bone mass. Rates of osteoporosis and low bone mass are lower in African American and Latina women. Five percent of African American women over age 50 have osteoporosis and another 35 percent have low bone mass. Ten percent of Latina women have osteoporosis and half of all Latinas have low bone mass. If your test reveals that you have low bone mass, that doesn't mean you will automatically develop osteoporosis, a condition in which the bones become fragile and break easily. However, low bone mass, called osteopenia, increases your risk for osteoporosis. Causes of low bone mass include: Hereditary factors Low body weight A medical condition or medication affecting bone mass If you have low bone mass, healthy habits can help you slow bone loss and prevent osteoporosis. Eating foods rich in the mineral calcium and vitamin D and doing weight bearing exercise, such as walking, jogging and lifting weights, can help strengthen your bones. In some cases, your doctor may recommend medication to prevent further bone loss and osteoporosis. Osteoporosis affects approximately 10 million Americans, according to the National Osteoporosis Foundation; about 80 percent of these are women. In 50 percent of women over age 50, osteoporosis will cause a broken bone. Women are more prone to osteoporosis because their bones are smaller and thinner. Additionally, levels of the female hormone estrogen, which helps protect bones, declines sharply after menopause. If your doctor diagnoses you with osteoporosis, the same healthy habits that help with low bone mass can help your condition. However, healthy habits alone aren't enough; your doctor will also likely recommend medication that can slow and even reverse bone loss. The most important time for building strong bones is in childhood and adolescence. Eating a balanced diet including plenty of calcium and vitamin D and getting plenty of physical activity early in life contributes to the formation of strong, healthy bones. The stronger bones start out, the lower the risk of low bone mass and osteoporosis later in life. But even in adulthood, you can take steps to maintain healthy bone mass as you get older: Eat a nutrient-rich diet, including plenty of vegetables and fruits. Eat foods rich in calcium, including dairy, sardines, kale, tofu and fortified orange juice and cereal. Adult males between the ages of 19 and 70 and women ages 19 to 51 need 1,000 milligrams a day; women ages 51 to 70 need 1,200 milligrams daily. Take a calcium supplement if you can't get enough from your diet. Get plenty of vitamin D from foods such as swordfish, salmon, egg yolks, fortified dairy products, orange juice and cereal. All adults ages 19 to 70 need 600 IU of vitamin D each day. Take a vitamin D supplement if necessary. Engage in physical activity every day. Don't smoke, as smoking can weaken your bones. Limit your alcohol intake. Lactose intolerance has been implicated as a factor in low bone mass and osteoporosis, since dairy is such a rich source of calcium. According to the National Osteoporosis Foundation, 90 percent of Asian American adults, 70 percent of African Americans and 15 percent of Caucasians are lactose-intolerant. If you are lactose-intolerant, ask your doctor about taking supplemental calcium to make sure you get everything you need. 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A bone density test is done to diagnose osteoporosis, which causes thin, weak bones, and osteopenia, which causes a decrease in bone mass. The complications of osteoporosis-related pathological fractures are often severe, particularly in elderly patients. Early diagnosis of osteoporosis leads to prompt treatment, and this can either improve the condition or at the very least keep it from deteriorating. Decreased bone mass makes it more brittle and is prone to pathological fractures. To diagnose osteopenia and osteoporosis, a bone density test can be performed, thus helping determine the future risks of fracture. The procedure measures the bone density of the spine, lower arm, and hip bones. Portable testing methods may use the radius, wrist, fingers, or heel, but the results are questionable. A bone density testing is thus done for the following reasons; Diagnose osteoporosis if there is a history of bone fracture. Predict the chances of fracturing a bone in the future. Determine the rate of bone loss. Evaluate the success of the treatment. What Are the Risk Factors for Reduced Bone Density? Aged women not taking estrogen supplements. Aging, women over 65 and men over 70. Smoking tobacco. Family history of hip fracture. Using long-term steroids or certain other medicines. Rheumatoid arthritis. Type 1 diabetes mellitus. Liver disease. Kidney disease. Hyperthyroidism. Hyperparathyroidism. Excessive alcohol consumption. Low BMI (body mass index). What Is Peak Bone Mass? The maximum bone size and strength reached during an individual's lifetime is called peak bone mass. The role of genetics is significant in determining the peak bone mass, alongside lifestyle factors like diet and exercise. It influences the peak bone mass of an individual. The ideal time to build up bone density is during the phase of rapid growth in childhood, adolescence, and early adulthood. Activities such as smoking, poor nutrition, inactivity, and excessive alcohol intake can decrease the potential for reaching this peak bone mass. Most individuals reach peak bone mass between the ages of 25 and 30. By age 40, the body slowly begins to lose bone mass. However, several steps to avoid severe bone loss over time can be taken, and the rate of bone loss can be significantly retarded through a regimen of proper nutrition and regular exercise. People who develop higher peak bone mass during their early years are better protected against osteoporosis, osteopenia, and related pathological fractures. However, specific individuals are more prone to bone loss and osteoporosis because of the altered bone remodeling process, which removes old bone and replaces it with new bone. A regimen of healthy diet and strengthening exercises can help, but the rate of bone loss cannot be compensated. However, recent advances in medications have been developed to treat this metabolic problem, and in some cases, bone loss may even be reversed. How Does Gender Influence Peak Bone Mass? Men have higher peak bone mass than women as they accumulate more skeletal mass during growth, and the bone width and size are more significant than that of females of the same age and race. Women have smaller bones with thin cortices and smaller diameters, which causes them to be more vulnerable to developing osteoporosis in later years. However, men have higher peak bone mass but are not spared from the risk of osteoporosis. Around 70 years, the risk of bone loss and pathological fractures increases significantly among men. Purchasing walking boot for broken foot can be useful in fractures of the leg. Conclusion Dual-energy X-ray absorptiometry, often known as DEXA or DXA, is a technique that uses X-rays to measure the density and mineral content of bones. The density of the spine's or the hip's bone can be assessed using a specialized computed tomography (CT) scan. Less bone mass makes bones fragile and more vulnerable to pathological fractures. A bone density test can be used to identify osteopenia and osteoporosis and assist or predict future fracture risks. The procedure evaluates the spine, lower arm, and hip bones' bone densities. The outcomes of portable testing procedures using the radius, wrist, fingers, or heel are dubious.