Bone Density Exam/Testing at the Family Health Care Center Royal Oak

A bone density test is the only test that can diagnose osteoporosis before a broken bone occurs. This test helps to estimate the density of your bones

and your chance of breaking a bone. NOF recommends a bone density test of the hip and spine by a central DXA machine to diagnose osteoporosis. DXA stands for dual energy x-ray absorptiometry.

You can find out whether you have osteoporosis or if you should be concerned about your bones by getting a bone density test. Some people also call it a bone mass measurement test. This test uses a machine to

measure your bone density. It estimates the amount of bone in your hip, spine and sometimes other bones. Your test result will help your healthcare

provider make recommendations to help you protect your bones.

Are you a postmenopausal woman or man age 50 and older? Have you recently broken a bone? If you answered “yes” to both questions, you should talk to your doctor or other healthcare provider about getting a bone density test if you’ve never had one.

What a Bone Density Test Can Do

A bone density test tells you if you have normal bone density, low bone density (osteopenia) or osteoporosis. It is the only test that can diagnose osteoporosis. The lower your bone density, the greater your risk of breaking a bone. A bone density test can help you and your healthcare provider:

• learn if you have weak bones or osteoporosis before you break a bone

• predict your chance of breaking a bone in the future

• see if your bone density is improving, getting worse or staying the same

• nd out how well an osteoporosis medicine is working

• let you know if you have osteoporosis after you break a bone

Who Should Have a Bone Density

Test?

NOF (National Osteoporosis Foundation) recommends that you have a bone density test if:

• you are a woman age 65 or older

• you are a man age 70 or older

• you break a bone after age 50

• you are a woman of menopausal age with risk factors

• you are a postmenopausal woman under age 65 with risk factors

• you are a man age 50-69 with risk factors

A bone density test may also be necessary if you have any of the following:

• an X-ray of your spine showing a break or bone loss in your spine

• back pain with a possible break in your spine

• height loss of ½ inch or more within one year

• total height loss of 1½ inches from your original height

Types of Bone Density Tests

Central DXA

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. When testing can’t be done on the hip and spine, NOF suggests a central DXA test of the radius bone in the forearm. In some cases, the type of

DEXA is a non-invasive test to measure bone density.

bone density testing equipment used depends on what is available in your community.

Healthcare providers measure bone density in the hip and spine for several reasons. First, people with osteoporosis have a greater chance of fracturing these bones. Second, broken bones in the hip and spine can cause more serious problems, including longer recovery time, greater pain and even disability. Bone density in the hip and spine can also predict the likelihood of future breaks in other bones

With most types of bone density tests, a person remains fully dressed, but you do need to make sure no buttons or zippers are in the way of the area to be scanned. The test usually takes less than 15 minutes. Bone density tests are non-invasive and painless. This means that no needles or instruments are placed through the skin or body. A central DXA uses very little radiation. You are actually exposed to 10–15 times more radiation when you y roundtrip between New York and San Francisco.

When repeating a bone density test, it is best to use the same testing equipment and have the test done at the same place each time. This provides a more accurate comparison with your last test result. Although it is not always possible to have your bone density test at the same place, it is still important to compare your current bone density scores to your previous scores.

Standard x-rays cannot be used in place of bone density tests. Unlike bone density tests, X-rays are not able to show osteoporosis until the disease is well advanced. However, X-rays can be used in addition to a DXA to detect broken bones in the spine or elsewhere.

People of Larger Size. Most central DXA machines cannot measure bone density in the hip and spine of patients who weigh more than 300 pounds. Some newer machines can measure bone density in people who weigh up to

400 pounds, but these machines are not widely available. When the hip and spine cannot be measured, some healthcare providers recommend a central DXA test of the radius bone in the forearm and a peripheral bone density test of the heel or another bone. Doing both of these tests might provide more complete information.

Where to Have a Bone Density

Test

Most people need a prescription or referral from their healthcare provider to have a bone density test. If you’re not sure where to go for a bone density

test, contact your healthcare provider or your insurance plan to nd out where the test is available. Also, most hospital radiology departments, private radiology groups and some medical practices offer bone density testing.

When you go for your appointment, be sure to take the prescription or referral with you. The testing center will send your bone density test results to your healthcare provider. You may want to make an appointment to discuss your results with your healthcare provider.

How Often to Repeat a Bone

Density Test

People taking an osteoporosis medicine should repeat their bone density test by central DXA every one – two years. After starting a new osteoporosis medicine, many healthcare providers will repeat a bone density test after one year.

Understanding Bone Density Test

Results

Your bone density test results are reported using T-scores. A T-score shows how much your bone density is higher or lower than the bone density of a healthy 30-year old adult. A healthcare provider looks at the lowest T-score to diagnosis osteoporosis.

What Your T-score Means. According to the World Health Organization

(WHO):

• A T-score of -1.0 or above is normal bone density. Examples are 0.9, 0 and -0.9.

• A T-score between -1.0 and -2.5 means you have low bone density or osteopenia. Examples are T-scores of -1.1, -1.6 and -2.4.

• A T-score of -2.5 or below is a diagnosis of osteoporosis. Examples are

T-scores of -2.6, -3.3 and -3.9.

• The lower a person’s T-score, the lower the bone density. A T-score of

-1.0 is lower than a T-score of 0.5 and a T-score of -3.5 is lower than a T- score of -3.0.

GUIDE TO UNDERSTANDING T-SCORES

Category T-scores

Range Examples

Normal Bone Density -1 and above +0.5

0

-1.0

Low Bone Density (Osteopenia) Between -1 and -2.5 -1.1

-1.5

-2.4

Osteoporosis -2.5 and below -2.5

-3.0

-4.0

Your bone density test result also includes a Z-score that compares your bone density to what is normal in someone your age and body size. Among older adults low bone mineral density is common, so Z-scores can be misleading.

Most experts recommend using Z-scores rather than T-scores for children, teens, women still having periods and younger men. NOF does not recommend routine bone density testing in these age groups. A Z-score above -2.0 is normal according to the International Society for Clinical Densitometry (ISCD). A diagnosis of osteoporosis in younger men, premenopausal women and children should not be based on a bone density test result alone.

When to Consider Treatment

The results of a bone density test help your healthcare provider make recommendations about what you can do to reduce your chance of breaking a bone. When making a decision about treatment with an osteoporosis medicine, your healthcare provider will also consider your risk factors for osteoporosis, your likelihood of breaking a bone in the future, your medical history and your current health.

Below are treatment guidelines for postmenopausal women and men age 50 or older:

• Most people with T-scores of -1.0 and above (normal bone density) do not need to take an osteoporosis medicine.

• Some people with T-scores between -1.0 and -2.5 (low bone density or osteopenia) should consider taking an osteoporosis medicine when they have certain risk factors.

• All people with T-scores of -2.5 and below (osteoporosis) should consider taking an osteoporosis medicine.

What About Low Bone Density?

Having low bone density or osteopenia does not mean you will get osteoporosis. It means you have a greater chance of developing osteoporosis if you lose bone in the future. While we’ve known that people with osteoporosis should consider treatment to reduce the risk of broken bones, it hasn’t always been clear when to treat people who have low bone density.

The online fracture risk assessment tool called FRAX® can assist healthcare providers with these decisions. FRAX is a tool that calculates a person’s absolute fracture risk or an estimate of the chance of breaking a bone in the next ten years. FRAX can help to identify people who have a greater chance of breaking a bone as well as people who might benet from taking an osteoporosis medicine.

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