

## HOW DO I KNOW IF I HAVE OSTEOPOROSIS?

Osteoporosis is often called the "silent disease". There are rarely signs until a lot of bone has been lost. A medical test that measures the density of bone is the best way to detect osteoporosis. The Achilles ultrasonometer is one such test. The Achilles uses ultrasound to measure bone density.

Important risk factors for osteoporosis include:

- female
- advanced age
- history of bone fracture
- a small thin frame
- a family history of osteoporosis
- removal of the ovaries
- early menopause
- a low calcium diet
- lack of exercise
- eating disorders
- certain medicines (such as steroids or anticonvulsants)
- alcohol and tobacco use

## WHERE CAN I GET MORE INFORMATION ABOUT BONE MEASUREMENTS AND OSTEOPOROSIS?

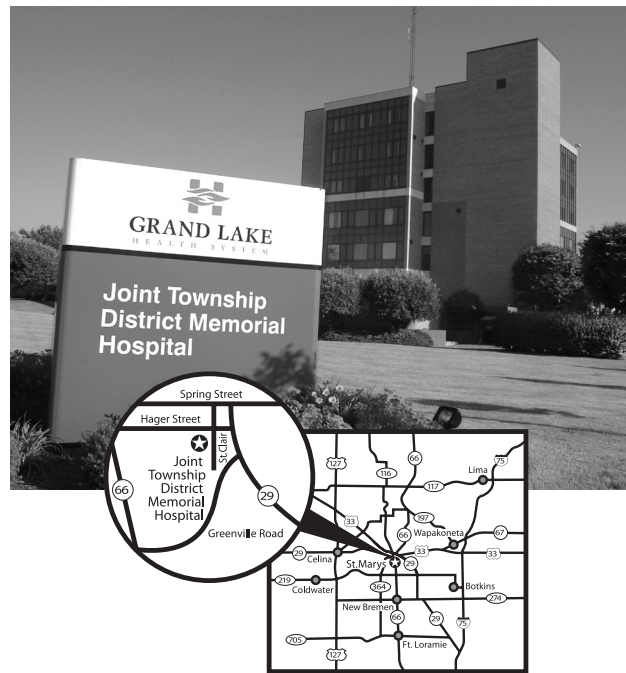
The National Osteoporosis Foundation (NOF) is one of the leading sources of information about osteoporosis and bone measurements.

### CONTACT THE NOF:

**National Osteoporosis Foundation**  
1232 22nd Street N.W.  
Washington, D.C. 20037-1202

Call: 202-223-2226 or toll free 800-231-4222

Log onto: [www.nof.org](http://www.nof.org)



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## MY ACHILLES TEST



PROTECTING WOMEN'S HEALTH  
THROUGH ALL OF LIFE'S SEASONS

**The  
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## MY ACHILLES TEST

Like other organs in the body, bones are constantly changing. Throughout childhood and young adulthood, bones grow in strength and in size. Around the age of 30, bones reach their peak strength and then naturally become weaker with age. Osteoporosis is a condition where bones become weak to the point of breaking. This weakening may be due to aging, or caused by other factors that combine with age.

Symptoms of osteoporosis do not occur until a lot of bone strength is lost. The most visible symptoms may include loss of height, along with curvature of the upper back. Osteoporosis also can result in a crippling and painful fracture, occurring most often in the hip, back, or wrist.

## HOW DOES THE ACHILLES WORK?

The Achilles passes ultrasound through the heel. The heel is measured because its bone is similar to that found in the spine and hip, where osteoporotic fractures occur most. Ultrasound does not travel well through air. Therefore, during an Achilles test, warm water fills membranes that contact your heel to provide a path for the ultrasound energy to follow. Isopropyl alcohol is used to provide coupling between your heel and the membranes.



## WHAT CAN I EXPECT DURING MY ACHILLES TEST?

The Achilles test requires a bare foot. Remove your sock, stocking, or panty hose. An Achilles test takes about 1 minute. During the test, keep your heel as still as possible for best results.

## IS THE ACHILLES TEST SAFE?

**Yes.** The Achilles is approved by regulatory agencies.

**Caution:** Avoid Achilles tests if you have a sore on your heel or sole. Please tell the health care professional operating the Achilles of any such problems to help prevent transmission of an infection.

## WHAT INFORMATION WILL ACHILLES GIVE MY DOCTOR?

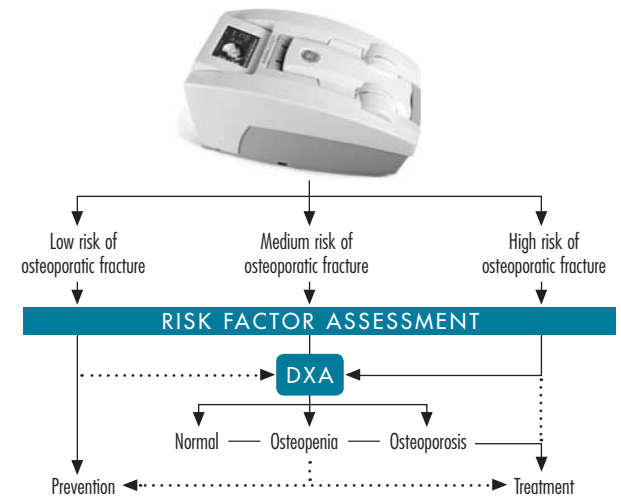
The Achilles is an aid to doctors in the diagnosis of osteoporosis. The Achilles test compares your bone quality to that of a "young adult" at peak bone strength (T-score). It also compares your results to people of your same age, called "age-matched" (Z-score). The risk of osteoporotic fracture falls into three categories:

Fracture Risk	T-score
Low	above -1
Medium	-1 to -2.5
High	below -2.5

This information, along with other factors, will help your doctor to gauge your risk of osteoporotic fracture and what course of action should be taken.

## WHAT IS THE NEXT STEP IF I AM FOUND TO BE AT RISK?

Your Achilles test is a screening tool and should not be used as a sole source to base treatment on. However, based upon your Achilles results and other factors, your doctor may suggest a follow-up DXA scan. A DXA scan is a painless test performed on an x-ray densitometer that takes only minutes, and measures your bone mineral density and body fat distribution. Information from a DXA scan can provide your doctor with valuable information to aid in the diagnosis of osteoporosis.



## WHO IS AT RISK?

Age is an important risk factor. Everyone, both men and women, loses bone strength as they grow older. Women have higher risk for osteoporosis than men do as women often have smaller, thinner frames. Women also are affected by the change-of-life, known as menopause. After menopause, women produce less of a hormone called estrogen. Estrogen helps protect women against bone loss.

## WHAT IS FRACTURE RISK?

The Achilles provides information about your own risk of bone fracture in the same way as a cholesterol test indicates risk of a heart attack. A diagnosis of osteoporosis cannot predict a bone fracture, just as high cholesterol cannot predict a heart attack. Instead, it means that the risk of having a fracture is higher than that for normal bones. Achilles results combined with other factors give your overall risk of fracture. Knowing your risk of fracture is important. There are a number of ways to prevent osteoporosis, and to reduce your risk of fracture. Your doctor may suggest a number of steps including exercise, changes in diet, hormone therapy, or other medicines known to build bone strength.