How do you get it?
Osteoporosis has no known causes. It has been related to many risk factors including lifestyle, medication and dietary considerations. The most commonly associated risk factors are: Caucasian or Asian post-menopausal female, family history and low body weight.

How is it treated?
The “Triangle of Management” includes exercise, medication and diet. Exercise should be resistive, site-specific and weightbearing. The most common medication is Hormone Replacement Therapy. Dietary intervention should include adequate calcium intake along with modifications of diet including reduced caffeine, alcohol, and soda consumption.

What are the exercise precautions?
General precautions include no flexion exercises—that is, no sit-ups, abdominal crunches, or toe touching. Flexion exercise has been associated with fractures. The exercise program should emphasize postural alignment, site-specific isometric strengthening, extension and resistive exercises.

How is it prevented?
Prevention of osteoporosis begins early in life. Because the majority of peak bone mass is attained by age 19 and most bone growth occurs during adolescence, prevention truly should begin by age 10. After the attainment of peak bone mass (age 30-35), prevention of the consequences of osteoporosis, such as fractures and falls, is most important.

Who can I contact?
These exercises are part of the course, OSTEOPOROSIS: Recognition and Team Management in the Rehab Setting by Sara Meeks, PT, MS, GCS. This entire program can be found in the book WALK TALL! An Exercise Program for the Prevention and Treatment of Osteoporosis by Sara Meeks. For more information call: Sara Meeks Physical Therapy at (352) 378-6484.
Exercises for Osteoporosis

**EXERCISE 1: THE OVERHEAD**

ONE: Grasp the Thera-Band® resistive band in your hands, arms at sides, palms down, resistive band across your hips. Pull your hands apart* to put tension on the resistive band.

TWO: Keeping your elbows straight**, bring your arms up and back overhead as far as you can.

THREE: Hold maximum position 2-3 seconds. Keeping tension on the resistive band, return to starting position. Repeat the entire movement 3-8 times.

*This exercise can be made easier by having the hands wide apart or harder by having hands closer together.

**It is very important to go through the movement only as far as you can with the elbows straight. If your elbows bend, you will not get maximum benefit from the exercise.

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**EXERCISE 2: THE SASH**

**OPTION ONE**

ONE: Place left hand on prominent left hip bone. Bring right hand up over your navel, thumb down, right elbow straight.

TWO: Keeping your right elbow into your collar bone. Hold maximum position 2-3 seconds. Return to starting position. Repeat 3-8 times.

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**OPTION TWO**

ONE: Keep left hand on prominent left hip bone. Bring right hand over top of left hand (right elbow now bent).

TWO: Pull resistive band up along left side of body, bending your right elbow as you pull and bring the right arm down towards the floor as far as it will so that the right arm cradles your head. Hold maximum position 2-3 seconds. Return to starting position. Repeat movement 3-8 times.

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**OPTION THREE**

ONE: Move left hand over to right hip bone.* Place right hand on top of left hand.

TWO: Keeping your right elbow straight, pull resistive band up along right side of body so that arm comes as close to the floor as possible. Hold maximum position 2-3 seconds. Keeping elbow straight, return to starting position. Repeat 3-8 times.

* If irritation of left shoulder occurs, place left hand at midline instead of on right hip.

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**EXERCISE 3: THE SIDE PULL**

**OPTION ONE**

ONE: Grasp the Thera-Band® resistive band in your hands and bring arms, with elbows straight, up to a 90° angle to your body.

TWO: Keeping elbows straight, pull arms apart so that arms come down to the supporting surface and the resistive band comes down across your collar bone. Hold maximum position 2-3 seconds. Return to starting position. Repeat 3-8 times.

**OPTION TWO**

ONE: Keep one arm stationary* and, keeping the elbow straight, pull the other arm out to the side. Hold maximum position 2-3 seconds. Return to starting position. Repeat 3-8 times.

TWO: Perform with opposite arm. **Important: Keep the stationary arm immobile so all work is done by the moving arm.

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**EXERCISE 4: THE BOW AND ARROW**

**OPTION ONE**

ONE: Tighten up on the Thera-Band® resistive band by wrapping it around your hands so that 6-8 inches of band remain between your hands. Bring arms, with elbows straight, up to a 90° angle with your body.

TWO: Keeping the right arm stationary, pull the left hand down towards the floor (as if shooting an arrow from a bow). The moving arm (left) comes down at a 90° angle to your body and the hand is kept in alignment (does not rotate inward or outward). Hold maximum position 2-3 seconds. Return to starting position. Repeat 3-8 times. Repeat entire exercise keeping the left arm stationary while moving the right arm.

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**OPTION TWO**

ONE: Keep one arm stationary and, keeping the elbow straight, pull the other arm out to the side. Hold maximum position 2-3 seconds. Return to starting position. Repeat 3-8 times.

TWO: Perform with opposite arm. **Important: Keep the stationary arm immobile so all work is done by the moving arm.

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**EXERCISE 5: THE ARM ROTATION**

**OPTION ONE**

ONE: Lay the Thera-Band® resistive band sideward and outward with both hands, keeping elbows bent and tucked into your sides, so that hands come down to the floor. Hold maximum position 2-3 seconds. Return to starting position. Repeat 3-8 times.

**OPTION TWO**

ONE & TWO: Keep one arm stationary and complete the movement with the opposite arm. Do each arm 3-8 times.

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**ALWAYS CONSULT YOUR PHYSICIAN BEFORE BEGINNING ANY EXERCISE PROGRAM**

Start with Yellow Thera-Band® resistive band. Use the proper resistance to safely perform the complete movement. Begin with 3 repetitions, then advance to five. For a higher level of fitness, progress to eight. Closely follow instructions about keeping elbows straight. Progress through the colors as you increase in strength. If you have weakness, frailty, or pain from arthritis in your hands, use the Thera-Band® exercise handles.