

- **TIP:** Encourage clients to bend from the hips and knees (not the waist) and sit without slouching.
- **TIP:** Encourage brisk walking with a warm up and cool down.
- **TIP:** Biking and swimming exercises, although aerobic, are not weight-bearing. Encourage clients who bike or swim to add weight-bearing and resistance exercises.
- **TIP:** Every day tasks such as lifting groceries, doing laundry or vacuuming can be harmful if not done properly. Teach clients good posture and body mechanics.

For more information about how to build and protect bones, visit the New Jersey Interagency Council on Osteoporosis website at: <http://nj.gov/health/senior/osteo/> or call **609/943-3498**.



- **DO** weight-bearing (low-impact) exercises (walking, dancing or stair climbing) at least 3-5 times per week.
- **DO** resistance exercises (free weights, resistance bands or exercise machines) 2-3 times per week.
- **DO** postural exercises to stretch tight muscles, improve posture, and strengthen back muscles several times a day.

To decrease stress on the back and reduce the risk of spinal fractures:

Shoulder Stretch:

Bring shoulder blades together.

Standing Backward Bend:

Place hands on lower back (palms down), gently arch the lower back over the hands.

- **DO** balance exercises to improve equilibrium, increase muscle strength and reduce falls.



AS A FITNESS INSTRUCTOR OR TRAINER, you have a critical role in helping your clients to exercise safely.

Encourage clients with a diagnosis of osteoporosis, or osteopenia and/or clients over age 50, to check with their health care provider before beginning any exercise program.

FOR CLIENTS WITH OSTEOPOROSIS, forward bending (flexion) exercises can cause wedge or compression fractures.

OSTEOPOROSIS is a serious disease that causes bones to become brittle and easily broken. More than 44 million Americans have or are at risk of osteoporosis. Half of women and 20% of men over the age of 50 will suffer an osteoporotic fracture.

GOOD NEWS! The right exercise program can decrease bone loss, increase bone density and reduce the risk of fractures at any age. An exercise program for people with osteoporosis should include weight-bearing, resistance, postural and balance exercises.

CLIENTS WITH OSTEOPOROSIS SHOULD AVOID THESE EXERCISES

1. Forward bending or rounding of the spine can be extremely dangerous.*



AVOID TOE TOUCHES AND FORWARD BENDING



AVOID SIT UPS OR CRUNCHES DONE WITH A 'ROUNDED' BACK

2. Excessive rotation (twisting) creates increased compression force and has a negative impact on the spine.





AVOID TWISTING 'WINDMILL' EXERCISES

3. High impact movement such as jumping, running, and high-impact aerobics can cause too much jarring and excessive stress on the spine.

*A Mayo Clinic study by Sinaki and Mikkelsen found an 89% fracture rate in women with osteoporosis who performed only forward bending (flexion) exercises. However, women who performed only backward bending exercises had a reduced fracture rate of only 16%.

CAUTION:

 If your client is frail, has had a fracture, falls frequently, or has osteoporosis, take extra precautions.

 Forward bending, excessive rotation, or high impact aerobics can be harmful for the client with osteoporosis.

A physician or physical therapist should be consulted if clients experience pain with exercise, have postural changes including muscle and soft tissue tightness, or have had a recent fracture.

The hands-on treatment of a physical therapist can often greatly help these individuals.

NOTE: The National Osteoporosis Foundation recommends individuals speak with a knowledgeable physician about their fracture risk before starting any exercise program.

