

# Osteoporosis: Guide to Safe and Effective Physical Activity and Exercise for the Aging Adult

- Osteoporosis, or porous bone, is a disease which leads to fragility of bone and increased risk of fracture.
- It affects 44 million Americans:
  - 10 million are diagnosed with osteoporosis.
  - 34 million have low bone density, putting them at risk.



## Exercises for Osteoporosis

### Cardiovascular/Aerobic:

- Impact activities (walking, dancing, hiking, etc.)
- 3-5 days per week
- Brisk pace
- 20-30 minutes



### Resistance Exercises:

- Dumbbells, weight machines, cuff weights, exercise bands and tubes, or floor calisthenics
- 2-3 days per week
- 1-2 sets of 8-10 repetitions for all major muscle groups
- A resistance that cannot be performed more than 8-10 times



### Balance Exercises:

- Activities to improve balance include those that challenge balance such as Tai Chi, lower extremity exercises and challenging gait activities performed daily.

### Functional Exercises:

- Activity-specific exercises (brisk walking, climbing stairs, repeated standing from a chair, and other normal challenging activities) performed daily.

### Focus of Exercise to Prevent Fractures:

- Increase or maintain bone density and bone strength
- Improve posture and body mechanics
- Improve balance/prevent falls



### Incidence of fractures:

- 1 in 2 Caucasian women and 1 in 4 men over age 50 will have an osteoporosis-related fracture in her/his remaining lifetime.
- People of other ethnic backgrounds are at lesser, but substantial, risk of fracture.

### Osteoporosis is responsible for more than 1.5 million fractures annually, including:

- Over 300,000 hip fractures
- 700,000 vertebral fractures
- 250,000 wrist fractures
- 300,000 fractures at other sites.

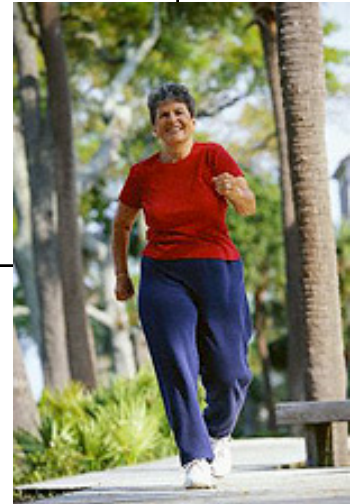
# Exercising Safely With Osteoporosis. . .

## Falls and Fractures:

- Most fractures in older adults are the result of a fall.
- More than 1/3 of adults over the age of 65 fall each year.
- The most serious injury from a fall in older adults is a hip fracture.
- 90% of hip fractures are the result of a fall.

## Fall prevention includes:

- Education about risk factors
- Strength and balance exercises
- Home and environmental modifications
- Medication assessment to minimize side effects.



## Safety for Exercise with Osteoporosis:

- If you have or are at risk of osteoporosis, you should receive an exercise prescription from a physical therapist.
- If you have osteoporosis, you should avoid spine flexion such as curl ups and toe touches. These movements can increase risk of spine fractures.



- Exercise should be done in your best posture.
- You should breathe through the exercise, not hold your breath.
- Avoid jerking or thrusting weights into position. The exercise should be done with smooth, steady movements.
- Muscle soreness lasting up to a few days and slight fatigue are normal after muscle-building exercises, but exhaustion, sore joints, and pain aren't.
- Exercises should be done in a pain-free range of motion.

## You may have osteoporosis if you have:

- Broken a bone with little, or no, trauma
- Lost more than 2 inches from your maximal height
- A bone density test showing low bone density

## Of those who suffer an osteoporotic hip fracture:

- 25% die within the next year.
- 20% require long-term care afterward.
- Only 15% can walk across a room unaided after 6 months.

## Spine (vertebral) fractures can cause:

- Decreased quality of life
- Pain
- Loss of height
- Loss of function
- Rounded back posture
- Stomach pain and difficulty eating
- Difficulty breathing
- Decreased mobility and energy

Protect yourself: get screened for osteoporosis, learn more about preventing falls, and stay active!

More Section on Geriatrics consumer information (including information about preventing falls) is available at:  
[www.geriaticsppt.org](http://www.geriaticsppt.org) (click "Consumers"), or call 800/999-2782 x8174

APTA consumer information

[www.apta.org/consumer](http://www.apta.org/consumer)

American Physical Therapy Association (APTA)

800/999-APTA

Find a Physical Therapist Near You

[www.apta.org/findapt](http://www.apta.org/findapt)



SECTION ON GERIATRICS