Exercise Guidelines for Osteoporosis and Osteopenia

WHY EXERCISE?

Exercise can decrease bone loss, increase bone density, and reduce the risk of fractures. Choosing the wrong exercise can be harmful and should be avoided. A safe and effective exercise program includes weight-bearing, resistance, postural, and balance exercises.

EXERCISE TIPS: Check with your health care provider before you begin any exercise program.

- Avoid exercises that require you to bend your spine forward (toe touches, sit-ups, or crunches). These exercises can increase the incidence of spinal fractures.
- Avoid exercises involving excessive twisting (windmill toe touches). This movement puts too much force on your spine.
- Avoid any exercise that causes or increases pain.
- Stop exercising if you feel dizzy or short of breath.
- Never hold your breath while exercising.
- Keep your back straight and your weight over the center of your feet while exercising.
- Wear shoes with good cushioning and support.

Weight-bearing exercises transmit the weight of the body through the bones working against gravity. Walking, dancing, and hiking are examples. The goal is to work up to 45 minutes or more per sesssion. *Perform at least 3 to 5 times per week.*

Walking

Warm up by walking at a slow pace for 5 minutes. Increase speed gradually to a brisk pace. Walk at a speed you can maintain for at least 20 minutes. To check your intensity, make sure you can carry on a conversation while walking. Gradually work up to a 45-minute walk. Cool down with a 5-minute slow walk. Perform gentle stretches after walking.

Resistance exercises generate muscle tension on the bones to strengthen muscles and stimulate bones to grow stronger. Examples are free weights, exercise machines and resistance bands. Start exercising without weights. Begin with 1 set of 8 to 10 repetitions of each exercise increasing gradually to 2 or 3 sets. When that becomes easy, add 1 lb. weight at a time. *Perform 2 to 3 times a week but not on consecutive days.*

Stick 'Em Up

Sit or stand, bringing arms into a "W" position without hunching shoulders. If sitting, place feet on the floor with knees apart. If standing, tighten lower abdominal muscles and keep knees soft (not locked). Bring arms backward to a comfortable position and pinch shoulder blades together. Slowly return to the starting position. Work up to 10 repetitions. When you can do this 10 times without difficulty, add 1-lb. weights to each hand or wrist. Increase weight gradually.

Postural exercises stretch and strengthen muscles to improve posture. They decrease harmful stress on the back, reduce the risk of spinal fractures, and minimize rounded shoulders seen in osteoporosis. *Perform several times daily to reinforce good posture.*

Shoulder Stretch

Sit at the edge of a chair. Draw shoulders back to a comfortable position pulling shoulder blades together. At the same time, visualize stretching and lengthening your spine. Hold for 3 seconds. *Perform 3–5 repetitions.*

Balance exercises improve equilibrium, increase muscle strength and reduce the risk of falling. *Perform these exercises daily.*

Balancing on One Leg

Stand in a comfortable, balanced position near a counter or sturdy chair for support. Keep knees soft (not locked) and toes facing forward. Tighten lower abdominal muscles and lift left knee to a comfortable position. Hold 5 to 10 seconds, while maintaining tightness of abdominal muscles. Alternate legs and perform 5-10 repetitions with each leg.

Body mechanics: Lifting, doing laundry, vacuuming and other daily activities can be harmful if done incorrectly. Simple tips include: bend from the hips; sit without slouching; and stabilize your back while coughing or sneezing by bending your knees and keeping your spine straight.

A Physical Therapist can help you design a safe, appropriate exercise program that can help prevent fractures.

New Jersey Interagency Council on Osteoporosis and "Osteoporosis: an Exercise Guide," Margie Bissinger, 1998.

Build Strong Bones and Maintain Bone Strength with Calcium

How Much Calcium Does Your Body Need Each Day?

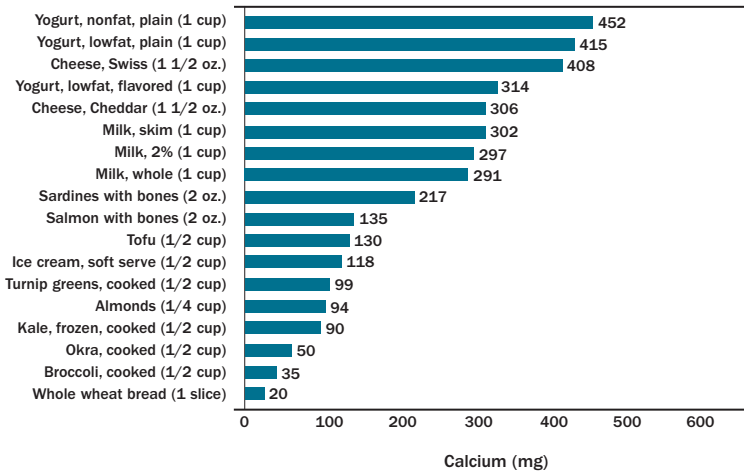
Children	Calcium
1–3 years	500 mg/day
4–8 years	800 mg/day
9–18 years	1,300 mg/day
Adults	**Calcium**
19–50	1,000 mg/day
51 and older	1,200 mg/day

Make Sure You're Getting Enough Calcium in Your Daily Diet

- Calcium is important at any age and the first choice for adequate calcium intake is from food. Your body absorbs calcium from food sources best.
- You need the equivalent of 3-4 eight-ounce glasses of milk each day to meet your calcium requirements.
- Remember to eat calcium-rich foods several times throughout the day.
- Calcium plays an important role in keeping bones strong, but calcium alone cannot prevent or cure osteoporosis.

Calcium Contribution of Foods

Source: USDA Agricultural Handbook 8-1.
*Check food labels. The amount of calcium in different brands varies.



Calcium to Prevent Bone Loss

If you are not getting enough calcium for other body processes, such as your heart and nerve function, your bones become your body's emergency supply of calcium. When this happens, your bones become weak and can break easily. Many women consume less than half of the daily recommended amount of calcium.

Source: New Jersey Interagency Council on Osteoporosis 609/943-3498

Read The Nutrition Label

To find out the milligrams (mg) of calcium per serving, add a 'zero' to the % Daily Value and remove % sign.

Nutrition Facts

Serving size 1 cup (236mL)
Servings Per Container 8

Amount Per Serving	
Calories 90	**Calories from Fat 0**
	% Daily Value*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Cholesterol 5 mg	**2%**
Sodium 125 mg	**5%**
Total Carbohydrate 13 g	**4%**
Dietary Fiber 0g	**0%**
Sugars 12 g	
Protein 8 g	
Vitamin A 10%	**Vitamin C 4%**
Calcium 30%	**Iron 0%**
Vitamin D 25%	

***Percent Daily Values are based on a 2,000 calorie diet.**

Example: 30% = 300 mg.

Calcium Supplements

- Talk to your health care provider or a registered dietitian to learn about foods that are high in calcium and bone-building nutrients. If you don't think you're getting enough calcium from your diet, calcium supplements may meet your needs.
- Discuss supplement options such as Calcium carbonate (Tums® or Caltrate®) or Calcium citrate (Citracal+D®) with your physician or a pharmacist.
- Some calcium supplements such as calcium carbonate work best if taken with food.
- Check with your health care provider about drug/supplement interactions.

Vitamin D For Calcium Absorption

- The recommended dose is 400-800 IU (International Units) of vitamin D each day. Note: Too much vitamin D can be toxic; do not exceed 2000 IU daily unless prescribed by a physician.
- 10-15 minutes outdoors with direct sun on your hands, arms and face two or three times a week will give your body some of the vitamin D you need. In New Jersey, adequate vitamin D from the sun only happens during the summer months; vitamin D cannot be absorbed through windows. Sunscreen blocks the absorption of vitamin D.
- Most multiple vitamins include vitamin D and it is also available in many foods, including milk.

If You Already Have Osteoporosis

proper nutrition, exercise and appropriate medical management are all important parts of a complete treatment program.

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