

SAFE MOVEMENT

When a person with osteoporosis falls they are more likely to break a bone in the hip, spine or wrist. More than 90 percent of hip fractures are associated with osteoporosis. Fractures can be serious and limit your ability to lead an active, independent life. For people with bone loss in the spine (backbone), activities that place stress on the spine can increase the likelihood of a broken bone in the spine (vertebral fracture). Avoid activities that twist or bend the spine. Good posture and proper body mechanics are important throughout your life, especially if you have osteoporosis. "Body mechanics" refers to how you move throughout the day. Knowing how to move, sit and stand properly can help you stay active and prevent broken bones and disability.

POSTURE

- Always pay attention to proper posture.
- Lift your breastbone
- Keep your head erect and look forward
- Keep your shoulders back; lightly "pinch" shoulder blades
- Tighten your abdominal muscles and buttocks

Proper posture can also help limit the amount of kyphosis, or forward curve of the upper back, that can result from broken bones in the spine.

ALIGNMENT

One of the most important things about body mechanics and posture is alignment. Alignment refers to how the head, shoulders, spine, hips, knees and ankles relate and line up with each other. Proper alignment of the body puts less stress on the spine and helps you have good posture. For the person with osteoporosis, general muscle strength and flexibility are especially important. Keeping active helps maintain muscle tone, reflexes, and balance. Follow these guidelines to move safely throughout your day.

Properly Align Your Spine

- Stand with your back against a wall with your heels 2 inches from the wall
- Tighten your abdominal muscles and flatten your back against the wall
- Lift your breastbone, keep your head up and look straight ahead
- Bring your shoulders back toward the wall
- There should be a small hollow at the small of your back
- Maintaining this position, move away from the wall and check your posture in a full-length mirror from the front and side

Unsafe Movement

To keep proper alignment, avoid the following positions or movements: Having a slumped, head-forward posture

- Bending forward from the waist
- Twisting of the spine to a point of strain
- Twisting the trunk and bending forward when doing activities such as coughing, sneezing, vacuuming or lifting
- Anything that requires you to reach far. An example is reaching up for items on high shelves when you could lose your balance and fall.



MOVEMENTS TO AVOID

Some exercises can do more harm than good. If you have osteoporosis or have broken bones in the spine, you should avoid exercises that involve bending over from the waist. Some examples of movements you should **NOT** do include:

- Toe Touches
- Sit-Ups
- Abdominal Crunches (also called stomach crunches)

In addition, many exercises and activities such as yoga, Pilates, tennis and golf may need to be avoided or adjusted because they often involve twisting and bending motions. Bending forward during routine activities also puts stress on the spine and can increase the chance of breaking a bone in the spine. While bending forward puts strain on the spine, it's usually safer if you're able to keep your back flat.

SITTING

When sitting in a chair, try to keep your hips and knees at the same level. Place your feet flat on the floor. Keep a comfortable posture. You should have a natural inward curve to your lower back.

When tying your shoes or drying your feet, sit in a chair, place one foot on a footstool, box or on your other leg and lean forward at the hips to tie or dry. Do not bend over or slouch through your upper back. Keep the natural curve of your lower back and a straight upper back.

- Use a footstool or footrest when seated for long periods of time
- When sitting in bucket seats or soft couches or chairs, use a rolled up towel or pillow to support your lower back
- When sitting at a desk, prop up a clipboard so it slants toward you, like a drafting table. When reading, do not lean or slump over
- Set your reading material on a desk, table or on pillows on your lap
- When standing up from a chair, move your hips forward to the front of the chair, and use your leg muscles to lift yourself up
- When driving, use the head rest

STANDING

- Keep your head high, chin in, shoulder blades slightly pinched together
- Maintain the natural arch of your lower back as you flatten your abdomen (tummy) by gently pulling it in
- Point your feet straight ahead with your knees facing forward

While standing in one place for more than a few minutes, put one foot up on a stool or in an open cabinet (if in kitchen). Switch to the other foot every so often. You'll find this much less tiring for your back and legs.

WALKING

- Keep your head high, chin in, shoulder blades slightly pinched together
- Keep your feet pointed straight ahead, not to one side
- Your knees should face forward
- Keep your knees slightly bent
- Avoid letting your knees lock as you bring your weight over your feet
- Wear rubber or other non-slip soles when walking, and land lightly on your foot
- Don't wear loose slip-on shoes or slippers



CLIMBING STAIRS

Use the stairs for exercise and to help your bone density, but only if your healthcare provider says it's safe for you, build up gradually with this exercise.

- Keep your head high, chin in, shoulder blades slightly pinched together and abdomen (tummy) gently pulled in
- Keep your feet pointed straight ahead, not to one side
- Your knees should face forward
- Keep your knees slightly bent
- Instead of putting one foot directly in front of the other, keep your feet a few inches apart, lined up under the hip on the same side

For safety, hold the rail while going up and down but try to avoid pulling yourself up by the railing. Be especially cautious going downstairs. A fall down the stairs could cause severe injuries.

GETTING INTO AND OUT OF BED

Getting Into Bed

- First, sit down on the side of the bed. Lean toward the head of the bed while supporting your body with both hands.
- Then lie down on your side, bringing both feet up onto the bed at the same time.
- Keep your knees bent and arms in front of you, and then roll onto your back in one motion. Pull your abdomen (tummy) in as you roll to support your back and to help prevent twisting.
- Keep nose, knees and toes pointing in the same direction. Do not lift your head and upper back to move in bed. This puts a great deal of strain on your spine and could cause breaks in the spine.

Lying Down and Getting Out of Bed

- When lying on your side in bed, use one pillow between your knees and one under your head to keep your spine aligned and increase your comfort.
- When lying on your back in bed, use one or two pillows under your knees and one under your head.

Try to avoid using extra pillow to prop your head and upper back since this will put you into a rounded upper back position. But, if you have a rounded upper back posture with a forward head, you may need two pillows to support your neck comfortably.

When getting out of bed, reverse the steps you took to get in bed (above):

- Keep both arms in front of you.
- Pull your abdomen (tummy) in and breathe as you roll onto your side. Keep your abdomen (tummy) pulled in and use your hands to raise your upper body as you carefully place your legs over the side of the bed in one motion.
- Sit on the edge of the bed for a moment or two before you stand up.
- When on your back, never lift your head and upper back to sit up in bed or get out of bed.

LIFTING AND CARRYING

- Don't lift or carry objects, packages or babies weighing more than 10 pounds. If you're unsure about how much you can lift, check with your healthcare provider, especially a physical therapist.
- If you are picking up a heavy object, never bend way over so that your back is parallel to the ground. This places a lot of strain on your back.



- To lift an object off the floor, first kneel on one knee. Place one hand on a table or stable chair for support if you need it.
- Bring the object close to your body at waist level. Gently pull your abdomen (tummy) in to support your back and breathe out when you are lifting an object or straightening up. Do not hold your breath. Stand using your leg and thigh muscles.
- When carrying groceries, request that your bags be packed lightly. Divide heavy items into separate bags. Hold bags close to your body. Balance the load by carrying the same amount in each hand.
- When unpacking, place bags on a chair or table rather than on a high counter or floor. This prevents extra lifting and twisting of the spine.
- Instead of carrying a heavy pocketbook or purse, consider wearing a fanny pack.

PUSHING AND PULLING

- When you vacuum, rake, sweep or mop, keep your feet apart with one foot in front of the other. Always face your work directly to keep from twisting your back.
- Shift your weight from foot -to -foot in a rocking movement. With knees bent and shoulder blades pinched together, move forward and back, or from side to side rhythmically.

COUGHING AND SNEEZING

- Support your back with one hand whenever you cough or sneeze.
- Place your hand behind your back or on your thigh. This protects the spine from damage caused by a sudden bend forward.

BENDING AND TURNING

- Keep your feet flat and about shoulder -width apart from one another.
- Let both upper arms touch your ribs on the sides, unless you're using one hand for support.
- As you bend, keep back upright and straight and shoulder blades pinched together. Bend only at the knees and hips. Do not bend over at the waist since this will put your upper back in a rounded position which can cause broken bones in the spine.
- Even when standing to brush your teeth or wash dishes, try not to bend over at the waist, but rather bend at the knees and hips while keeping your back straight.
- When changing the direction you're facing, move your feet with your body. Do not twist the spine. Pivot on your heels or toes with your knees slightly bent. Keep nose, knees and toes pointing in the same direction.

