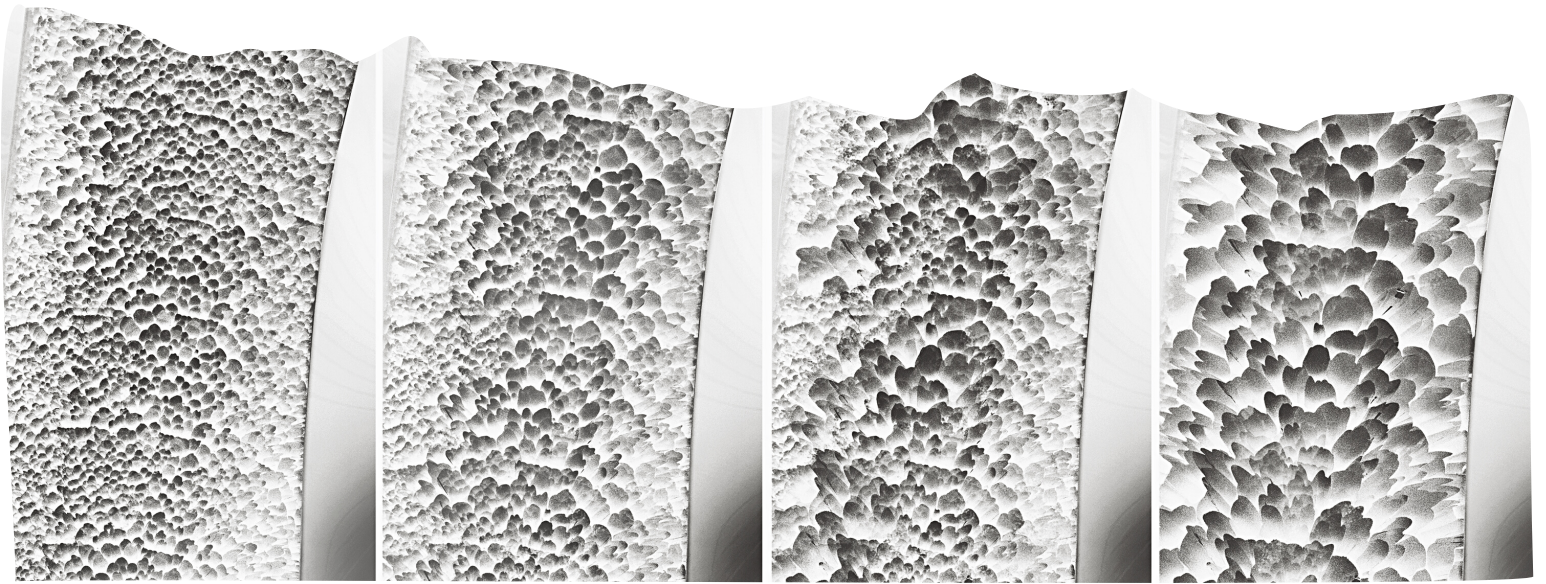


USF HEALTH PHYSICAL THERAPY CENTER

BUILD UP YOUR BONES



WHAT IS OSTEOPOROSIS?

Osteoporosis is a disease in which the bone decreases in strength. Osteoporosis means “porous bone”. Porous meaning that it is filled with holes. Now, all bones are filled with holes, however with osteoporosis these holes are larger due to the loss of its structure over time. Osteoporosis is called a “silent disease” because bone loss occurs without symptoms.

WHY DOES THIS MATTER?

Osteoporosis is not a reversible condition. In addition, low bone mass makes bones more susceptible to fractures, especially the bones of the hip, spine, and wrist. Depending on the severity, the bones can become so weak that a sudden strain, twist or fall could result in a fracture. Fractures can result in pain, time in the hospital, and even surgery which can result in physical deconditioning and disability.

SO WHAT NOW?

Weakened bones can become stronger if you participate in regular physical activity which can help delay the progression of osteoporosis. In addition by adopting some lifestyle behaviors you can protect your bones from injury which is why the physical therapists at the USF Physical Therapy Center made this resource for you so you have the tools to make those changes.



"Almost every successful person begins with two beliefs: the future can be better than the present, and I have the power to make it so."

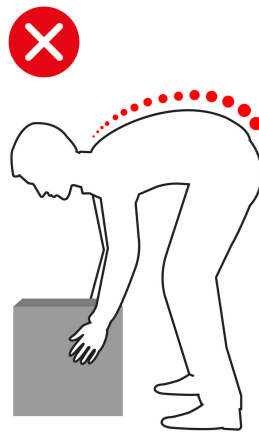
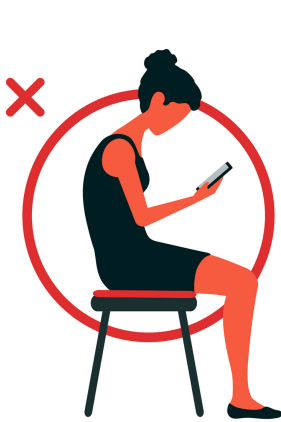
- David Brooks

THIS INFORMATIONAL PACKET INCLUDES:

- The DOs and DO NOTs for people with osteoporosis
- Safety tips for preventing falls
- Start up guide to physical activity
- Comprehensive exercise program approved by a licensed physical therapist

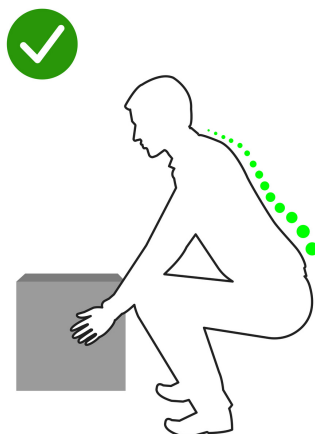
DON'T:

- Slouch forward when standing, walking, or sitting at desk
- Perform exercises or activities that cause you to bend forward and/or twist at your waist such as touching your toes, or doing sit-ups
- Participate in high-impact activities such as jumping or running
- Wear shoes with slippery soles
- Smoke or vape tobacco as it has negative effects on your bone health



DO:

- Pay attention to good posture during sitting and standing
- Bend at your hips when picking up items from the floor
- Perform weight bearing exercises
- Wear good fitting shoes with supportive non-slip soles
- Eat a diet rich in calcium (after age 50 your body needs 1,200 to 1,500 mg per day). Talk to your doctor before taking any supplements.



SAFETY TIPS FOR FALL PREVENTION

PERSONAL:

- Pay attention to proper posture in sitting and standing
- Stay active
- Ask your doctor about your medications as some medications or combination of medications can cause drowsiness or dizziness which can put you at risk for falls
- Have your vision and hearing checked regularly



INDOOR:

- Keep all rooms free from clutter
- Keep cords and telephones lines out of walkways
- Be aware of differences in floor levels and thresholds
- Avoid walking around in sock or floppy slippers, instead wear supportive, low-heeled shoes
- Ensure all area rugs are either removed or have skid-proof backing or are tacked to the floor
- Be sure that all stairways are well lit and have handrails on both sides
- Place fluorescent tape on edges of top and bottom steps
- Install grab bars on bathroom walls beside tubs, shower, toilets
- Purchase a shower chair with non-skid tips
- Use a rubber bathmat in the shower or tub
- Use at least 100-watt light bulbs in your home
- Use nightlights throughout your home
- Keep a flashlight beside your bed with extra batteries

OUTDOOR:

- In bad weather, consider using a cane or walker
- Look carefully at floor surfaces in public buildings since they can be highly polished that can be very slippery when floors have plastic or carpet runners in place try to stay on them whenever you can.
- Stop at curbs to check height before stepping up or down
- Make sure you use a handrail when climbing the stairs

START UP GUIDE FOR PHYSICAL ACTIVITY

BENEFITS OF PHYSICAL ACTIVITY:

- Can increase your strength to move and walk easier
- Can improve balance to reduce your risk of falling
- Can maintain /improve your posture
- Can decrease pain in joints and muscles
- Can improve quality of sleep, energy, and mood
- So much more!



SMART FORMS OF ACTIVITY:

- Walking
- Strength training
- Dancing
- Tai chi
- Stair climbing
- Hiking
- Bicycling and swimming (both are not good weight-bearing exercises, but are decent alternatives if you have a health condition that makes it painful to bear weight on joints (ex. arthritis))



WHAT TO KEEP IN MIND BEFORE STARTING:

- If you are new to aerobic exercise it is ok to start with 10 minutes bouts as tolerated then slowly work your way up to 30 minutes
- When performing resistance training expect that you will feel sore in the muscles 1 or 2 days after training your muscles however it should decrease after your warm up
- If you experience soreness that goes away during your warm up but comes back after your workout, consider taking two days of rest and lower the resistance/intensity of your workouts



TANDEM STANCE WITH SUPPORT

Stand in front of a chair, table or counter top for support. Then place the heel of one foot so that it is touching the toes of the other foot. Maintain your balance in this position.

REPEAT: 10 TIMES
COMPLETE: 2 SETS
PERFORM: 3 TIMES A WEEK



SINGLE LEG STANCE

Cross your arms over your chest and then stand on one leg. Perform this next to a table or other sturdy object. Hold your balance in this position. If you lose your balance, you can use one or more strategies to help: Touch your toes down

Take a step

Unfold your arms and raise them to the sides

Grab on to something for support

COMPLETE: 3 SETS
PERFORM: 3 TIMES A WEEK



STAGGERED STANCE- SIT STAND

Start by sitting in a chair with your feet staggered apart as shown.

Then stand up while keeping your feet in the same position. Sit back down and repeat.

REPEAT: 10 TIMES
COMPLETE: 2 SETS
PERFORM: 3 TIMES A WEEK



HIP ABDUCTION - STANDING

While standing next to a chair or counter top for support, raise your leg out to the side. Keep your knee straight and maintain your toes pointed forward as best as you can. Then, lower your leg back down and repeat. Use your arms for balance support if needed for balance and safety.

REPEAT: 10 TIMES
COMPLETE: 2 SETS
PERFORM: 3 TIMES A WEEK



HIP EXTENSION - STANDING

While standing, stand on one leg and move your other leg in a backward direction. Do not swing the leg. Perform smooth and controlled movements. Keep your trunk stable and without arching during the movement. Use your arms for support if needed for balance and safety.

**REPEAT: 10 TIMES
COMPLETE: 2 SETS**

PERFORM: 3 TIMES A WEEK



STEP UP AND OVER - SIDWAYS

While standing next to a box or raised surface, step up and to the side on to the surface. Both feet should touch the raised surface. Then step down and onto the floor towards the opposite side you started from.

**REPEAT: 10 TIMES
COMPLETE: 2 SETS**

PERFORM: 3 TIMES A WEEK



STEP UP AND STEP DOWN (SAME SIDE)

Start by standing in front of a step/step stool with both feet on the floor. Step forward and up the step with your target leg and use that leg to lift your body weight up onto the step with the other leg. Once both feet are on the step, step back down backward with the other leg first so that your target leg does the work to lower your body back down to the ground. Then return the target leg to the floor next to your other leg. You may need something to hold on to for balance support. Repeat this on the same side.

**REPEAT: 10 TIMES
COMPLETE: 2 SETS**

PERFORM: 3 TIMES A WEEK



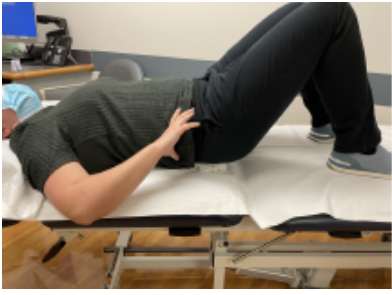
CHIN TUCK - LYING ON BACK

While lying on your back, tuck your chin towards your chest and press the back of your head into the table.

Maintain contact of the back of your head with the surface you are lying on the entire time.

**REPEAT: 10 TIMES
COMPLETE: 2 SETS**

PERFORM: 7 TIMES A WEEK



PELVIC TILT WITH TOWEL ROLL

Lay on your back with a towel placed under the sacrum (tailbone). Engage your core by squeezing in your abdominal muscles – think about pulling your belly button down towards your spine. You should still be able to breathe with this. Tilt your pelvis posteriorly by pressing your back into the towel. Hold for a few seconds. Return to the starting position. Repeat.

REPEAT: 10 TIMES
HOLD: 8 SECONDS
COMPLETE: 3 SETS
PERFORM: 7 TIMES A WEEK



DEAD BUG

Lie on your back with your feet on the floor, establish diaphragmatic breath. Slowly lift feet off the ground so that your knees are bent at 90 degrees and hips at 90 degrees or less. Raise the arms straight up in the air. Slow and controlled lower the left foot and right arm down. Stop before you lose neutral spine.

Return to start position. Repeat with opposite arm and leg.

REPEAT: 10 TIMES
HOLD: 3 SECONDS
COMPLETE: 3 SETS
PERFORM: 7 TIMES A WEEK



PRONE BACK EXTENSION

While lying face down, slowly raise your chest upwards and off the ground. Then lower slowly back to the ground.



REPEAT: 10 TIMES
HOLD: 3 SECONDS
COMPLETE: 3 SETS
PERFORM: 7 TIMES A WEEK

BIRD DOG

While in a crawling position, tighten/brace at your abdominal muscles and then slowly lift a leg and opposite arm upwards. Your hip will move into hip extension on the way up. Lower leg and arm down and then repeat with opposite side. Maintain a level and stable pelvis and spine the entire time.

BEGINNER: Start with alternating arms only
INTERMEDIATE: Alternate legs only



REPEAT: 10 TIMES
HOLD: 3 SECONDS
COMPLETE: 3 SETS
PERFORM: 7 TIMES A WEEK

STANDING WALL ANGEL

Standing against wall, attempt to keep heels, butt, shoulder blades, and back of head touching the wall. Once hands are as high as you can open palms forward and make a slow arch downwards as if making a snow angel. Be careful your low back does not arch more when arms are overhead.

BEGINNER LEVEL: Start with back of hands by your sides with arms against the wall and hold position for 10 seconds

INTERMEDIATE LEVEL: Move arms from sides to 90 degrees(making a T with your body)

ADVANCED LEVEL: Move arms overhead as shown in picture

REPEAT: 10 TIMES

COMPLETE: 2 SETS

PERFORM: 7 TIMES A WEEK

**ELASTIC BAND EXTENSION BILATERAL SHOULDER**

While holding an elastic band with both arms in front of you with your elbows straight, pull the band downwards and back towards your side.

REPEAT: 10 TIMES

COMPLETE: 2 SETS

PERFORM: 3 TIMES A WEEK

**ELASTIC BAND ROWS**

Holding elastic band with both hands, drawback the band as you bend your elbows. Keep your elbows near the side of your body.

REPEAT: 10 TIMES

COMPLETE: 2 SETS

PERFORM: 3 TIMES A WEEK

References

- 1.) American Academy of Orthopaedic Surgeons. OrthoInfo Basics. 2019.
- 2.) Osteoporosis. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/osteoporosis/symptoms-causes/syc-20351968>. Published August 21, 2021. Accessed June 14, 2022.
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