



# OSTEOPOROSIS

EXERCISE & BONE STRENGTH

# POSITIONS & EXERCISES TO AVOID



- ▶ Forward flexion
- ▶ Loaded forward flexion
- ▶ Rolling over the spine (yoga)
- ▶ Sit ups

# HOW TO PREVENT FALLS AT HOME

- Clean up clutter
- Repair or remove tripping hazards – loose carpets, slippery throw rugs
- Install grab bars - by toilets, bathtubs, showers
- Non-slip surfaces in shower and bathtub
- Install handrails – at stairways
- Adequate lighting – at stairways, hallways, outdoor entrances, nightlights for bathrooms and hallways

# HOW TO PREVENT FALLS AT HOME

- Wear shoes or socks with gripper soles
- Shoes – need to have heel strap or the heel enclosed
- Limit how much you carry in your arms when navigating stairs
- Slow down – after standing up pause for a few seconds before you start walking
- If you have any tendency to lose your balance backwards be cautious when reaching up to a high shelf in cupboard or closet

# What's a Safe Corner?

(We'll be using it for some exercises)

- ▶ Find a free corner in your house that is accessible
- ▶ Place a solid chair or a rollator walker with its brakes on, near the corner
- ▶ Stand with your back to the corner and with your feet close enough to the corner that you can lose your balance backward and the wall “catches” you easily. Your arms or back should not be touching the wall when exercising.
- ▶ Place the chair or rollator a few inches in front of you

# Calf Exercises

- ▶ **Beginner:** Raise up on toes in safe corner holding chair
- ▶ **Intermediate:** Raise up on toes in safe corner without holding chair
- ▶ **Advanced:** Holding chair stand on one foot and raise up on those toes
- ▶ These exercises will be done in 2 sets of 5-10 repetitions (depending on ability) at a slow speed



# Heel Drops

(not appropriate for anyone who's had a spinal fracture)

- ▶ **Beginner:** Stand holding chair, lift your heels 2 inches off the floor. Then let your heels fall to the floor with a thump. Start with 2 repetitions
- ▶ **Intermediate:** Stand NOT holding a chair, lift your heels 2 inches off the floor. Let your heels fall to the floor with a thump. Start with 5 repetitions.
- ▶ **Advanced:** Stand NOT holding a chair lift your heels 4 inches off the floor. Then let your heels fall to the floor with a thump. Start with 5 repetitions



# SIT TO STAND/STAND TO SIT

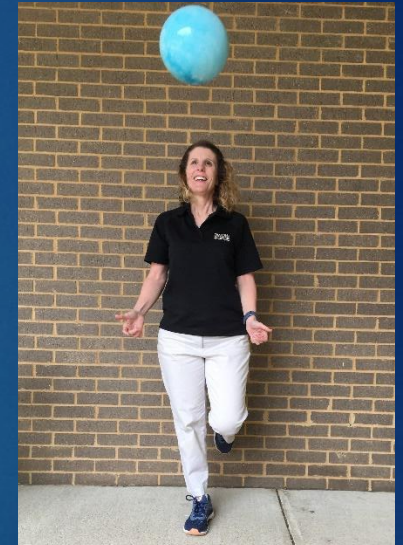
- ▶ Sit on a firm surface
- ▶ SIT TO STAND -Hinge forward at the hips until you feel your weight shift onto your feet and stand up.
- ▶ STAND TO SIT - Hinge forward at the hips taking your bottom backwards, moving until your bottom touches the chair. Sit down gently and with control.
- ▶ Start this exercise at a height that is challenging for you legs but doable and then move to lower surfaces as you get stronger. A pneumatic office chair can work well for this exercise but PLEASE back it up into a corner to keep it from rolling anywhere.





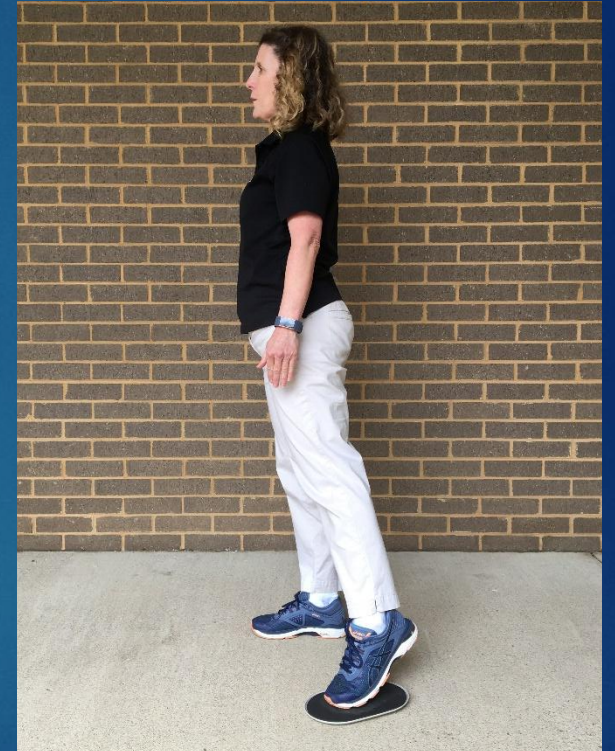
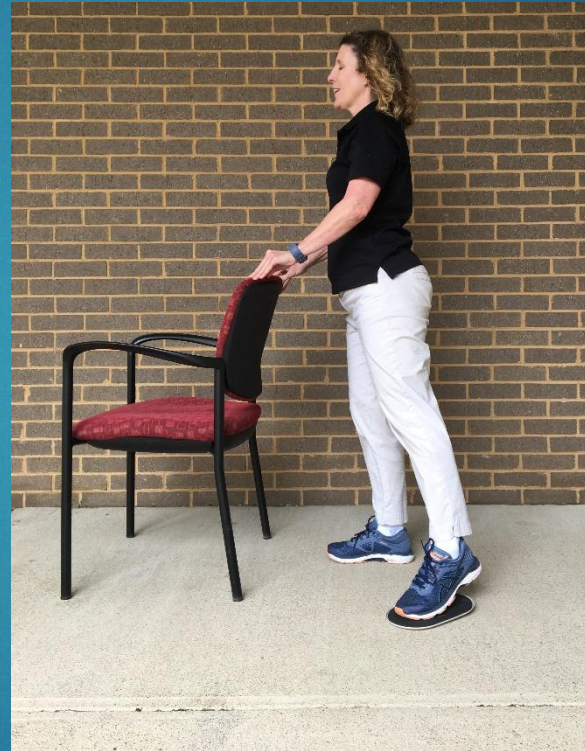
# BALANCING ON ONE FOOT

- ▶ **Beginners:** In SAFE CORNER place feet together or in a tandem position (heel to toe). Lift hands off the chair and balance. Work on this for 1-2 minutes
- ▶ **Intermediate:** In SAFE CORNER let your hands hover just above the chair. Then lift one foot off the floor balancing on the other foot for as long as is safe. Repeat working with each leg for one minute.
- ▶ **Advanced:** Balance on one foot for as long as you can. If this is easy then stand on one foot and 1). toss a ball to yourself or 2). slowly turning you head slowly to the right/left as well as up/down.



# SLIDER CIRCLES

- ▶ **Beginner:** In your safe corner **HOLD** the chair and place one foot on the furniture slider (for carpet) or on a washcloth (for wood or tile). Make circles on the floor with the slider/washcloth moving clockwise and then counterclockwise. Use your hands as little as possible to challenge your balance.
- ▶ **Advanced:** In safe corner **DON'T** hold chair but place one foot on slider and make circles in clockwise and counterclockwise directions.
- ▶ Perform 1-2 sets of 10 repetitions in each direction with each foot



# STEPUPS

- ▶ **Intermediate:** Standing near a bottom step with a railing. **HOLD** the railing and step up to the step. Then step down the step leading with the same foot. Your sequence will be right foot/left foot up the step and right foot/left foot down the step. Do 5-10 repetitions leading with each foot
- ▶ **Advanced:** Standing near a bottom step with a railing. Place your hand above but not touching the railing and step up and down the step as noted above. Do 1-2 sets of 10 repetitions.



# REVERSE LUNGE

- ▶ **Intermediate:** Stand with your R hand on a sturdy chair or table and your R foot on a furniture slider or washcloth.
- ▶ Slide the R foot backward, lowering yourself as far down as is comfortable, possibly placing the R knee on the floor. You do NOT have to go all the way down to the floor, a partial range is very acceptable.
- ▶ Push down on your L leg and lift yourself back up to the starting position. Do 2- 5 reps 1-2 sets
- ▶ **OPPOSITE SIDE:** L hand on chair and L foot on slider or washcloth
- ▶ **TIP:** It is great to do this exercise in front of a mirror, if possible, to watch for proper form.



# REVERSE LUNGE

- ▶ **Advanced:** Stand with your R foot on a furniture slider or washcloth.
- ▶ Slide the R foot backward, lowering yourself as far down as is comfortable, possibly placing the R knee on the floor. You do NOT have to go all the way down to the floor, a partial range is very acceptable.
- ▶ Push down on your L leg and lift yourself back up to the starting position. Do 2- 10 reps 1-2 sets
- ▶ **OPPOSITE SIDE:** L foot on slider or washcloth
- ▶ **TIP:** It is great to do this exercise in front of a mirror, if possible, to watch for proper form.



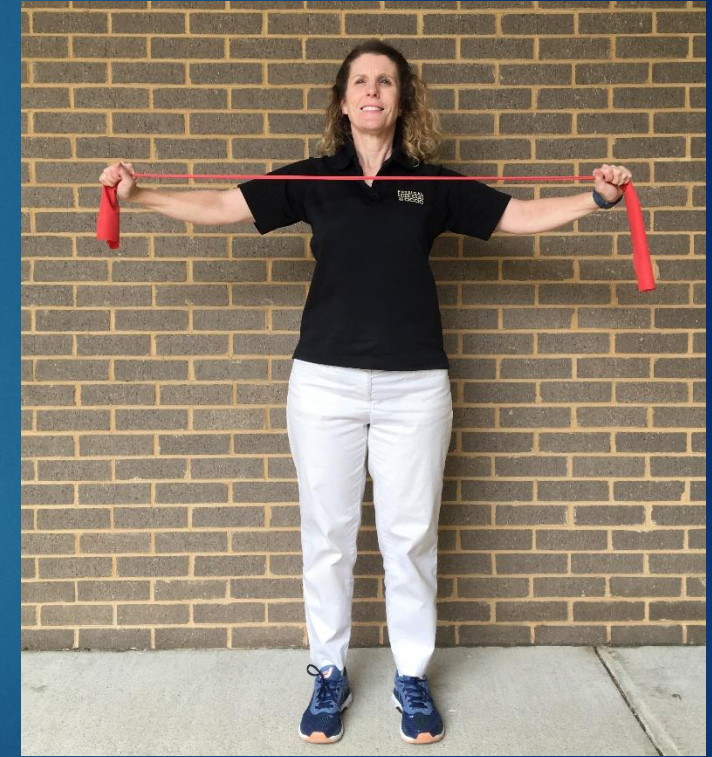
# BICEP CURLS

- ▶ **With theraband:** sit on front edge of a chair and wrap a piece of theraband under your thigh, grasp the band with the hand (on the same side as thigh with the band) thumb pointing up. Sit tall with your shoulder blades gently pinched together and down and your elbow at your side. Now bend you elbow lifting the band about 6 inches then slowly lower band. Your elbow stays at your side. Repeat 1-2 sets of 10 repetitions
- ▶ A **dumbbell** can also be used instead of the theraband



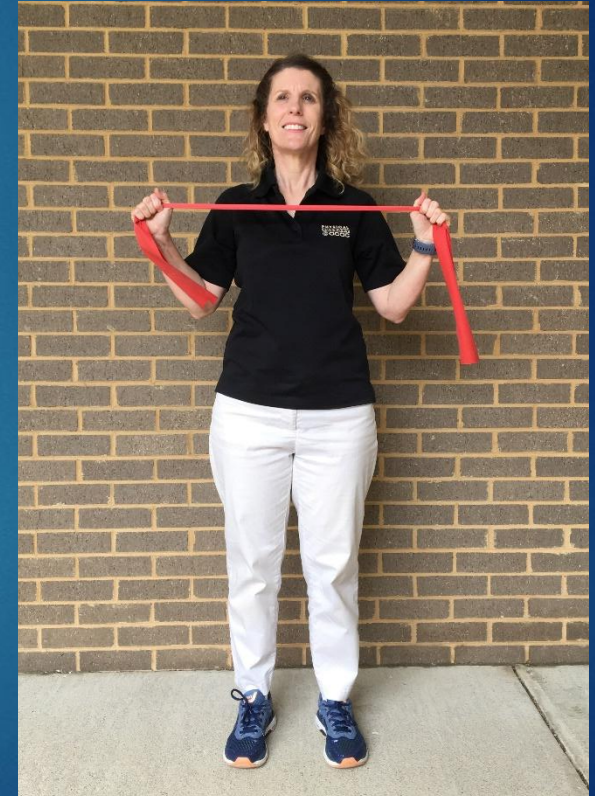
# “†” Exercise

- ▶ Sit or stand. Wrap theraband around each hand and extend your arms in front of you at shoulder height. Move your hands away from each other and out to the side making a † with your body. Slowly return your arms to the starting position. Do 10 reps 1-2 sets
- ▶ **Tip:** if you cannot move your hands all the way out to each side you've wrapped the band too tightly around your hands. Different colored bands or tubing offer different resistance. Find the one that is best for you.



# “W” Exercise

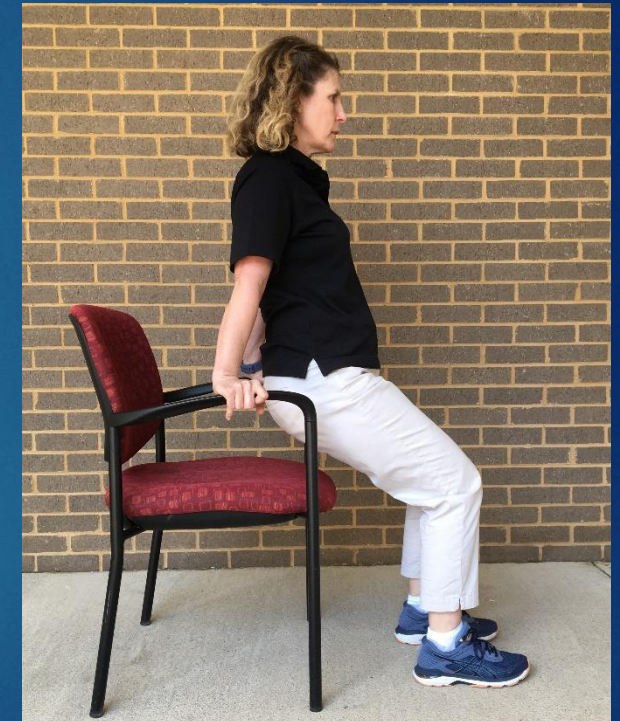
- ▶ Sit or stand. Wrap theraband around each hand and bring your hands up to your chest. Move your hands away from each other about 4 inches and HOLD 2 seconds. Return to the start position slowly and with control. Do 10 reps and 1-2 sets.
- ▶ **TIP:** Different colored bands or tubing offer different resistance. Find the one that is best for you.





# ARMCHAIR PUSHUPS

- ▶ **Beginner:** Sit toward front edge of armchair with your feet on the floor and your hands resting on the arms of the chair. Elbows should be below the level of your shoulders. If they are at the level of your shoulders sit on a pillow or book. Then using your arms only lift your bottom straight up off the chair.
- ▶ **Advanced:** To make this exercise more difficult move your feet forward on the floor.



# COUNTERTOP PUSHUP

- ▶ **Beginner:** Stand with hands on countertop in a position like you're going to do a pushup. Move each foot back one shoe length from the counter. Start you push ups. Start with 5 repetitions and slowly work up to 1-2 sets of 10 repetitions. You may want to pad the countertop with a folded towel.
- ▶ **Intermediate:** Place your hands as above and then step back 2 shoe lengths and continue as above.
- ▶ **Advanced:** Place your hands as above and then step back 3 shoe lengths and continue as above.



# QUADRUPED ARM AND LEG LIFTS

- ▶ Get onto hands and knees. This can be a padded surface on the floor or you can crawl onto the middle of a queen/king sized bed.
- ▶ **Beginner:** Extend one leg back behind you and hold 2 seconds then lower that leg and lift the opposite leg. Then lift one arm forward and hold 2 seconds then lower that arm and lift the opposite arm. 10 reps each leg and arm 1-2 sets.
- ▶ **Intermediate:** In position noted above lift one leg behind you and the opposite arm in front of you. Hold 2 seconds. You can repeat lifting the same arm and leg for 10 repetitions, 1-2 sets and then switch to the opposite leg/arm.
- ▶ **Advanced:** In the position noted above lift the right leg/left arm and hold 2 seconds and then switch and lift the left leg/right arm. Do 10 reps each side, 2 sets



# HIP ABDUCTION

- ▶ **Beginner:** sidelying leg lift



- ▶ **Intermediate:** Standing hip abduction with theraband (be cautious moving with band around ankles)



- ▶ **Advanced:** Sidesteps with band around ankles

# Prone Planks

- ▶ **Intermediate:** Lie prone on a firm surface resting on your elbows. Tighten your belly and then lift your pelvis so that you are in a straight line from your head to your knees. Hold 2-3 seconds. Do 3-5 repetitions. Increase the time of the hold as you get stronger with a goal of 15-30 seconds and then perform fewer repetitions.



# PRONE PLANKS

- ▶ **Advanced:** Lie on your stomach and prop up onto your elbows. Tighten your lower belly and then lift your pelvis until you are on your toes and elbows. Your body should be in a straight line. Hold a 3-5 seconds and then lower your knees to the floor. Do 5 repetitions. Slowly increase the length of time of the hold as you get stronger.
- ▶ **Advanced:** Start on your hands and knees, tighten your belly and then move to the position of bearing your weight on your hands and toes. Your body should be in a straight line from head to toes. Hold for a few seconds. Do 5 repetitions. Slowly increase the length of time of the hold as you get stronger.



# BRIDGING

- ▶ **Beginner:** Lie on back with hips and knees bent and arms crossed on your chest. Lift your bottom a few inches and HOLD 5 seconds. Do 10 repetitions, 1-2 sets
- ▶ **Intermediate:** Do bridge as above and HOLD as you straighten the R knee. Hold R leg extended 1 second and then lower the leg but maintain the bridge. Then straighten the L knee and hold 1 second. You can lower your bottom after lifting the leg on each side or perform 10 repetitions of the alternating leg movements while maintaining the bridge. Do 1-2 sets **Tip:** Your pelvis should remain level (not tilting side to side) when straightening the knees.



# SIDE PLANKS

- ▶ **Intermediate:** Lie on one side on a firm surface with knees bent to 90 degrees. Prop up on your elbow and then push your elbow down depressing your shoulder blade. Hold that position as you lift your pelvis. You should be in a straight line from your head to your knees. Hold 2-3 seconds and do 5 repetitions. Slowly increase the length of time of the hold as you get stronger. Repeat exercise on the opposite side.
- ▶ **Advanced:** Lie on one side with entire body in a straight line. Prop on elbow then push elbow into floor holding that position as you lift your pelvis and knees. You should be in a straight line from head to toes. Holds and repetitions as noted above.





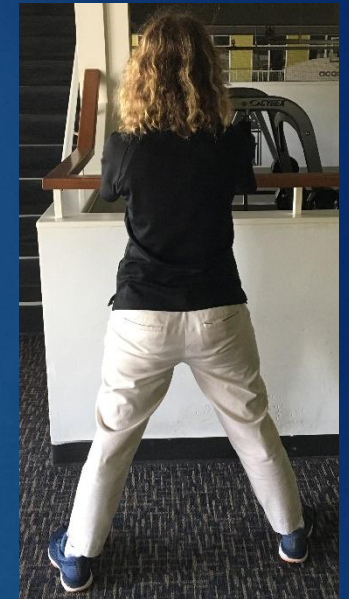
# Back Extension

- ▶ **Beginner:** Lie on your stomach (on bed or floor) over 1 or 2 fluffy pillows. Rest your forehead on a towel roll and place your arms at your side. Tighten your belly and buttocks and lift your upper body 2-4 in. and hold 2 sec. Your head should stay in line with your body. Do 5-10 reps and 1-2 sets
- **Intermediate:** Position yourself as above except position your arms straight out to the side forming the letter t with your body. Tighten your belly and buttocks and lift your arms and upper body 2-4 inches and hold 2 seconds. Reps & sets as above
- **Advanced:** Position yourself as above except arms overhead (like superwoman). Tighten belly and buttocks and lift arms and upper body 2-4 inches and hold 2 seconds. Reps & sets as above



# JACKS AT COUNTER

- ▶ Stand with arms resting on a counter and your feet together. Jump and move feet apart and then back together as if you are doing a jumping jack but only with the legs.
- ▶ This exercise can be done slowly or at a faster speed depending on your balance and physical health.



# JUMPING JACKS

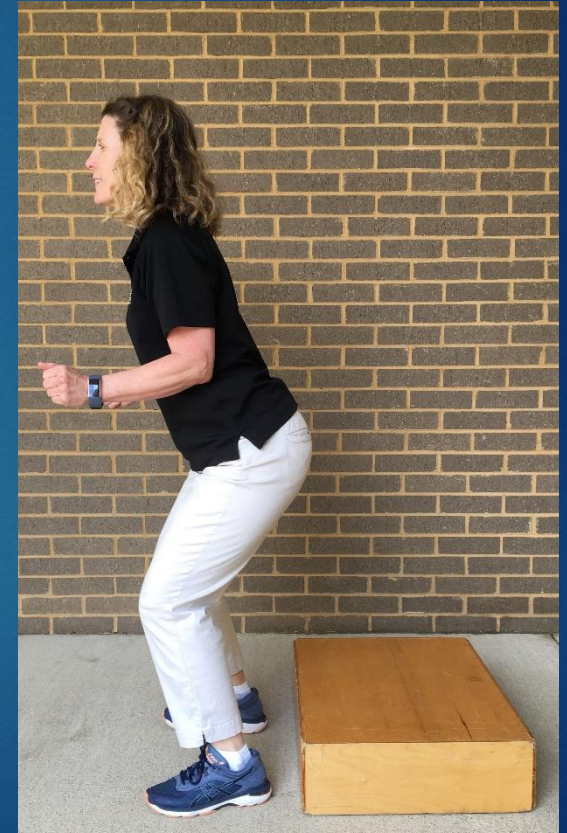
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# JUMPING DOWN FROM A STEP



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