

EXERCISES FOR OSTEOPOROSIS

We all need exercise to help our bone health. Exercises for good bone health aim to (a) strengthen bones, (b) strengthen muscles and (c) maintain good balance and posture.

Exercises that are good for bones and muscles are those activities that are weight bearing. This is because these activities stress the bone and promote them to react by getting stronger. These weight bearing exercises can be graded into low, moderate and high impact.

You should aim to do a minimum of 30 minutes daily of low or moderate impact activity. You can split the time up into 10 minute portions if it helps.

Low Impact: Examples are brisk walking, low impact aerobics, stair climbing.

Moderate impact: power walking (brisk walking with vigorous arm movements and/or use of hand weights).

If you do NOT have osteoporosis you should do some **high impact exercise**: High impact aerobics, skipping, jumping exercises, jogging, running. For example hopping up and down, about five inches off the floor, and landing flat footed, at least 15 times, daily.

If you have osteoporosis or have fractured a bone in the past, *consult a doctor* before embarking on these.

Other forms of exercise that are not weight bearing, such as cycling and swimming, do not directly strengthen bones, but can be useful in strengthening the muscles and helping with flexibility.

Weight training exercises, involving lifting light free weights help to strengthen bones and muscles and should be performed at least three times per week. You should get some instruction from a physiotherapist or personal trainer before embarking on these.

Some basic postural and stretching exercises are given below.

EXERCISE PROGRAMME FOR PEOPLE WITH OSTEOPOROSIS

Aerobic activity

DAILY: Walking briskly 30-60 minutes. You may need to build up to this, starting with just 10 minutes per day.

If necessary you can split this into portions, providing they add up to 30+ minutes over the course of each day.

OPTIONAL ACTIVITIES built into your week:

- Cycling,
- Cross trainer machine,
- Rowing machine,
- Stepping machine
- Swimming
- Other recreational activities, such as tennis, badminton, golf.

Strengthening:

1. Daily: Balance & coordination exercises
2. Upper and lower limb light weight lifting, 3 times per week, performed on non consecutive days.

Additional tools

There are potential tools available now that may help in building bone. One such tool is Whole Body Vibration (WBV), such as Power Plate. Whole body vibration (WBV) refers to a machine with a flat plate on which a person stands, that stimulates the whole body by tilting slightly around an axle. The person who stands on the machine tries to keep the head and body steady and upright. All the muscles that keep the body in this position are forced to react to the oscillatory movements provided by the machine, thus exercising them. Training sessions of only 2-3 minutes twice a week are claimed to produce measurable effects. More research needs to be performed to establish whether there are significant benefits from WBV, but some small studies have shown improved balance, strength, function and bone density in postmenopausal women.

Some warnings:

If you have Osteoporosis do NOT do exercises which require you to bend forward at the waist. Spontaneous crush fractures of the spine can occur when coming back up from this position.

Examples of exercises to avoid: Toe touching, bent over row when weightlifting.

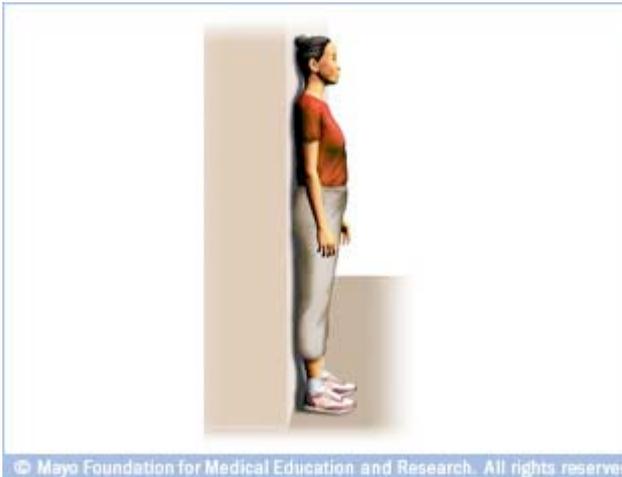
Yoga is often helpful since it lengthens and strengthens muscles, but many poses in yoga require these forward or bent positions. Avoid them unless you have expert guidance from someone who understands the risks of spontaneous crush fractures in persons with Osteoporosis of the spine.

Pilates is also wonderfully helpful in developing strength and control of your body, but you should be careful in performing some exercises as they may impose load on areas of your body that are fragile. Ensure you have a well informed Pilates instructor before you embark on a programme.

Equipment: ensure you wear well cushioned shoes, and you may wish to put some shock absorbing insoles into them. Examples include sorbothane insoles. You can get these from a chemist or some sport shops. Make sure you bring your shoes along and consider that, because they take up space in your shoes, you may have to buy a slightly bigger size.

When you are performing impact activity some surfaces are more forgiving on the body than others. The best tennis court surfaces are those that are grass or sand based artificial surfaces, for badminton sprung floors are best.

1. Postural exercises: *Perform Daily*



Standing posture

Stand with your head, shoulders and buttocks against a wall, with your heels 2 to 3 inches from the wall.

Relax your shoulders and pull in your chin. Tighten your abdomen and buttocks.

Press your back against the wall, leaving room for your hand to fit flat behind the curve of your lower back.

Hold 30 seconds.

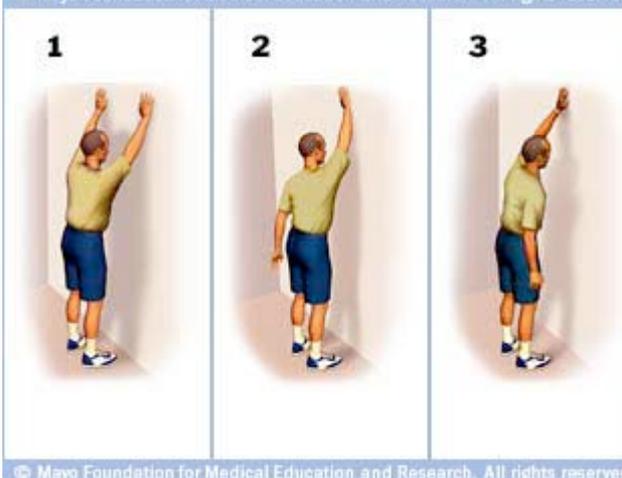


Walking posture

Hold your head high. Keep your back and neck as straight as possible.

Keep your chin parallel to the ground. Gently tighten your abdominal muscles.

Let your shoulders move freely and naturally.



Wall arch

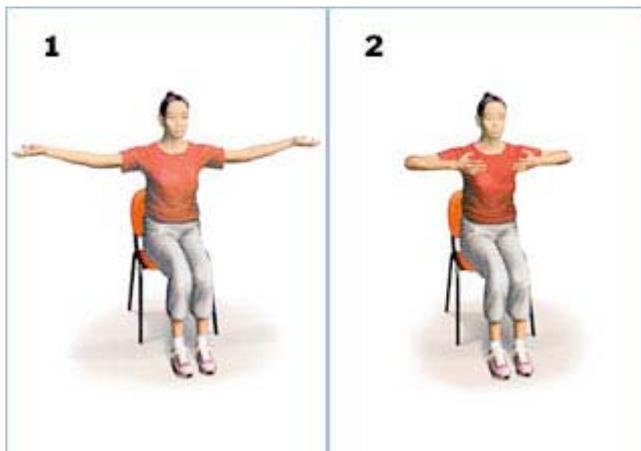
Stand facing the wall, arms at your sides, feet 6 inches apart and 6 inches from the wall.

While inhaling, flatten your stomach and stretch both arms up to touch the wall (1).

Exhale and lower both of your arms to the starting position.

While inhaling, reach up with your right arm and stretch down with your left arm (2).

Exhale and lower your right arm to the starting position.



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Chest stretch

Sit with your feet flat on the floor. Keep your back erect and look straight ahead.

Stretch your arms out to the side, keeping them level with your shoulders (1).

Bend your arms at the elbows and bring your hands toward your chest (2).

Repeat five to 10 times.



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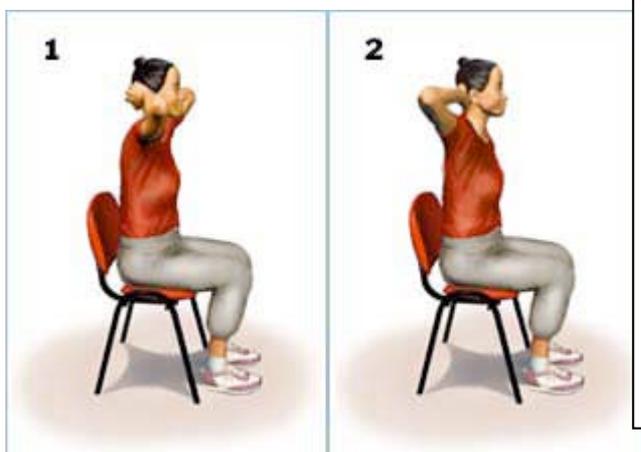
Chin tuck

To straighten your head and shoulders:

While seated, look straight ahead.

Pull your chin in toward your neck, but keep looking straight ahead; don't let your head bend forward. Push your hands down on your thighs to help straighten your back.

Hold for a few seconds. Repeat five times.



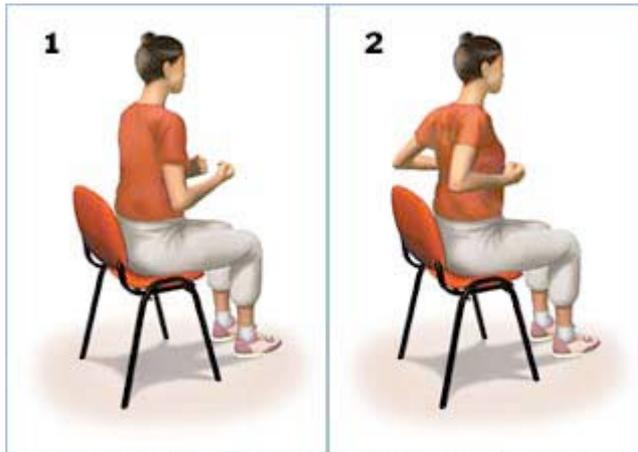
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Back posture exercise

Sit in a chair as shown, with your hand behind your neck (1).

Inhale while gently moving your elbows backward (2).

Hold the position for a few seconds, breathing normally, before returning to your starting position. Repeat five to 10 times..



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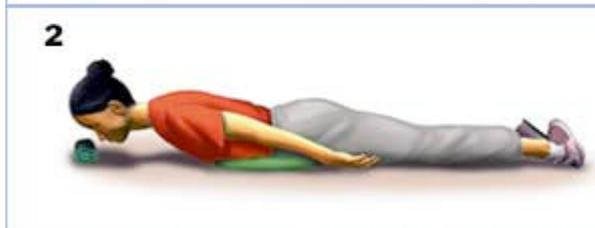
Shoulder blade squeeze

With your feet flat on the floor, sit slightly forward in a sturdy chair, keeping your back and neck straight.

Look straight ahead, bending your arms at the elbows (1).

Gently move your elbows and shoulder blades back as far as you can and still be comfortable (2).

Hold for five seconds while breathing normally. Return your arms to the starting position. Repeat five to 10 times.



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Upper back lift

Lie facedown on the floor with a pillow under your abdomen and hips (1). Use a rolled towel to cushion your forehead, if you wish.

Keep your arms at your sides as you tighten your abdominal muscles. Keep your head in line with your neck and torso. Focus on keeping your shoulders down — don't let them shrug up toward your ears.

Inhale and raise your head and chest a few inches from the floor (2).

Hold for five seconds, breathing normally, before returning to your starting position. Rest for a few seconds. Repeat five to 10 times.



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Back and shoulder stretch

Lie on the floor. Bend your knees, tighten your abdominal muscles and stretch your arms above your head (1).

Keeping your arms straight, spread them out and lower them until they're level with your shoulders (2 and 3).

Hold the position for a few seconds while breathing normally. Then return your arms to the starting position. Repeat this exercise five to 10 times.

1



2



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Pelvic tilt

Lie on your back with your knees bent and your feet flat on the floor (1). Maintain a normal curve in your back; don't arch your back. Tighten your abdominal muscles.

Roll your pelvis down to flatten your back against the floor (2). Avoid using your leg and buttock muscles.

Hold the position for five seconds while breathing normally, and then relax. Repeat this exercise 10 times



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Sitting knee extension

Sit with your back straight and your hands on your thighs. Tighten your abdominal muscles and look straight ahead.

Slowly straighten one knee while lifting your heel a few inches from the floor. Don't slouch or round your back.

Hold this position for a few seconds while breathing normally. Relax and return to the starting position. Repeat five to 10 times with each leg.

2. Strength Exercises

About Strength Exercises

Even very small changes in muscle size can make a big difference in strength, especially in people who already have lost a lot of muscle. An increase in muscle that's not even visible to the eye can be all it takes to improve your ability to do things like get up from a chair or climb stairs.

Your muscles are active even when you are sleeping. Their cells are still doing the routine activities they need to do to stay alive. This work is called metabolism, and it uses up calories. That can help keep your weight in check, even when you are asleep!

To do most of the following strength exercises, you need to lift or push weights, and you need to keep gradually increasing the amount of weight you use. You can use the hand and ankle weights sold in sporting-goods stores, or you can use things like emptied milk jugs filled with sand or water, or socks filled with beans and tied shut at the ends.

There are many alternatives to the exercises shown here. For example, you can buy a resistance band (it looks like a giant rubber band, and stretching it helps build muscle) at a sporting-goods store for under \$10 to do other types of strength exercises. Or you can use the special strength-training equipment at a fitness center.

How Much, How Often

Do strength exercises for all of your major muscle groups at least twice, preferably three times, per week. Don't do strength exercises of the same muscle group on any 2 days in a row.

Depending on your condition, you might need to start out using as little as 1 or 2 pounds of weight, or no weight at all. The tissues that bind the structures of your body together need to adapt to strength exercises.

Use a minimum of weight the first week, then gradually build up the weight. Starting out with weights that are too heavy can cause injuries.

At the same time, remember that you have to gradually add a challenging amount of weight in order to benefit from strength exercises. If you don't challenge your muscles, you won't benefit from strength exercises. (The "*Progressing*" section below will tell you how.)

When doing a strength exercise, do 8 to 15 repetitions in a row. Wait a minute, then do another set of 8 to 15 repetitions in a row of the same exercise. (Tip: While you are waiting, you might want to stretch the muscle you just worked or do a different strength exercise that uses a different set of muscles).

Take 3 seconds to lift or push a weight into place; hold the position for 1 second, and take another 3 seconds to lower the weight. Don't let the weight drop; lowering it slowly is very important.

It should feel somewhere between hard and very hard for you to lift or push the weight. It should not feel very, very hard. If you can't lift or push a weight 8 times in a row, it's too heavy for you. Reduce the amount of weight. If you can lift a weight more than 15 times in a row, it's too light for you. Increase the amount of weight.

Stretch after strength exercises, when your muscles are warmed up. If you stretch before strength exercises, be sure to warm up your muscles first (through light walking and arm pumping, for example).

Safety

Don't hold your breath during strength exercises. Breathe normally. Holding your breath while straining can cause changes in blood pressure. This is especially true for people with cardiovascular disease.

If you have had a hip repair or replacement, check with the doctor who did your surgery before doing lower-body exercises.

If you have had a hip replacement, don't cross your legs, and don't bend your hips farther than a 90-degree angle.

Avoid jerking or thrusting weights into position. That can cause injuries. Use smooth, steady movements.

Avoid "locking" the joints in your arms and legs in a tightly straightened position. (A tip on how to straighten your knees: Tighten your thigh muscles. This will lift your kneecaps and protect them.)

Breathe out as you lift or push, and breathe in as you relax. For example, if you are doing leg lifts, breathe out as you lift your leg, and breathe in as you lower it. This may not feel natural at first, and you probably will have to think about it as you are doing it for awhile.

Muscle soreness lasting up to a few days and slight fatigue are normal after muscle-building exercises, but exhaustion, sore joints, and unpleasant muscle pulling aren't. The latter symptoms mean you are overdoing it.

None of the exercises you do should cause pain. The range within which you move your arms and legs should never hurt.

Progressing

Gradually increasing the amount of weight you use is crucial for building strength.

When you are able to lift a weight between 8 to 15 times, you can increase the amount of weight you use at your next session.

Here is an example of how to progress gradually: Start out with a weight that you can lift only 8 times. Keep using that weight until you become strong enough to lift it 12 to 15 times. Add more weight so that, again, you can lift it only 8 times. Use this weight until you can lift it 12 to 15 times, then add more weight.

Arm Raise



Strengthens shoulder muscles. Sit in a chair, with your back straight. Your feet should be flat on the floor, spaced apart so that they are even with your shoulders. Hold hand weights straight down at your sides, with your palms facing inward. Take 3 seconds to lift your arms straight out, sideways, until they are parallel to the ground. Hold the position for 1 second. Take 3 seconds to lower your arms so that they are straight down by your sides again. Pause. Repeat 8 to 15 times. Rest; do another set of 8 to 15 repetitions.

Summary:

1. Sit in chair.
2. Feet flat on floor; keep feet even with shoulders.
3. Arms straight down at sides, palms inward.
4. Raise both arms to side, shoulder height.
5. Hold position.
6. Slowly lower arms to sides.

Chair Stand



Strengthens muscles in abdomen and thighs. Sit toward the middle or front of a chair and lean back so that you are in a half-reclining position, with back and shoulders straight, knees bent, and feet flat on the floor. Be sure to place pillows against the lower back of the chair first, to support your back and keep it straight. Using your hands as little as possible (or not at all, if you can), bring your back forward so that you are sitting upright. Your back should no longer be leaning against the pillows. Keep your back straight as you come up, so that you feel your abdominal muscles do the work; don't lean forward with your shoulders as you rise. Next, with feet flat on the floor, take at least 3 seconds to stand up, using your hands as little as possible. As you bend slightly forward to stand up, keep your back and

shoulders straight. Take at least 3 seconds to sit back down. Your goal is to do this exercise without using your hands as you become stronger. Repeat 8 to 15 times. Rest; then repeat 8 to 15 times more.

Summary:

1. Place pillows against back of chair.
2. Sit in middle or toward front of chair, knees bent, feet flat on floor.
3. Lean back on pillows, in half-reclining position, back and shoulders straight.
4. Raise upper body forward until sitting upright, using hands as little as possible.
5. Slowly stand up, using hands as little as possible.
6. Slowly sit back down.
7. Keep back and shoulders straight throughout exercise.

Biceps Curl

Strengthens upper-arm muscles. Sit in an armless chair, with your back supported by the back of the chair. Your feet should be flat on the floor, spaced apart so that they are even with your shoulders. Hold hand weights, with your arms straight down at your side, palms facing in toward your body. Take 3 seconds to lift your left hand weight toward your chest by bending your elbow. As you lift, turn your left hand so that your palm is facing your shoulder. Hold the position for 1 second. Take 3 seconds to



lower your hand to the starting position. Pause, then repeat with right arm. Alternate until you have repeated the exercise 8 to 15 times on each side. Rest, then do another set of 8 to 15 alternating repetitions.

Summary:

1. Sit in armless chair, with your back supported by back of chair.
2. Feet flat on floor; keep feet even with shoulders.
3. Hold hand weights at sides, arms straight, palms in.
4. Slowly bend one elbow, lifting weight toward chest. (Rotate palm to face shoulder while lifting weight.)
5. Hold position.
6. Slowly lower arm to starting position.
7. Repeat with other arm.



Plantar Flexion

Strengthens ankle and calf muscles (also described in *balance section*). Use ankle weights, if you are ready to. Stand straight, feet flat on the floor, holding onto the edge of a table or chair for balance. Take 3 seconds to stand as high up on tiptoe as you can; hold for 1 second, then take 3 seconds to slowly lower yourself back down. Do this exercise 8 to 15 times; rest a minute, then do another set of 8 to 15 repetitions. As you become stronger, do this exercise first on your right leg only, then on your left leg only, for a total of 8 to 15 times on each leg. Rest a minute, then do another set of 8 to 15 alternating repetitions.

Summary:

1. Stand straight, holding table or chair for balance.
2. Slowly stand on tiptoe, as high as possible.
3. Hold position.
4. Slowly lower heels all the way back down.

Variation, as strength increases:

Do the exercise standing on one leg only, alternating legs.

Triceps Extension

(If your shoulders aren't flexible enough to do this exercise, see alternative "Dip" exercise, below.)

Strengthens muscles in back of upper arm. Sit in a chair, toward the front. Your feet should be flat on the floor, spaced apart so that they are even with your shoulders. Hold a weight in your left hand, and raise your left arm all the way up, so that it's pointing toward the ceiling, palm facing in. Support your left arm by holding it just below the elbow with your right hand. Slowly bend your left arm so that the weight in your left hand now rests behind your left shoulder. Take 3 seconds to straighten your left arm so that it's pointing toward the ceiling again. Hold the position for 1 second. Take 3 seconds to lower the weight back to your shoulder by bending your



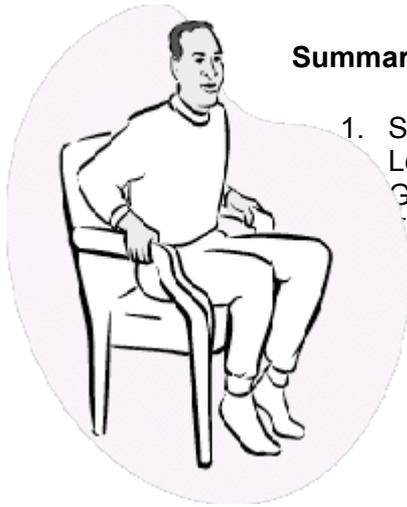
elbow. Keep supporting your left arm with your right hand throughout the exercise. Pause, then repeat the bending and straightening until you have done the exercise 8 to 15 times with your left arm. Reverse positions and repeat 8 to 15 times with your right arm. Rest; then repeat another set of 8 to 15 repetitions on each side.

Summary:

1. Sit in chair, near front edge.
2. Feet flat on floor; keep feet even with shoulders.
3. Raise one arm straight toward ceiling.
4. Support this arm, below elbow, with other hand.
5. Bend raised arm at elbow, bringing hand weight toward same shoulder.
6. Slowly re-straighten arm toward ceiling.
7. Hold position.
8. Slowly bend arm toward shoulder again.

Alternative "Dip" Exercise For Back of Upper Arm:

Sit in a chair with armrests. Lean slightly forward, keeping your back and shoulders straight. Hold onto the arms of the chair. Your hands should be level with the trunk of your body, or slightly farther forward. Place your feet slightly under the chair, with your heels off the ground and the weight of your feet and legs resting on your toes and the balls of your feet. Slowly lift yourself up, using your arms, as high as you can. This pushing motion will strengthen your arm muscles even if you aren't yet able to lift yourself up off of the chair. Don't use your legs or feet for assistance, or use them as little as possible. Slowly lower yourself back down. Repeat 8 to 15 times. Rest; repeat another 8 to 15 times.



Summary:

1. Sit in chair with armrests.
Lean slightly forward, back and shoulders straight.
Grasp arms of chair.
Tuck feet slightly under chair, weight on toes.
Slowly push body off of chair using arms, not legs.
Slowly lower down to starting position.

Knee Flexion

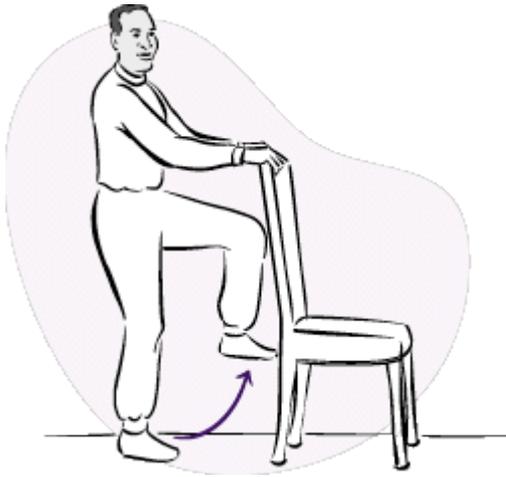
Strengthens muscles in back of thigh. Use ankle weights, if you are ready to. Stand straight, very close to a table or chair, holding it for balance. Take 3 seconds to bend your left knee so that your calf comes as far up toward the back of your thigh as possible. Don't move your upper leg at all; bend your knee only. Take 3 seconds to lower your left leg all the way back down. Repeat with right leg. Alternate legs until you have done 8 to 15 repetitions with each leg. Rest; then do another set of 8 to 15 alternating repetitions.

Summary:

1. Stand straight; hold onto table for balance.
2. Slowly bend knee as far as possible.
3. Hold position.
4. Slowly lower foot all the way back down.
5. Repeat with other leg.



Hip Flexion



Strengthens thigh and hip muscles. Use ankle weights, if you are ready to. Stand to the side or behind a chair or table, holding it with one hand for balance. Take 3 seconds to bend your left knee and bring it as far toward your chest as possible. Stand straight throughout, without bending at the waist or hips. Hold position for 1 second, then take 3 seconds to lower your left leg all the way down. Repeat with right leg; alternate legs until you have done 8 to 15 repetitions on each side. Rest; then do another set of 8 to 15 alternating repetitions.

Summary:

1. Stand straight, holding tall, stable object for balance.
2. Slowly bend one knee toward chest, without bending waist or hips.
3. Hold position.
4. Slowly lower leg all the way down.
5. Repeat with other leg.

Shoulder Flexion

Strengthens shoulder muscles. Sit in a chair, with your back straight. Your feet should be flat on the floor, spaced apart so that they are even with your shoulders. Hold hand weights straight down at your sides, with your palms facing inward. Take 3 seconds to lift your arms in front of you, keeping them straight and rotating them so that your palms are facing upward, until your arms are parallel to the ground. Hold the position for 1 second. Take 3 seconds to lower your arms so that they are straight down by your sides again. Pause. Repeat 8 to 15 times. Rest; do another set of 8 to 15 repetitions.



Summary:

1. Sit in chair.
2. Feet flat on floor; keep feet even with shoulders.
3. Arms straight down at sides, palms inward.
4. Raise both arms in front of you (keep them straight and rotate so palms face upward) to shoulder height.
5. Hold position.
6. Slowly lower arms to sides.

Knee Extension



Strengthens muscles in front of thigh and shin. Use ankle weights, if you are ready to. Sit in a chair, with your back resting against the back of the chair. If your feet are flat on the floor in this position, you should place a rolled-up towel under your knees to lift them up. Only the balls of your feet and your toes should be resting on the floor. Rest your hands on your thighs or on the sides of the chair. Take 3 seconds to extend your right leg in front of you, parallel to the floor, until your knee is straight. With your right leg in this position, flex your foot so that your toes are pointing toward your head; hold your foot in this position for 1 to 2 seconds. Take 3

seconds to lower your right leg back to the starting position, so that the ball of your foot rests on the floor again. Repeat with left leg. Alternate legs, until you have done the exercise 8 to 15 times with each leg. Rest; then do another set of 8 to 15 alternating repetitions.

Summary:

1. Sit in chair. Put rolled towel under knees, if needed.
2. Slowly extend one leg as straight as possible.
3. Hold position and flex foot to point toes toward head.
4. Slowly lower leg back down.
5. Repeat with other leg.

Hip Extension

Strengthens buttock and lower-back muscles. Use ankle weights, if you are ready to. Stand 12 to 18 inches away from a table or chair, feet slightly apart. Bend forward from the hips, at about a 45-degree angle, holding onto the table or chair for balance. In this position, take 3 seconds to lift your left leg straight behind you without bending your knee, pointing your toes, or bending your upper body any farther forward. Hold the position for 1 second. Take 3 seconds to lower your left leg back to the starting position. Repeat with right leg. Alternate legs, until you have repeated the exercise 8 to 15 times with each leg. Rest; then do another set of 8 to 15 alternating repetitions with each leg.



Summary:

1. Stand 12 to 18 inches from table.
2. Bend at hips; hold onto a table.

3. Slowly lift one leg straight backwards.
4. Hold position.
5. Slowly lower leg.
6. Repeat with other leg.

Side Leg Raise



Strengthens muscles at sides of hips and thighs. Use ankle weights, if you are ready to. Stand up straight, directly behind a table or chair, feet slightly apart. Hold onto the table to help keep your balance. Take 3 seconds to lift your right leg 6 to 12 inches out to the side. Keep your back and both legs straight. Don't point your toes outward; keep them facing forward. Hold the position for 1 second. Take 3 seconds to lower your leg back to the starting position. Repeat with left leg. Alternate legs, until you have repeated the exercise 8 to 15 times with each leg. Rest; do another set of 8 to 15 alternating repetitions.

Summary:

1. Stand straight, directly behind table, feet slightly apart.
2. Hold table for balance.
3. Slowly lift one leg to side, 6-12 inches.
4. Hold position.
5. Slowly lower leg.
6. Repeat with other leg.
7. Back and both knees are straight throughout exercise.

BALANCE & COORDINATION EXERCISES

There is a lot of overlap between strength and balance exercises; very often, one exercise serves both purposes.

Any of the lower-body exercises for strength shown in the strength section also are balance exercises. They include plantar flexion, hip flexion, hip extension, knee flexion, and side leg raise. Just do your regularly scheduled strength exercises, and they will improve your balance at the same time. They can improve your balance even more if you add the following modifications: Note that these exercises instruct you to hold onto a table or chair for balance. Hold onto the table with only one hand. As you progress, try holding on with only one fingertip. Next, try these exercises without holding on at all. If you are very steady on your feet, move on to doing the exercises using no hands, with your eyes closed. Have someone stand close by if you are unsteady.

Don't do more than your regularly scheduled strength-exercise sessions to incorporate these balance modifications; remember that doing strength exercises too often can do more harm than good. Simply do your strength exercises, and incorporate these balance techniques as you progress.

Also do the knee-extension exercise shown in the strength section. It helps you keep your balance by increasing muscle strength in your upper thighs.

Plantar Flexion

Plantar flexion is already included in your strength exercises (described in previous section). When you do your strength exercises, add these modifications to plantar flexion as you progress: Hold table with one hand, then one fingertip, then no hands; then do exercise with eyes closed, if steady.

Summary:

1. Stand straight, holding onto a table or chair for balance.
2. Slowly stand on tip toe, as high as possible.
3. Hold position.
4. Slowly lower heels all the way back down.
5. Repeat 8 to 15 times.
6. Rest a minute, then do another 8 to 15 repetitions.
7. Add modifications as you progress.



Knee Flexion

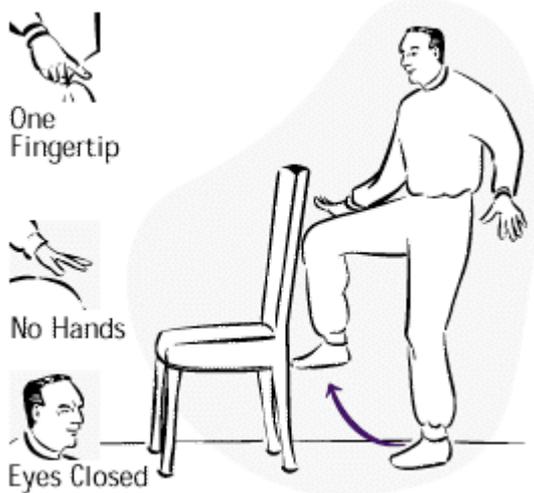


Do knee flexion as part of your regularly scheduled strength exercises, and add these modifications as you progress: Hold table with one hand, then one fingertip, then no hands; then do exercise with eyes closed, if steady.

Summary:

1. Stand straight; hold onto table or chair for balance.
 2. Slowly bend knee as far as possible, so foot lifts up behind you.
 3. Hold position.
 4. Slowly lower foot all the way back down.
 5. Repeat with other leg.
6. Add modifications as you progress.

Hip Flexion



Do hip flexion as part of your regularly scheduled strength exercises, and add these modifications as you progress: Hold table with one hand, then one fingertip, then no hands; then do exercise with eyes closed, if steady.

Summary:

4. Slowly lower leg all the way down.
5. Repeat with other leg.
6. Add modifications as you progress.

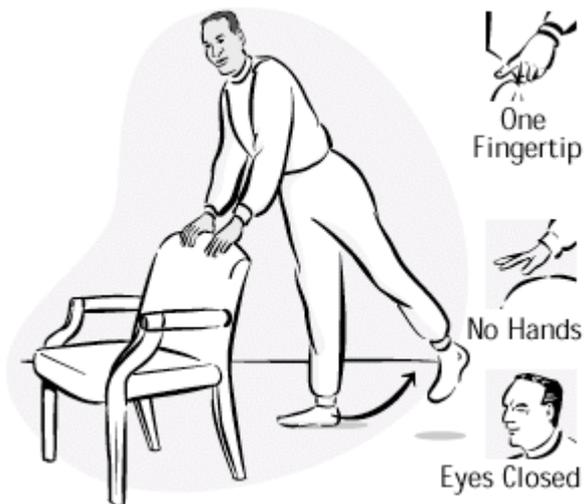
1. Stand straight; holding onto a table or chair for balance.
2. Slowly bend one knee toward chest, without bending waist or hips.
3. Hold position.

Hip Extension

Do hip extension as part of your regularly scheduled strength exercises, and add these modifications as you progress: Hold table with one hand, then one fingertip, then no hands; then do exercise with eyes closed, if steady.

Summary:

1. Stand 12 to 18 inches from table.
2. Bend at hips; hold onto table.
3. Slowly lift one leg straight backwards.
4. Hold position.
5. Slowly lower leg.
6. Repeat with other leg.
7. Add modifications as you progress.



Side Leg Raise

Do leg raise as part of your regularly scheduled strength exercises, and add these modifications as you progress: Hold table with one hand, then one fingertip, then no hands; then do exercise with eyes closed, if steady.

Summary:

1. Stand straight, directly behind table or chair, feet slightly apart.
2. Hold table for balance.
3. Slowly lift one leg to side, 6-12 inches.
4. Hold position.
5. Slowly lower leg.
6. Repeat with other leg.
7. Your back and knees are straight throughout exercise.
8. Add modifications as you progress.



Anytime/Anywhere

These types of exercises also improve your balance. You can do them almost anytime, anywhere, and as often as you like, as long as you have something sturdy nearby to hold onto if you become unsteady.

Examples:

- Walk heel-to-toe. Position your heel just in front of the toes of the opposite foot each time you take a step. Your heel and toes should touch or almost touch. (See Illustration.)
- Stand on one foot (while waiting in line at the grocery store or at the bus stop, for example). Alternate feet.
- Stand up and sit down without using your hands.