

Resistance Training (No Equipment Required)

Name: _____

Date: _____

Exercise Supervisor Contact: _____

How to do resistance training:

1. Do five minutes of slow walking and a stretching routine before and after resistance training. See pictures at end of document.
2. Do all exercises slowly and breathe normally. When you are performing an exercise, raise your body weight to a count of 2 and lower your body weight to a count of 3.
3. Do resistance training 2 to 3 times a week with at least one day of rest in between workouts.
4. Rest for at least a 30 to 60 seconds between exercises.
5. **Stop** and talk with your Rehab Supervisor (phone or e-mail) if you have any problems carrying out this program.

Important words to know:

Repetition: Doing 1 complete exercise movement (such as 1 curl up)

Progression: Gradually making the exercise more difficult by adding more repetitions or changing the exercise.

Power up: Lifting the limb as fast as possible

What's the right exercise or effort level for me?

To find out if you are at the right level of effort or that the exercise is the right one for you, answer these questions:

- After doing the last repetition, do I feel that I can do 5 to 10 more repetitions?
If you answer yes, then the exercise is **too easy.**
- Am I struggling to complete the last repetition?
If you answer yes, then the exercise is **too hard.**
- After the last repetition, do I feel as if I could do 2 to 3 more repetitions and no more?
If you answer yes, then this is a **good starting level or a good exercise for you.**

How to progress so you can get stronger and gain more muscle:

1. When you can comfortably repeat an exercise 10 times, slowly increase the number of repetitions to 15. **This may take 2 to 4 weeks.**
2. When you can comfortably repeat an exercise 15 times, increase the difficulty level and reduce the repetitions to 10 (see the progression examples below).
 - a. There are examples of how to progress for each exercise. Check the tip included under each exercise picture.
3. Fill in your resistance training diary. Hand them in when you attend an exercise class or send them to your health care professional. Tracking your progress can help to keep you motivated.

Examples of progressing the exercises:

Note: People progress at different rates. This is an example only.

Step	Week	How many repetitions to do	Type of Exercise
A	2	10	Continue with same exercise.
B	3	12 to 13	Continue with same exercise.
C	4	13 to 15	Continue with same exercise.
D	5	10	Progress exercise to increase the difficulty level.*
----	8	Repeat steps B to D	-----

*Note: There are examples of how to increase the difficulty level for each exercise. Check the tip included under each exercise picture.

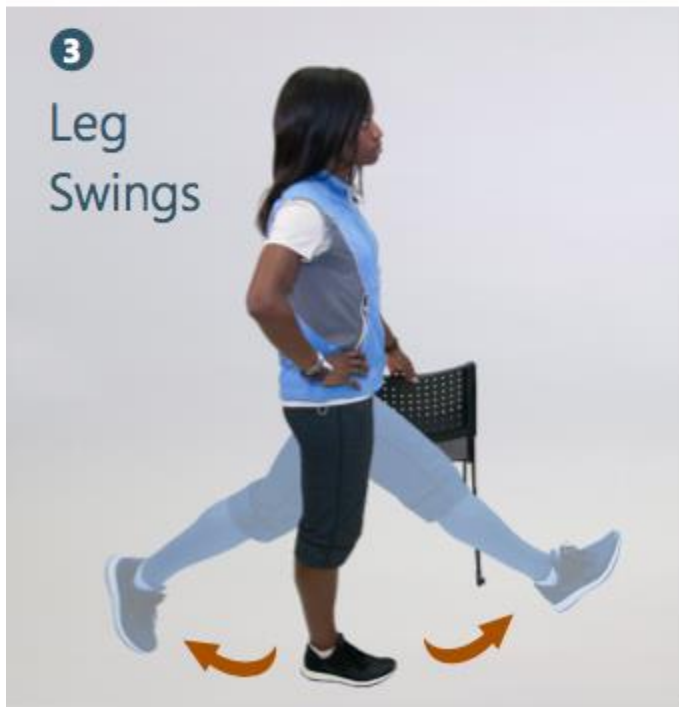
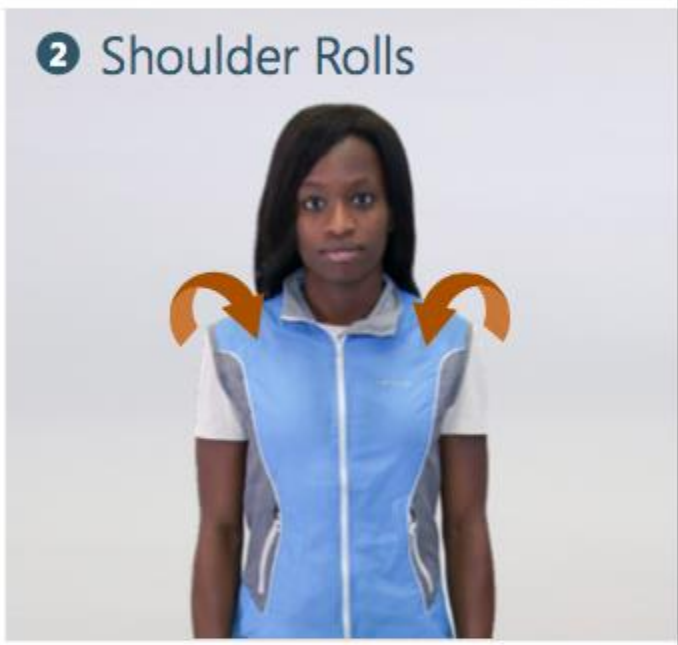
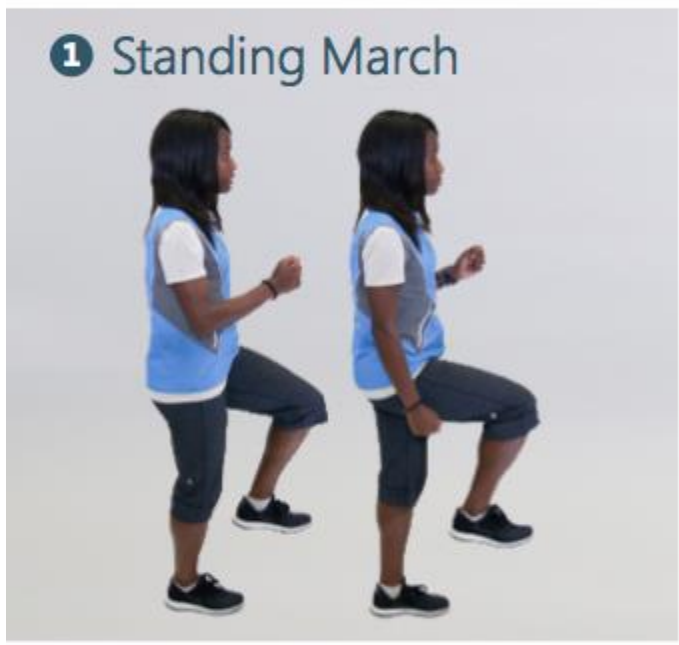
To help you to keep track of the exercises that are most appropriate for your level, use the resistance training worksheet the first time you use this document.

Dynamic Stretches

moving

**BEFORE
EXERCISE**

Do these stretches **BEFORE** you do your walking/biking or resistance training program.



Resistance Training Exercises

1. Lunge

Benefit: This exercise will help you to build strength for walking and improving balance.



Starting Position

One hand on counter

Heel Plant

Plant heel with toe as high as possible

Lower Toe

Slowly lower toe and then lower your hips

Lunge

Keep upper body straight and shoulders back

End Position

Repeat with other leg

Repeat up to 10 times on each leg; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 repetitions.

Tips: Pick a point to look at in front of you so that you don't look at your feet. You can lower your hips until the front leg is bent at a 90-degree angle. Don't let your knee lunge past your toe. Lunge with one leg and then the other.

Progression:

- 1) Start with a short stride. As you get stronger and your balance improves, take a longer stride. Try not to look at your feet.
- 2) Gradually repeat the exercise a little faster to improve power. After foot plant/ lunge, return your foot to the starting position as fast as possible.
- 3) Try this exercise with as little help as possible. Try one finger tip on a counter. Or, put some weights in a knapsack to make it harder.

Lunge Options

If you have **knee pain** replace this exercise with one of the following shown at the end of the document.

1B) Thigh Press (easier) on page 19

1C) Leg Raise (a bit harder) on page 20

If this exercise is **too difficult**, try exercise 1D Static Lunge on page 21

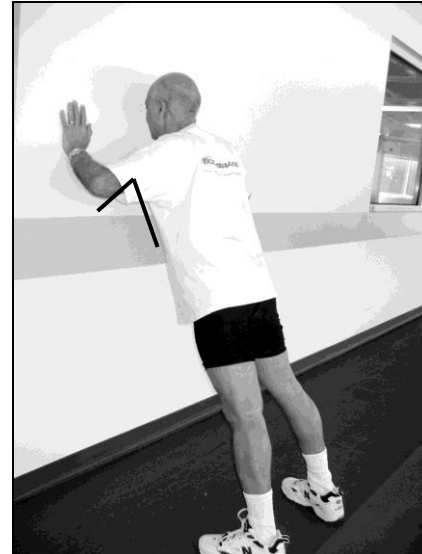
2) Wall Push Up

Benefit: Makes chest, arm, abdominal, and lower back muscles stronger. Helps with pushing and shoving.

Start Position



End Position



1. Stand facing the wall with your feet placed slightly wider than shoulder width apart.
2. Put hands on the wall at shoulder height.
3. Gently lean forward. Then push back to start position making sure your back stays straight.

Technique tip: When doing this exercise try and keep a 45 degree angle between your elbow and your side

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Progression:

- 1) To make the exercise harder, place your feet further away from the wall.
- 2) Place your hands on the edge of a kitchen counter, to lower yourself more once the wall pushups become too easy.

Alternative: If this exercise causes discomfort then see Exercise on Page 29.

3) Half-Squat

Benefit: Improve balance and sitting to standing performance (such as getting out of a car)

Start and End Position



Stand with feet shoulder width apart.
Turn toes slightly out.

Put a chair behind you for safety.

Middle Position



Keeping your **feet flat on the floor**, push your buttocks back and bend at the hips to slowly lower your body so that your knees are almost at a 90-degree angle. Knees should not go past the toes.

Then stand up straight again.

Repeat up to 10 times; stop when you feel that you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Tips: If this is too difficult, only lower your body down a quarter of the way. Only bend your knees slightly.

Keep your weight even over both legs.

If one knee collapses inwards, place a large ball between your knees while doing the exercise.

Progression:

1. Use less support by putting only two fingers on counter. Then try with no support.
2. Hold 3 to 10 lb. weights at your side with a 'palms-in' grip. Do the exercise by keeping weights at your side. Or, put weights in knapsack.
3. Slowly lower yourself down to the squat position, then POWER UP (stand straight again as fast as possible without losing balance).

Technique Tip: keep you back straight during this exercise

If you have knee pain, replace this exercise with one shown at the end of the document (1B or C) or leave it out for now.

1B) Thigh Press (easier) on page 19

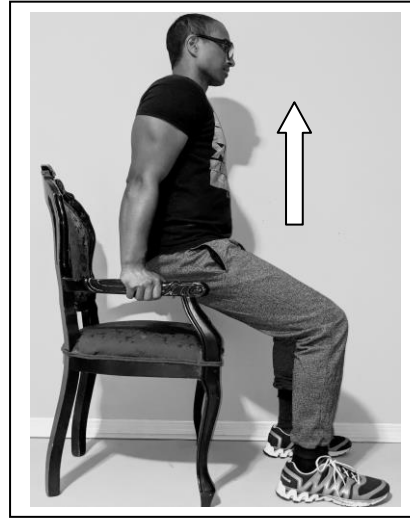
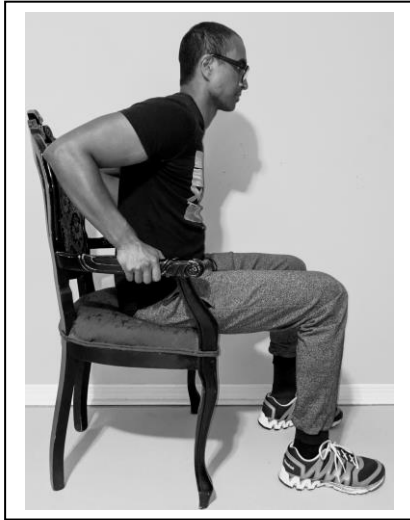
1C) Leg Raise (a bit harder) on page 20

4) Chair Dip

Benefit: Helps to build muscle and strength behind the arms and in the chest and shoulders.

The pushing motion will strengthen your arm muscles even if you are not able to raise yourself off of the chair seat.

Start and End Position



1. Place a sturdy chair (no wheels) with armrests against a wall. Sit with your feet flat on the floor hip distance apart.
2. Grasp the arm rests and keep your elbows close to your body and not splayed out.
3. Lean slightly forward while keeping your back straight.
4. Push your body slowly off the chair.
5. Hold the position for 1 second and then slowly lower yourself down.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Tips:

- 1) If you are not able to raise yourself out of the chair then you can use your legs for assistance.
- 2) If you are not able to raise yourself, hold the pushing motion at the start position for 2 seconds as this will engage the muscles.

Alternative: If this exercise causes discomfort or you find it to be too difficult then see Exercises on Page 29 to 30.

Progression:

1. Slowly lower yourself down to the start position, then POWER UP (push yourself up as fast as possible).
 2. See Exercise #4B on page 21 for the next progression.
-

5) Stair Climbing

Benefit: Helps you with climbing stairs



1) Make sure you are standing up straight. Hold the handrail for support.

Put one foot on the first step (or second to make it harder) and the opposite foot on the ground.

2) Slowly bring the leg from the ground up. Put it beside the other leg on the first step. Try not to pull yourself up.

3) Slowly lower the same leg down to the ground and repeat 10 to 15 times.

Repeat up to 10 times on each leg; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

6) Heel Raises

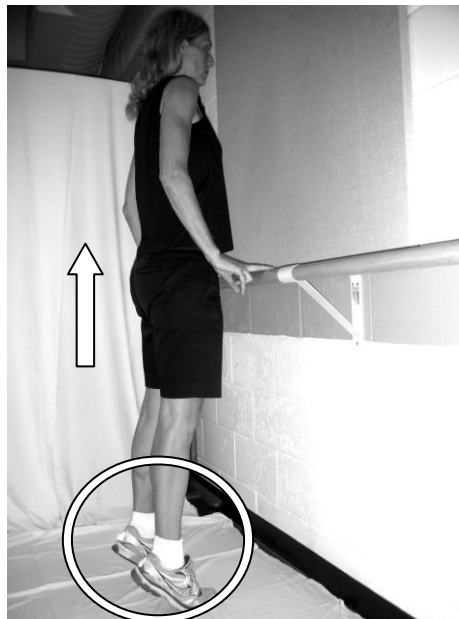
Benefit: Helps improve your balance and makes you stronger for walking.

Start and End Position



Stand with your feet shoulder width apart. Use the counter for support if you need it.

Middle Position



Slowly raise your heels as high as you can. Then slowly lower your heels and repeat.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Tip: If your heel turns inwards, put a ball between your heels.

Lift your body up towards ceiling and not forward.

Try to make sure your weight is distributed evenly between your feet.

Progression: you can progress in any order for options below.

1. Use less support by putting only two fingers on counter. Then try with no support.
2. Lift heels as fast as possible (power up), and slowly lower heels down.
3. Put something heavy (10 to 20 lbs) in a knapsack.
4. Perform this exercise on a stair (#6B page 23)

Heel Raises Options and Alternatives

If exercise 6 is too easy or you are ready to progress, try exercise 6B shown at the end of the document

6B) Heel Raise on the stair (harder) on page 23

7) Bridging Exercise

Benefit: Helps to build strength in the buttocks and the hamstrings (the muscles at the back of the legs behind the thighs)



Lie flat on back with knees bent, feet planted flat on the floor.

Tighten stomach muscles and buttock muscles and lift buttocks off the floor.

Repeat.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Tips: You can do this exercise while lying on a bed. Use either no pillows behind your head or a flat pillow.

Progression or Alternative Exercise:

- 1) Put your feet on a chair seat or put two or three pillows under your feet (See Exercise # 7C page 25).
- 2) When ready, perform this exercise one leg at a time keeping the opposite leg straight and pointing to the ceiling (Exercise 7D page 26).

Alternative: If you are unable to perform this exercise, please see exercise number 7B (leg curl with towel) at the end of the document (page 24).

8) Bird Dog: (lower back)



- In a four-point hand and knee stance, raise the right arm and left leg while holding torso as steady as you can.
- Hold for 1 second and then lower back down.
- Repeat the same move with your left arm and right leg.
- Do not arch neck.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Note: If too difficult, lift only one arm or leg individually.

9 Supine Curl-Up



1. Put one or both hands under your lower back to make sure you still have the natural arch in the lower back.
2. Bend one knee. Keep the other leg straight to protect the back.
3. Raise your head and upper shoulders off the floor. Slowly return to start position.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Tip: Don't tuck your chin in or poke it out. Your neck shouldn't move.

If you feel dizzy, stop the exercise and speak to a staff member.

Progression: When you can repeat the 'curl up' comfortably 15 times, cross your arms over your chest. When you can do this 15 times comfortably, put your fingers to your temples with elbows extended out.

Alternative: If this exercise is difficult to perform, please see exercise number 9B on page 26-27



Important Note: Please talk to your exercise supervisor if you have a hernia or osteoporosis or risk of fracture of the bones in the spine (weakened or thinning of the bones). This exercise may not be appropriate for you.

Note: This is the last exercise of the workout.

For greater benefit, do the exercises again when you feel ready (2 or 3 sets).

The exercises shown on the following pages are ones that are harder or easier than the ones above. They will replace the exercise above.

Replacement Exercises For Numbers 1 to 8 Above

Alternative Exercises to the Lunge (Exercise #1) or Squat #3

(1B to 1D -Easier or Less Stress on the Joints)

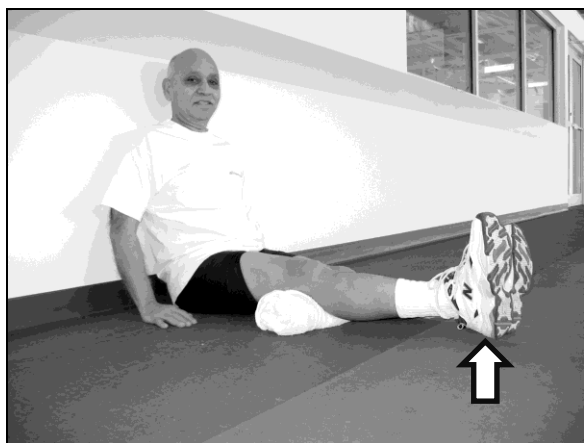
Alternatives to Exercise Number 1 or Number 3: The Lunge or Squat

Exercises 1B and 1C are easier on the knees. 1C is a progression to 1B.

Exercise 1D: If the lunge is too difficult, try exercise 1D called the static squat

1B) Thigh Press – Easier on the knees than the Squat

Benefit: Makes the muscles around the knee stronger to help stabilize the joint.



1. Roll up a bath towel. Sit on the floor or bed, and lean against a wall with your legs straight out in front of you.
2. Place the towel under one knee.
3. Squeeze your front thigh muscles tightly and press down on the towel.
4. Hold for 2 slow counts. Relax and repeat. Then switch legs.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

When you have progressed to 15 repetitions on each leg, then try exercise 1C (Leg Raise)

Alternative Exercises to the Lunge (Exercise #1) or Squat #3

1C) Leg Raise-Progression from Exercise 1B (Thigh press)

Benefit: Makes the muscles around the knee stronger to help stabilize the joint.



1. Sit on the floor or bed. Lean against a wall with one leg straight out in front of you and the other bent.
2. Wrap your arms around the bent leg for support.
3. Lift the straight leg off the floor, keeping the leg straight (but not locked). Try not to lean back.
4. Lower the leg, lightly touching the floor and repeat before switching sides.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Alternative Exercises to the Lunge (Exercise #1)

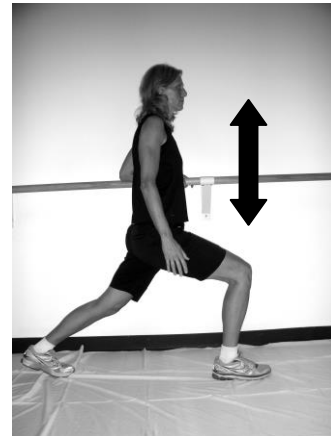
1D) Static Lunge – Less Difficult than the Lunge

Benefit: Helps with walking and balance.

Start and End Position



Middle Position



1. If you need to, put one hand on counter or ledge for support.
2. Put one foot in front of the other.
3. Bend the front knee making sure that the knee does not go past the toes.
4. Keep the same foot position as you slowly straighten the front leg. Repeat knee bend on the same leg 10 to 15 times.
5. Then repeat with the other leg 10 to 15 times keeping back straight.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Tip:

- 1) If this is too difficult, only take a small step forward and bend the knee a quarter of the way.
- 2) To make this exercise more difficult take a longer step forward.

Progression (harder) than the Chair Dip Exercise #4

4B) One-leg Chair Dip – (harder than the seated dip)



1. Place a sturdy chair with armrests (no wheels) against a wall. Sit with your feet flat on the floor hip distance apart.
2. Grasp the arm rests and keep your elbows close to your body and not splayed out.
3. Extend one leg out to about a 45-degree angle (any leg).
4. Lean slightly forward while keeping your back straight and leg extended.
5. Push your body slowly off the chair.
6. Hold the position for 1 second and then slowly lower yourself down.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Alternative or Progression Exercise for the Heel Raises (Exercise #6)

6D) Double Heel Raise on Stairs – Harder than heel raise

Benefit: Helps to improve balance and builds strength for walking and stair climbing

Start and End
Position



Middle Position



Stand with both feet on the bottom step using good posture.

Using the handrail for support, slowly raise your heels as high as you can.

Slowly lower your heels down below the level of the stair.

Repeat.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Tip: If your heel turns inwards, put a ball between your heels.

Lift your body up towards the ceiling and not forward.

Try to make sure the weight is even between your feet. Don't rely on the stronger side too much.

Progression: Slowly lower your heels down as low as possible, then POWER UP (lift your heels as fast as possible without losing balance). Repeat.

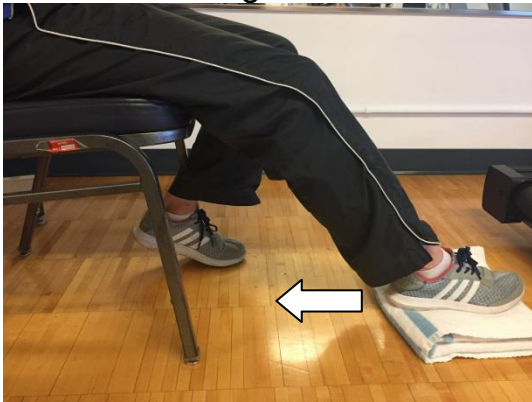
When ready, perform this exercise one leg at a time.

Alternative Exercises to the Bridge (Exercise #7)

7B) Leg Curl with Towel - easier

Benefit: Helps strengthen the hamstring muscles

Starting Position



While seated in a chair (no wheels), place your foot as far in front of you as possible on a towel on the floor.

End Position



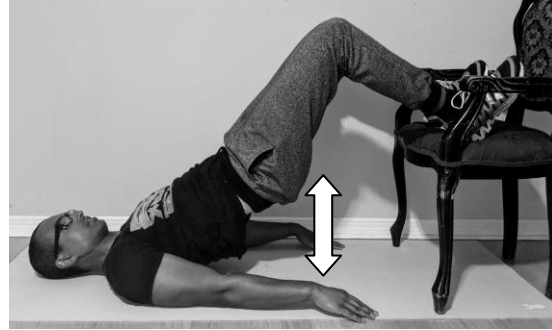
Pull the towel towards you to a count of 3 seconds.

Slowly return to starting position to a count of 2 seconds.

Repeat up to 10 times on each leg; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Progression for the Bridge Exercise #7

7C) Bridge with feet on a chair - harder



1. Place a sturdy chair (no wheels) against a wall.
2. Lie on floor, palms down, with heels on a chair and knees at a right angle
3. Tighten stomach and buttock muscles and lift hips off the floor
4. Slowly return to the starting position.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

7D) Bridge – single leg (Hardest)



1. Lay on your back with your palms down at your sides.
2. Bend your knees with feet on the floor.
3. Lift one leg and fully extend it, forming a 45-degree angle with the floor.
4. Tighten stomach and buttock muscles and lift hips off the floor.
5. Slowly return to the starting position.

Repeat up to 10 times on each leg; stop when you feel you could do 2 to 3 more repetitions and no more.

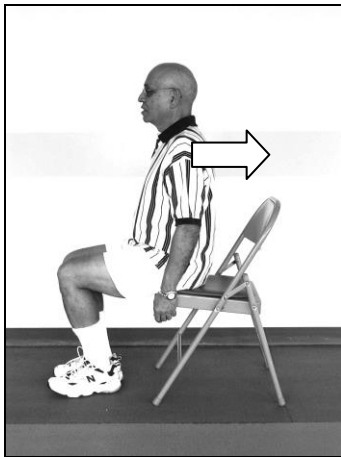
As you get stronger, gradually increase to 15 reps.

Alternative to the Curl Up #9

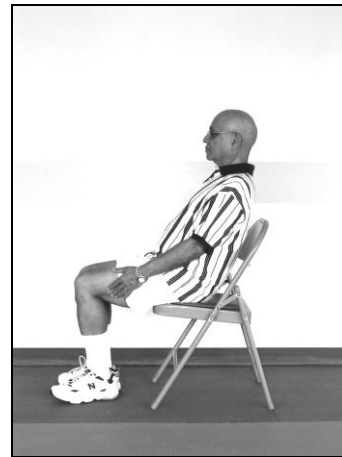
9B) Seated Forward Curl

Benefit: Helps improve balance and strengthen your core muscles.

Start Position



End Position



1. Sit in the middle or front of a chair (no wheels).
2. Using your hands as little as possible (or not at all, if you can) lean back slowly so that you are almost touching the back of the chair. Keep your back straight, knees bent, and feet flat on the floor.
3. Slowly bring your trunk forward. Make sure you can feel your stomach muscles doing most of the work until you are sitting up straight.

Repeat up to 10 times; stop when you feel you could do 2 to 3 more repetitions and no more. As you get stronger, gradually increase to 15 reps.

Progression 1



Progression 2



- a. The further that you sit to the front of the chair the harder the exercise gets.
- b. When you can do the 'curl up' comfortably 15 times, then cross your arms over your chest.
- c. When you can do this exercise with arms crossed over chest 15 times comfortably, place your fingertips on your temples and extend your elbows out.

Alternative or Additional Exercises to any of the Arm Exercises Including #2 (wall push up) and #4 (Chair Dip)

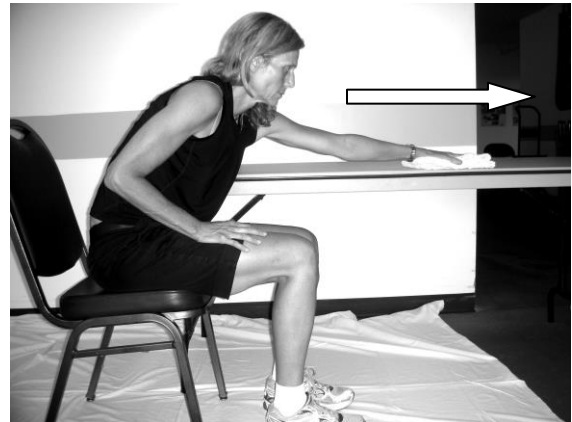
Table Slide - easier

Benefit: Helps to improve shoulder movement

A. Forward: Start Position



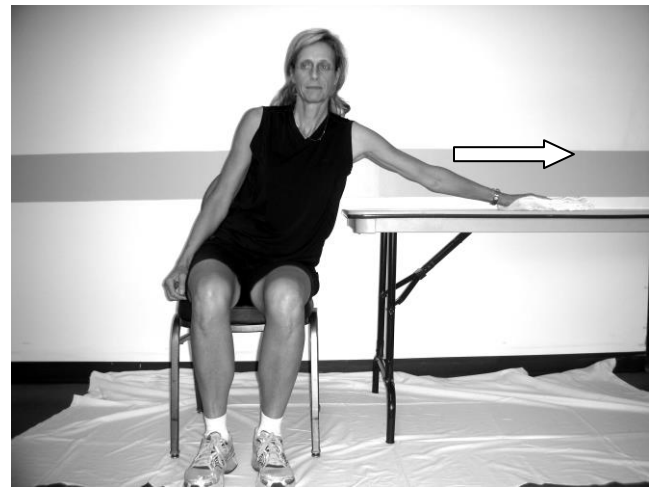
End Position



B. Side: Start Position



End Position



1. Sit close to a table. Put your affected hand palm down on a table top.
2. Slowly slide the hand forward (A) or to the side (B) until you feel a little stretching.
3. Stop and hold this position for 3 to 5 seconds.
4. Slowly return to the start position. Repeat.

Do up to 10 repetitions of each A and B

Tips:

To make it easier, put a towel under your hand. To make it harder, put a ball under your hand or arm.

Static Stretches

not moving

**AFTER
EXERCISE**

Do these stretches **AFTER** you do your walking/biking or resistance training program. **Hold each stretch for 15 to 30 seconds. Breathe normally.**

1

pectoral
muscle

Chest
Stretch



2

deltoid
muscle

Shoulder
Stretch



3

Standing
Leg
Stretch

hamstring
muscle



4

Calf
Stretch

calf
muscle

