

Resistance Training

Name: _____

Date: _____

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 lifting weights, **raise weight to a count of 2 and lower weight to a count of 3.**
3. Do resistance training at least 2 times a week with at least one day of rest in between workouts.
4. Take at least a 30 to 60 second rest between exercises.
5. **Stop** and talk to your health care professional if you have any problems carrying out this program.

Important words to know:

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

Affected limb: The arm or leg most affected by the stroke

Non-affected limb: The arm or leg not affected by the stroke

Progression: Gradually increasing the weight or adding more repetitions

Power up: Lifting the limb as fast as possible

What's the right weight for me?

To find out if you are using the right weight, band or exercise, answer these questions:

- After doing the last repetition or lift, do I feel that I can do 5 to 10 more repetitions?
If you answer yes, then the weight, band or exercise is **too light or easy.**
- Am I struggling to do the last repetition?
If you answer yes, then the weight, band or exercise is **too heavy or 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 weight or band.**

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 weight by 2 to 5 lbs. or, increase the exercise band thickness and reduce the repetitions to 10 (see the progression examples below).
3. There are also other examples of how to progress for each exercise. Check the tip included under each exercise picture.
4. 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 with weights and bands:

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

Step	Week	How many repetitions to do	Weight or resistance
A	2	10	No change in weight or resistance.
B	3	12 to 13	No change in weight or resistance.
C	4	13 to 15	No change in weight or resistance.
D	5	10	Increase weight or resistance band.
----	8	Repeat steps B to D	-----

When progressing in weight, please follow this sequence (dumbbells)												
Lightest  Heaviest												
1 lb	2 lbs	3 lbs	5 lbs	8 lbs	10 lbs	12 lbs	15 lbs	20 lbs	25 lbs	30 lbs	35 lbs	40 lbs

When progressing, please follow this sequence (resistance bands)				
Lightest  Heaviest				
Yellow	Red	Green	Blue	Black

Note that the thickness of the band may differ by colour than above depending on the manufacturer.

Resistance Training Exercises

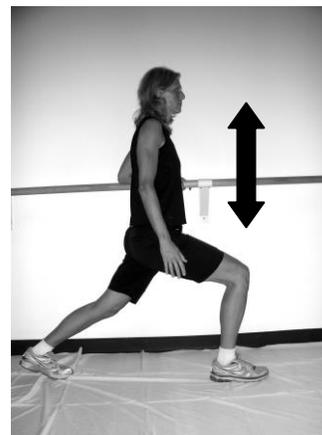
1) Static Lunge

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. Then repeat knee bend on the same leg.
5. Repeat with the other leg keeping back straight.

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

Tips:

- 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.

Static Lunge Options

If you have **knee pain** then **STOP** the exercise and replace it with one of the following shown at the end of the document.

1B) Thigh Press (easier) on page 20

1C) Leg Raise (a bit harder) on page 21

If this exercise is **too easy**, try exercise 1D Lunge (harder) on page 22

2) Bicep Curls

Benefit: This exercise helps your arm to move better and makes it easier to lift heavy objects.



Hold a weight in each hand. Put your arms at your sides and face your palms forward.

Curl one weight up to the shoulder, keeping your elbow close to your body. Slowly lower to starting position. Don't sway your body. Don't hunch your shoulders.

Repeat with other arm until you have repeated 10 times with each arm.

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

As you get stronger, gradually increase to 15 reps

Lift ____ lbs. for right arm

Lift ____ lbs. for left arm.

Tips: You can do this exercise standing up or sitting down.

If you can't keep the elbow of the affected arm close to the body during the lift, steady the arm by holding it against your body with your non-affected hand.

Progression: See page 2

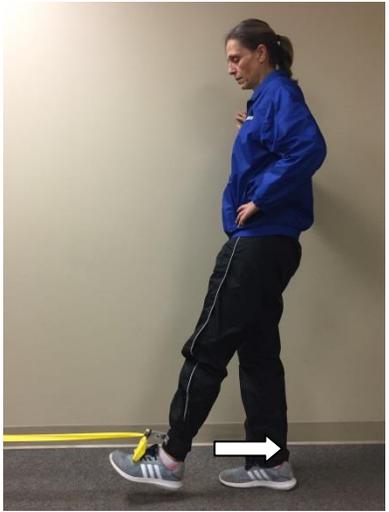
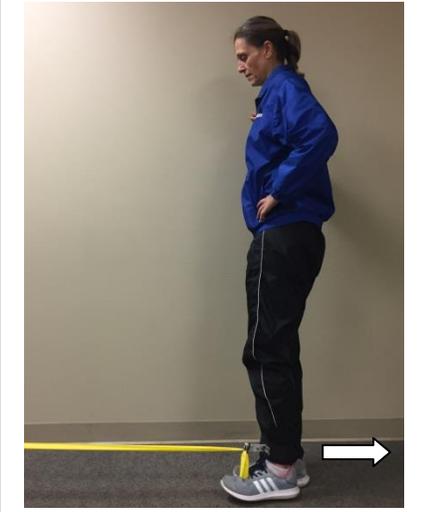
2) Bicep Curls Options

If you are unable to curl the arm with weights, then try one of the following exercises.

- 2B) With Resistance Band (for people who can bend the elbow but cannot grip weight) on page 23
- 2C) Arm pulls with resistance bands on page 24 (if you are unable to bend the elbow but are able to move the shoulder).
- 2D) Shoulder Shrugs on page 25
- 2E) Shoulder Retraction on page 26

3) Standing Hamstring Exercise (Hip Extension) with Band

Benefit: Helps strengthen the hamstrings (muscle in the back of the leg).

Start	Middle	End
		
<p>Attach the resistance band to an object in front of you, and the opposite end to your ankle. <u>Hold onto a ledge or counter for balance</u>, and start with your leg in front of you.</p>	<p>Without twisting your hips, pull your leg slowly behind you, as far as you can go.</p>	<p>Slowly return to starting position.</p>

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

Use _____ (colour) resistance band for right leg and

Use _____ (colour) resistance band for left leg

Progression: Please see Page 2, number 2.

Alternative: If you are unable to perform this exercise on the affected leg, please see exercise number 3B (leg curl with towel) on page 27.

4) Triceps Pull-down with Resistance Band

Benefit: Helps you build muscle and move your arm.

Start and End Position



Put your elbow at a 90-degree angle with your elbow close to your side.

Middle Position



Slowly straighten your arm. Then slowly return to start.

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

As you get stronger, gradually increase to 15 reps

Use _____ resistance band for right arm and

Use _____ resistance band for left arm

Tip: Keep your elbow at your side as you do this exercise. Slowly let your arm return to a 90 degree angle. Make sure you use your muscles to pull.

Progression: Repeat 15 times and then increase band colour. Talk with your supervisor about doing the triceps extension lying down using handheld dumbbells (see exercise 4B on page 28).

Triceps Pull Down Alternative

If you are unable to extend your elbow, then try one of the following exercise,

- 2C) Arm pulls with resistance bands on page 24 if you are unable to bend the elbow.
- 2D) Shoulder Shrugs on page 25
- 2E) Shoulder Retraction on page 26

5) Heel Raises

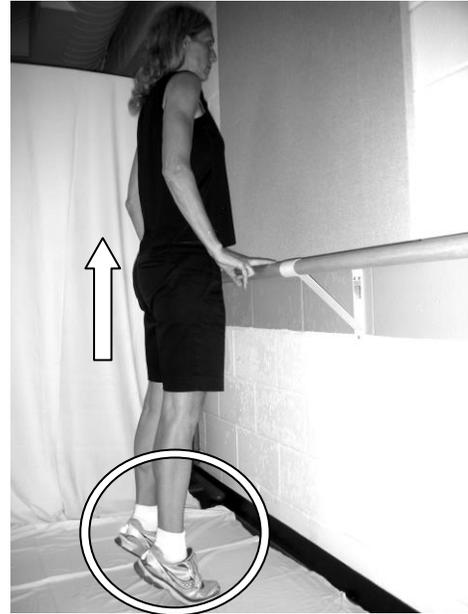
Benefit: Helps improve your balance and makes you stronger for walking.

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 repetitions.

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. Don't rely on the stronger side too much.

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.
 3. Or, put weights in a knapsack.
 4. Lift heels as fast as possible (power up), and slowly lower heels down.
 5. Ask a staff member how to try this exercise on a stair.
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Heel Raises Options and Alternatives

If you are unable to lift the heel on the affected leg then try

Exercise 5B (forward and backward stepping) on page 29

If exercise 5 is too easy, try exercise 5c or 5d shown at the end of the document

5C) Heel Raise on the stair (harder) on page 30

5D) Single Leg Heel Raise on the stair (hardest) on page 31

6) 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 6 to 10 times (stop when it feels a bit more than hard).
As you get stronger, gradually increase until you can repeat 15 times.**

Tip: If this is too difficult, only lower your body down a quarter of the way. Keep knees only slightly bent.

Keep your weight even over both legs. If you find the stronger leg doing most of the work, then place the weaker leg slightly behind the stronger leg.

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).
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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 20

1C) Leg Raise (a bit harder) on page 21

7) Seated Hamstring Curl with Resistance Band

Benefit: Helps with walking and building muscle.

Start Position



- 1) Attach resistance band to a fixed object. Make sure the strap is secure around your ankle.
- 2) Keep your back straight and put your leg in front of you with tension in the band.

Pull Leg Under Knee



- 3) Bend your knee, pulling your foot back towards the chair.
- 4) Slowly return leg to starting position.

You should feel tension in the muscles in the back of the upper leg (hamstrings).

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

**Use ___ resistance band for right leg and
Use ___ resistance band for left leg**

Tip: If this is too hard, do this exercise without a band.

Progression: See page 2 numbers 1 to 2

Seated Hamstring Curl Options and Alternatives

If you are unable to curl the leg on the affected leg then try

Exercise 3B or 7B at end of the document.

3B) Seated Leg Curl with towel (page 27)

7B) Heel Presses (Page 32) for those with no movement

If exercise 7 is too easy, try the exercise standing (see exercise 7C on page 33)

8) Seated Leg Extension

Benefit: Makes thigh muscles stronger

Start and End Position



Middle Position



1. Sit in a chair with your back straight. Put one end of the looped resistance band under the foot and other around the opposite ankle.
2. You may hold on to the sides of the chair. Straighten the leg that has the resistance band around the ankle.
3. **Do not completely straighten or lock your knee.** Repeat with the other leg.

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

As you get stronger, gradually increase to 15 reps

Use ___ resistance band for right leg

Use ___ resistance band for left leg

Progression: See page 2, #1-2

If you have knee pain, replace this exercise with exercise

1B) Thigh Press on page 20

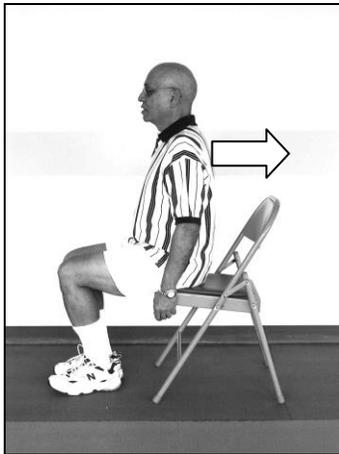
Susan Marzolini, R.Kin PhD May 1, 2020

1C) Leg Raise (a bit harder) on page 21

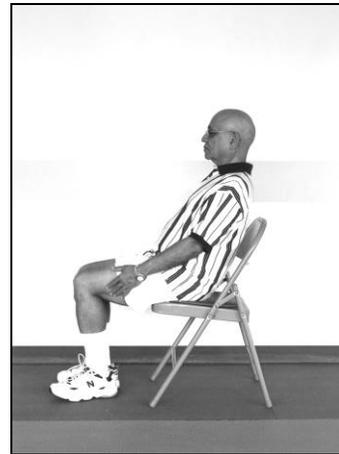
9) Seated Forward Curl

Benefit: Helps improve balance and strengthen your core muscles.

Start Position



End Position



1. Sit in the middle or front of a chair.
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 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

See progressions on the next page



Important Note: Please talk to your exercise supervisor if you have 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.

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.
- d. If this exercise is too easy, then try this while lying down (see exercise 9B on page 34)..

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 9 Above

Alternative Exercise to the Static Lunge (Exercise #1), Half-Squat (Exercise # 6), and Seated Leg Extension (Exercise # 8)

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

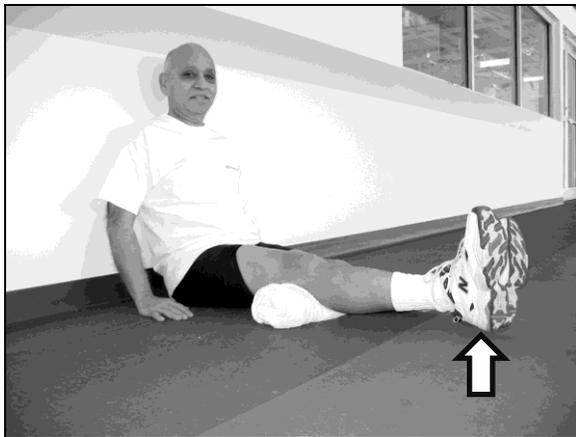
Alternatives to Exercise Number 1: The Static Lunge

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

Exercise 1D: If the static lunge is too easy, try exercise 1D called the dynamic lunge.

1B) Thigh Press – Easier on the knees than the Static Lunge, Half-Squat, and Seated Leg Extension

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 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

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

Alternative Exercise to the Static Lunge (Exercise #1) and Half-Squat (Exercise # 6) and Seated Leg Extension (Exercise # 8)

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

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.

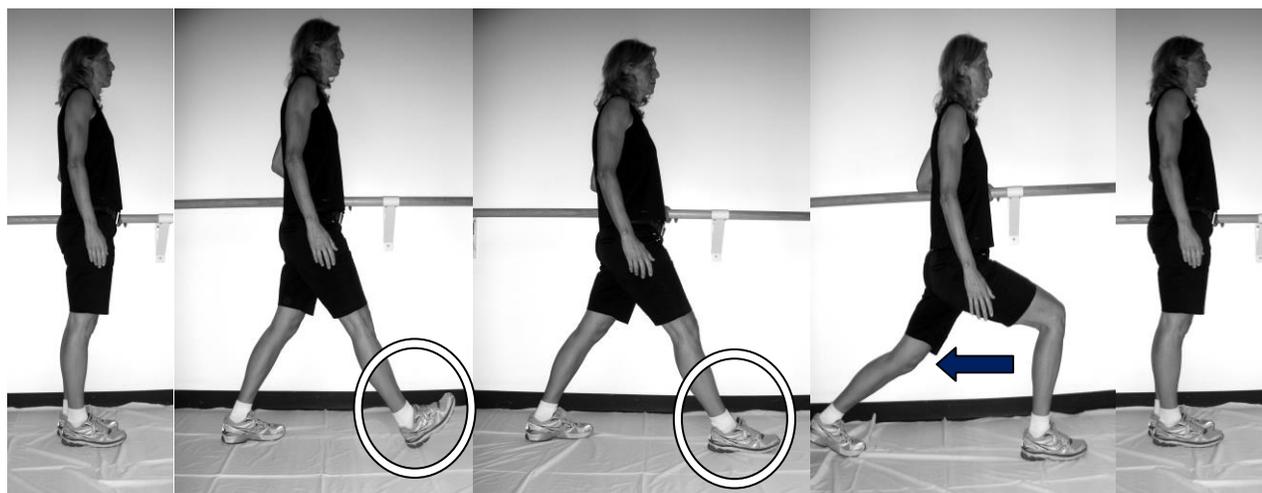
Repeat up to 10 times on each leg; stop when you feel you could do 2 to 3 more repetitions and no more.

As you get stronger, gradually increase to 15 reps

Progression to the Static Lunge (Exercise #1)

1D. Lunge – More difficult than the Static Lunge

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



Starting Position	Heel Plant	Lower Toe	Lunge	End Position
One hand on counter	Plant heel with toe as high as possible	Slowly lower toe and then lower your hips	Keep upper body straight and shoulders back	Repeat with <u>other</u> leg

Repeat 10 times on each leg (20 in total) and slowly increase to 15 times.

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 – both sides of the brain will be communicating

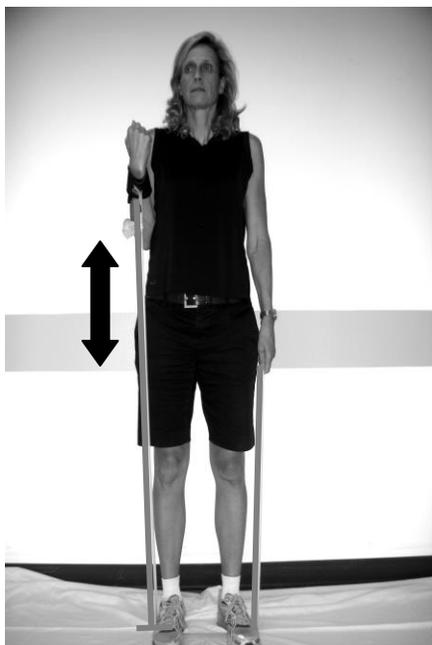
Progression:

- 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.

Alternative Exercise to the Biceps Curls (Exercise #2)

2B) Bicep Curl With Resistance Band

Benefit: Helps you move your arm so you can lift heavier objects



1. Stand with your feet shoulder-width apart and knees slightly bent
2. Put the wrist attachment around **affected** wrist
3. Put the band under both feet and hold the other end with your **non-affected** hand
4. With palm facing forward, curl your forearm to the shoulder. **Keep your elbow close to your body.**
5. Slowly lower to the start position without swaying your body. Then repeat.

Repeat using a **dumbbell** for the other arm

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

As you get stronger, gradually increase to 15 reps

Use ___ resistance band for **affected** arm

Use ___ lbs for **non-affected** arm if using a dumbbell.

Progression: See page 2 numbers 1-2

Alternative Exercise to the Biceps Curls and Triceps Pull-Down (Exercise #2 and #4)

2C) Arm Pulls With Resistance Band (2 Movements)

Benefit: Makes the muscles around the shoulder stronger.

1) Shoulder front to back pull:



Attach resistance band to affected arm

With your affected arm in front of you, slowly pull the arm back until it is at hip level and beyond.

2) Shoulder side to inside pull:



Put the affected arm out to the side and slowly bring it close to your body.

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

As you get stronger, gradually increase to 15 reps

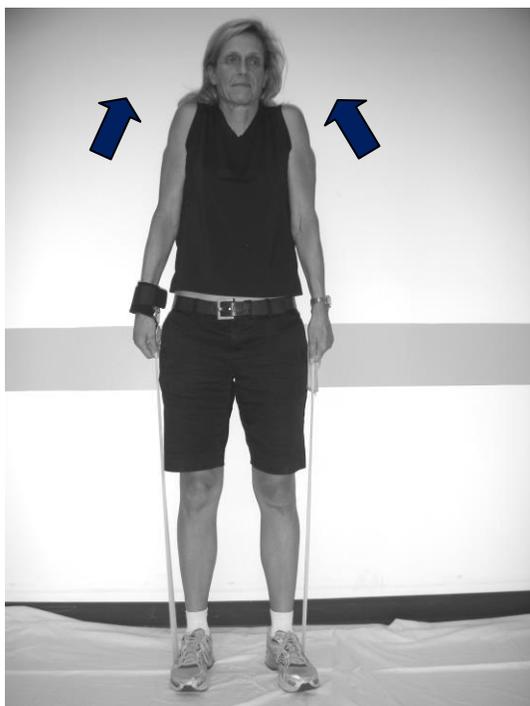
Use ___ resistance band for **affected** arm

Progression: See page 2 numbers 1-2

Alternative Exercise to the Biceps Curls and Triceps Pull-Down (Exercise #2 and #4)

2D) Shoulder Shrug With Resistance Band

Benefit: Makes the shoulder muscles stronger.



1. Put the band under both feet. Grasp both ends with arms at your side.
2. Stand with your feet shoulder width apart and knees slightly bent.
3. Keeping your arms straight, slowly bring your shoulders up to your earlobes
4. Slowly lower your shoulders down 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

Use ___ resistance band

Tip: If you have trouble moving both shoulders at the same time, repeat this 10 times with the affected shoulder only.

Progression: See page 2, #1-2

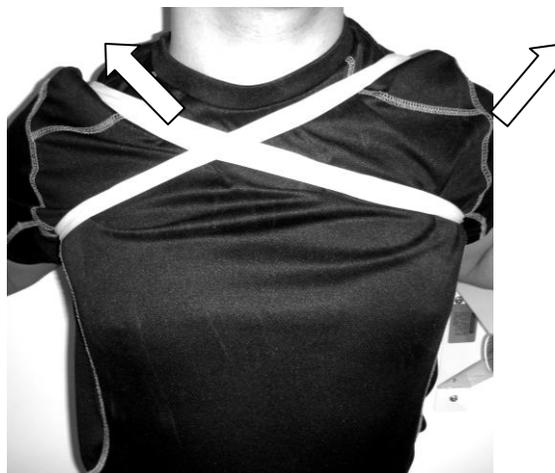
Alternative Exercise to the Biceps Curls and Triceps Pull-Down (Exercise #2 and #4)

2E) Shoulder Retraction With Band

Start Position



End Position



1. Take a looped band and first place it around the stroke-affected shoulder.
2. Cross the band and place the other end of the loop around the non-affected shoulder.
3. With arms down at your sides, slowly squeeze your shoulder blades together as far as possible. Hold for 3 seconds.
4. Then slowly relax and bring your shoulders to the 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

Use ___ resistance band

Tip: If using a band is too hard, do the same motion without a band.

Progression: See page 2, numbers 1-2

Alternative Exercise for the Standing Hip Extension and Seated Leg Curl (Exercise #3 and #7)

3B) Leg Curl with Towel

Benefit: Helps strengthen the hamstring muscles

Starting Position



While seated in a chair, 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 affected leg only; stop when you feel you could do 2 to 3 more repetitions and no more.

As you get stronger, gradually increase to 15 reps

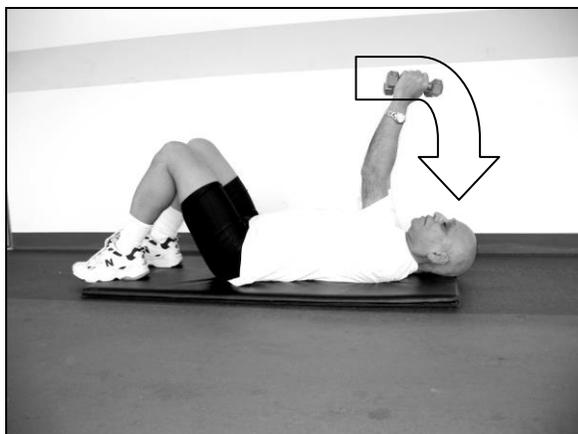
Progression: Hamstring curl with the band.

Progression for the Triceps Pulldown #4

4B) Supine Tricep Extension

Benefit: Helps build muscle and improve arm function

Start and End Position



Middle Position



1. Lie on your back with knees bent at 90 degrees and your arms straight out above the shoulders.
2. Slowly lower weights down until elbows reach 90 degrees.

Important: Always keep your upper arms straight out above the shoulders for this exercise.

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

As you get stronger, gradually increase to 15 reps

Use ___ resistance band for right arm and

Use ___ resistance band for left arm

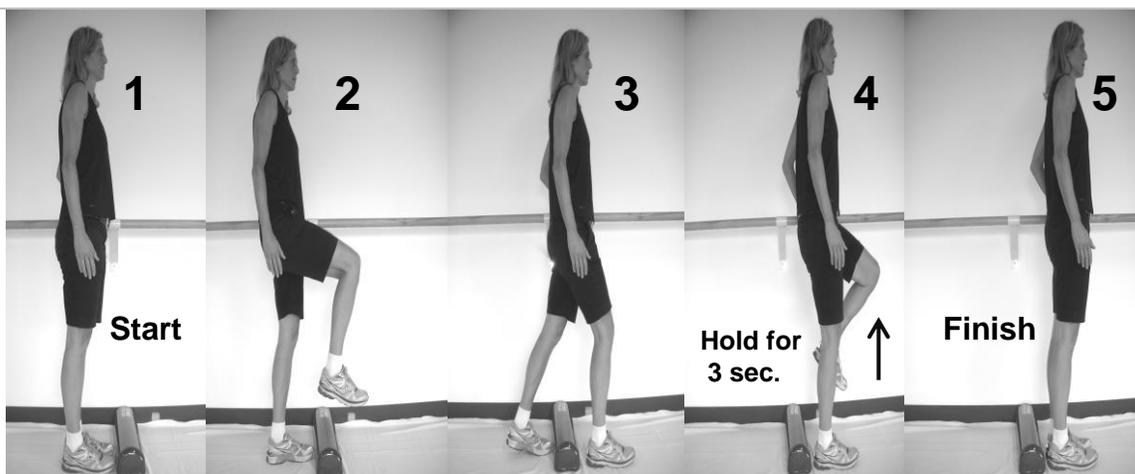
Tip: To make the exercise easier, repeat 10 times with one arm and then 10 times with the other arm. Use your opposite arm to keep the upper arm steady during the exercise

Progression: See page 2 numbers 1-2

Alternative Exercise to the Heel Raise (Exercise #5)

5B) Forward and Backward Stepping

Benefit: Improves balance and movement.



- 1) Using a counter for support, stand with both feet to one side of a rolled towel.
- 2) Lift one foot towel and put it on the ground on the other side of the towel. Place all your weight on this foot. Stay balanced on this foot for 3 seconds
- 3) Then place both feet on the ground.
- 4) Repeat by stepping backwards with same leg.

Please have someone stand beside you for safety. This is important when stepping backwards.

Repeat 10 times to start on each leg. As it gets easier gradually increase to 15 repetitions

Progression for the Heel Raise #5 (Harder)

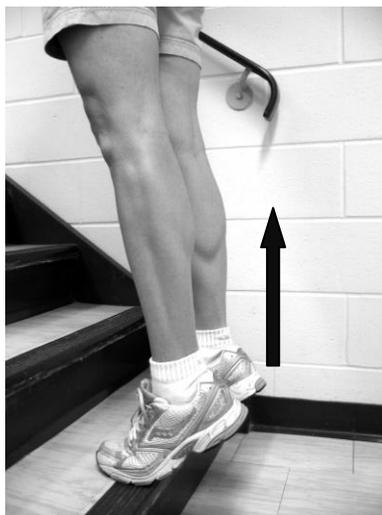
5C) Double Heel Raise on Stairs – Harder than heel raise

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, speak to your rehab supervisor to try this exercise one leg at a time.

Progression for the Heel Raise #5 (Hardest)

5D) Single Leg Heel Raise on Stairs



1. Stand on the bottom step using good posture. Use the handrail for support.
2. Place opposite foot behind your calf.
3. Slowly raise the heel of the opposite leg as high as you can.
4. Repeat until you have done one set. Then switch feet.

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: 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.

Alternative Exercise to the Seated Hamstring Curl (Exercise #7)

7B) Heel Presses (Hamstring Pulsations)

Benefit: Helps stimulate the muscles of the back of the leg above the knee.



1. Sit in a chair with your knee bent to about 45 degrees.
2. Press your heel into the floor. Tighten the back of your thigh (hamstrings).
3. Hold for 5 seconds and repeat 10 times as hard as possible.

Progression for the Seated Hamstring Curl #7 (Harder)

7C) Standing Leg Curl with Band

Benefit: Helps with walking and building muscle.



Put a looped exercise band around one ankle. Step on the band with the opposite foot.

With one hand on the counter for support, lift the heel that has the band around the ankle towards the buttocks. **Make sure the knees are kept together.**

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

Use __ resistance band for right leg and

Use __ resistance band for left leg

Progression: See page 2, #1-2

Progression for the Seated Forward Curl #9 (Harder)

9B 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.

Warm Up Exercises TRI-REPS

Each warm up exercise should be done for 15 to 20 seconds.
Exercise slowly and with control.

