

## **Management of Fall Risk in Full Time Wheelchair Users Living with Spinal Cord Injury**

Below are a list of exercises designed to strengthen your core muscles and upper body to improve your balance in a seated position and make transfer easier.

Most of these exercises are performed in a sitting position. Please sit on a firm, stable surface and place your hands on either side of your legs. You can use your hands to assist with balance to start with but as you get stronger, try to put your hands in your lap during the exercises. Ideally, your back should not be supported.

You should have a friend or family member stand next to you to assure that you don't fall during the exercises.

Please start doing each exercise \_\_\_\_\_ times, \_\_\_\_\_ days per week.

After you exercise you should feel soreness in the muscles but not pain or extreme fatigue. Listen to your body! If you are feeling extreme fatigue, decrease the number of repetitions and/or reduce the number of days per week that you exercise. If you do not feel that the exercises are difficult, increase the number of repetitions performed (increase by 5 repetitions each week, with a max of 20 repetitions each, 3 days per week).

If you are unable to perform or uncomfortable attempting a particular exercise, please feel free to skip and jump to next exercise.

If you have questions, do not hesitate to call Dr. Rice at 217-333-4650.

**Make sure you always have someone with you while you are performing your exercises to assure safety!!!**

**Warm-Up:** Before you start your exercise routine, be sure to perform a short warm-up to get your muscles ready to go.

**Round and Arch Spine:** Round your shoulders forward and then arch your back. Each time you arch your back counts as 1 repetition. Start with a small movement first and then try to go through a greater range of motion as your muscles warm up.



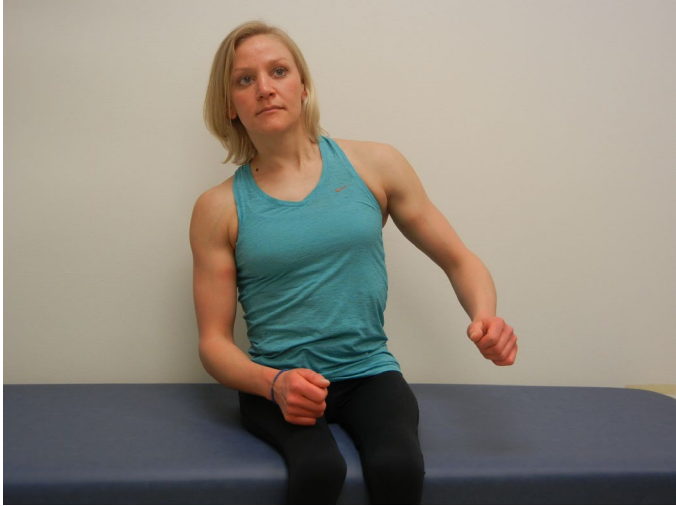
**Start**



**Finish**

**Routine:**

***Lateral Spinal Flexion:*** While you are sitting, bend your body to the right side, pause, then to the left. Each time you bend to the left counts as 1 repetition.



**Start**



**Finish**

**Challenge:** Lift your arms over your head while performing the exercise

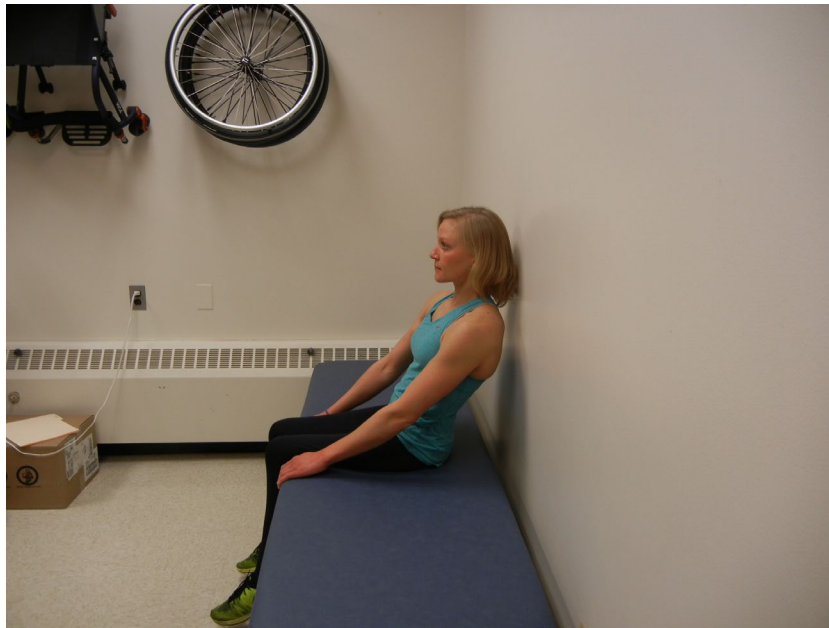


**Start**

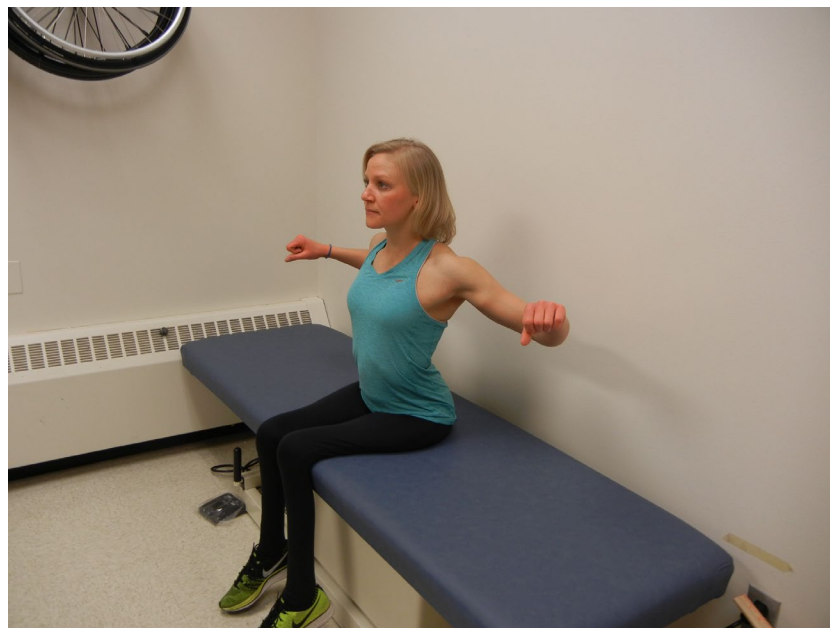


**Finish**

**Lean Backs:** Lean your body as far back as possible. Hold this position for approximately 5 seconds and then return to an upright seated position. Try not to use your hands to support your body.



**Scapular Retraction:** Keeping your back straight, bend your elbow to 90 degrees; lift your arms approximately 6 inches away from the sides of your body. Squeeze your shoulder blades together and hold for approximately 5 seconds each time.



**Scapular protraction:** Lie on your back while holding a hand weight. If you don't have weights, you can use water bottles. Keeping your elbow straight, push your hand up towards the ceiling, hold, and return to starting position. Perform this exercise one arm at a time.



If you are uncomfortable on your back, you can also perform this exercise in a seated position.



**Forward/Lateral Reach:** Reach forward, to the right and to the left. Each time you reach forward counts as 1 repetition.



**Reach Forward**



**Reach Left**



**Reach Right**

**Scoting:** Use your abdominal and hip muscles to scoot your bottom to the right 2 inches, backwards 2 inches, to the left 2 inches and forward 2 inches. Please, try not to use your hands unless absolutely necessary. You will end in the same position you started. Each time you scoot forward counts as 1 repetition.



**Scot Right**

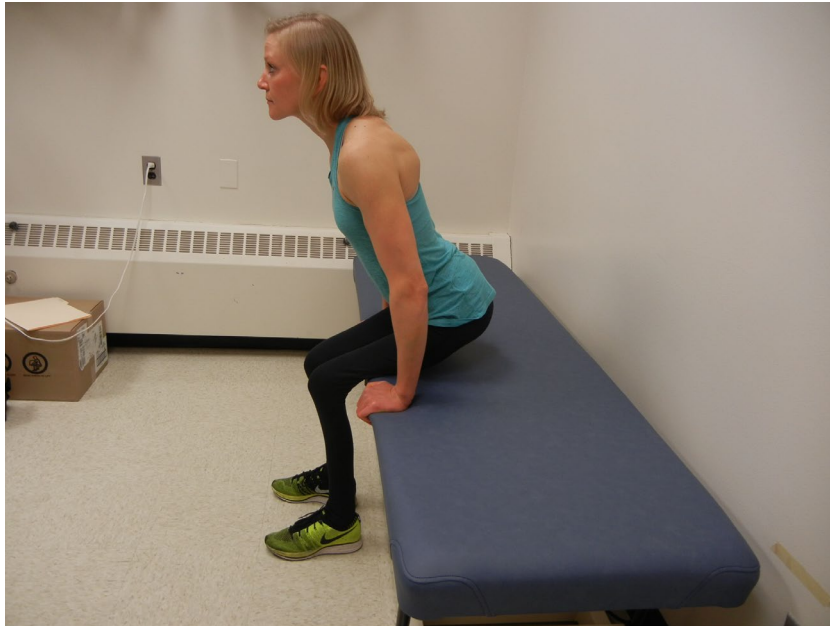
**Scot Backward**



**Scot Left**

**Scot Forward**

***Press up:*** With your hands on a firm surface, push yourself up using your arms and shoulders, and hold for a few seconds. Slowly lower your body back into the seated position.





**Shoulder press:** Bend your elbows and raise your arms to a 90 degree position. Grasp the weights so your palms are facing forward with your hands slightly wider than your shoulders. Slowly straighten your elbows and raise the weights above you. Then, slowly lower the weights back down to starting position.

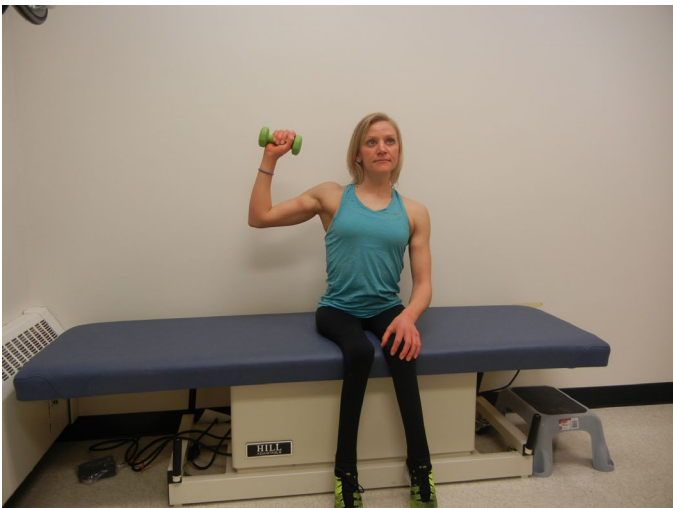


**Start**

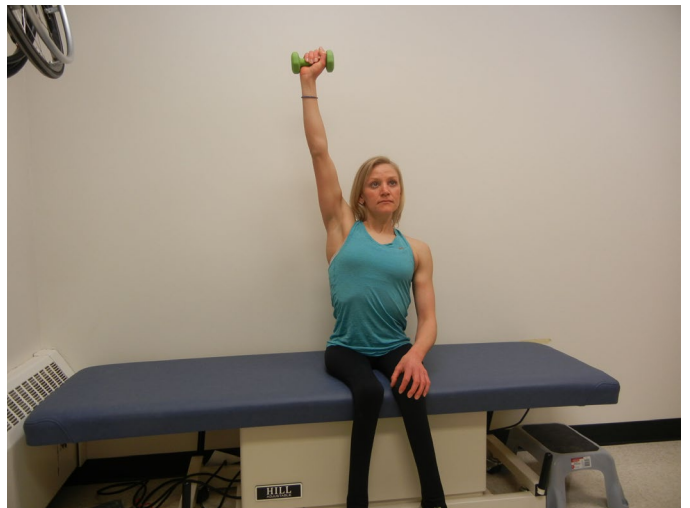


**Finish**

If you have trouble raising both arms at the same time, you can modify this exercise by raising only one arm at a time.



**Start**



**Finish**

***Shoulder Flexion and Abduction:*** Raise your arms in front of you at shoulder level and slowly lower your arms back down to starting position. Then, raise your arms out from your sides to shoulder level and lower your arms.

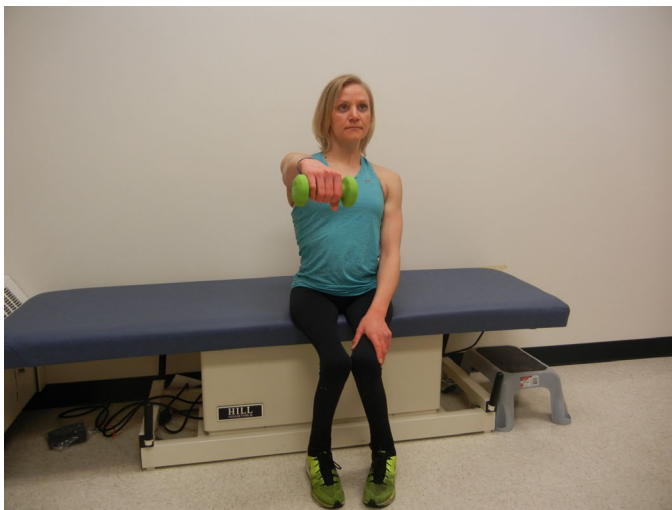


**Flexion**

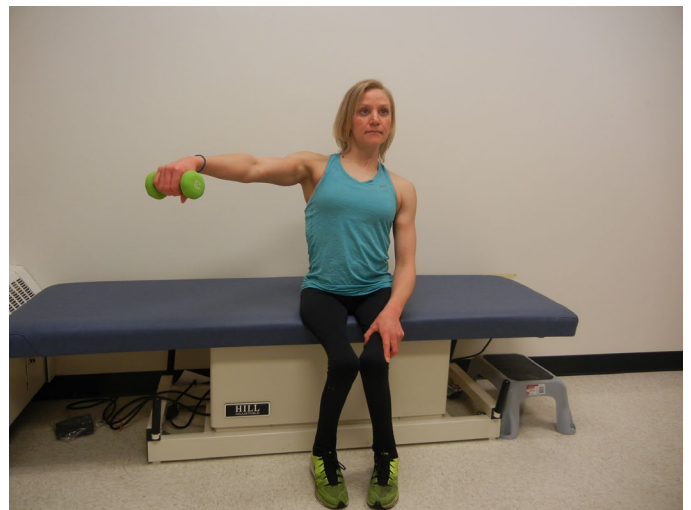


**Abduction**

This exercise can also be done using one arm at a time.



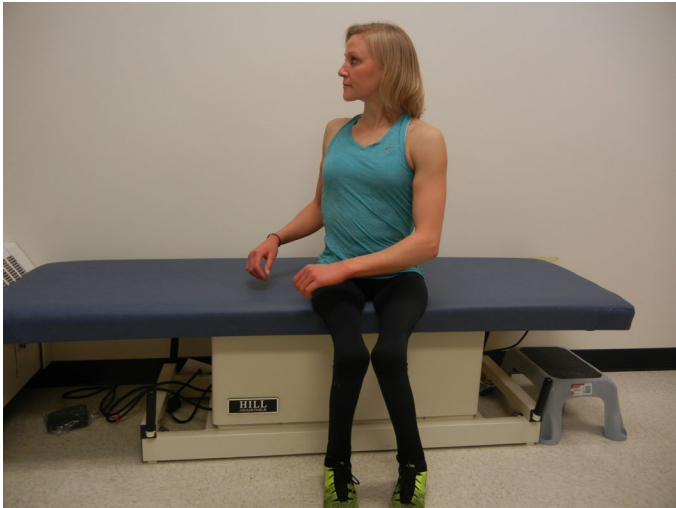
**Flexion**



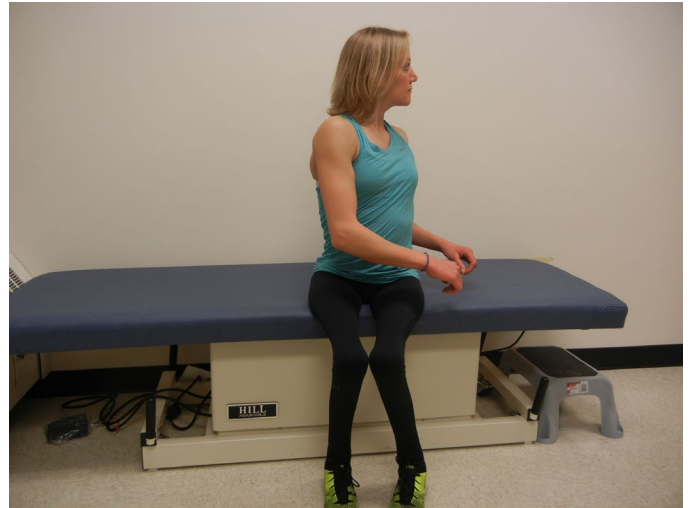
**Abduction**

**Cool Down:** To help you recover faster, finish up your exercise routine with a few stretches.

**Rotational twist (lower back stretch):** Gently twist your upper body to the right and hold for 10 to 20 seconds, and twist to the left and hold for 10 to 20 seconds.

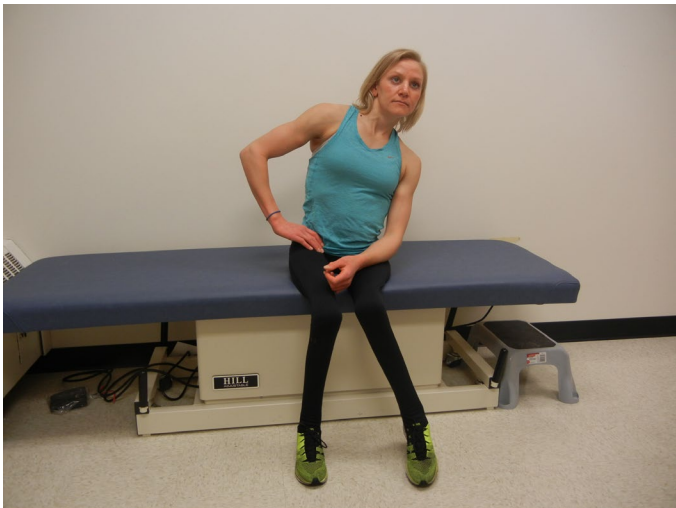


**Right**

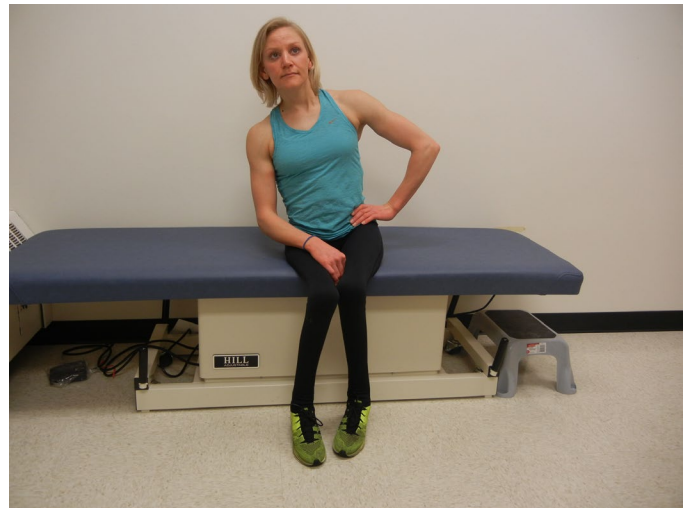


**Left**

**Side stretch:** Gently lean to your right side and hold that position for 10 to 20 seconds. Repeat on left side.



**Right**



**Left**

**You are done!**