

Upper Extremity Range of Motion Weight Bearing

Department: Independent Living Skills

Priority:

High priority for students who are hemiplegic with high or low muscle tone. Some may have no active arm movement and some have some.

Overall purpose of class:

This class is designed to strengthen muscle and reduce spasticity while improving range of motion for upper extremities.

Number of classes held per week:

Twice a week

Optimum class time:

Mid day

Instructor requirements:

1 and an assistant if needed. Positioning is ongoing throughout the class.

Number of students:

8

Student ability range and limitations:

Students need to be able to be positioned. For the duration of the class the affected hand cannot be frozen in a claw. Ice water baths are sometimes used to shocks hands into releasing muscles.

Space and Equipment requirements:

- Benches and a counter surface
- NDT or Bobath benches.

Student Needs to be met from the perspective of the instructor:

- Increasing range of motion
- Decreasing muscle tone
- Learning techniques to break up muscle tone throughout the day.

Typical Student Goals that lead to placement in the class:

Students with hemiplegia whose goals are to stretch their affected arm take this class.

Sample Classroom Exercises

Goals:

1. to increase body awareness.
2. to normalize posture.
3. to provide sensory and proprioceptive input on the affected side of the body.
4. to decrease tone in the affected upper extremity.
5. to increase use of the hand on the affected side.
6. to prevent shortening of the flexors of the elbow, wrist, and fingers.
7. to teach the students to incorporate weight bearing activities into their daily routines.

Warm Up:

1. Chair, bench or table placed directly in front of all participants.
2. Gentle bilateral stretching (using the stronger arm to aid the weaker arm)
3. Deep breathing.
4. Interlace fingers, supporting elbows on table or armrests of chair, gently stretch affected hand into wrist extension (as if you're carrying a pizza on the palm of the affected hand) Rest chin in palm of hand.

*Support the elbow of the affected side with the trunk, and use the unaffected UE for support.

Exercises:

1. Interlace your fingers, placing your hands on the surface in front of you. Lean on your hands (hold for 10seconds,repeat8x)

If unable to interlace fingers, place your hands next to each other with your thumbs nearly touching.

2. Walk both hands forward on the surface in front in front of you. When your reach the end of your comfortable range, walk your hands back to the starting position (Hold for10 seconds, Repeat 8x)

Support body weight with both hands and do gentle push-ups (2 push-ups each time)

3. Externally rotate your arm (demonstrate) and place your right hand on the surface next to your hips, lean and hold for 10 seconds, switch sides and lean (Hold for 10 seconds, Repeat 4 times to each side).

4. Interlace your fingers or place your hands next to each other, rotate to your right side, lean on clasped hands and do 8 push-ups. Rotate to the center, do 8 push-ups. Rotate to left, do 8 push-ups, repeat 3x to each side.
5. Place your affected hand in front of you on the table or chair. Without moving your hand, move your body around the stable base (like a balloon tied down and blowing in the breeze). Change directions, figure 8's, spell names.
6. Lean on your right arm and with your left arm, draw a semi-circle around yourself (as if you're at the beach drawing a circle in the sand). Switch arms, repeat 8 times.

Same position, now draw a circle around your supporting hand 8 times each side.

7. Interlace your fingers or place your hands next to each other on the surface in front of you, gently bend your elbows and straighten, do this 10 times as if you're doing push-ups. Use your affected side to pushup, using your stronger side only for support.

Activities:

1. Balloon ping-pong on the table top
2. Badminton with the balloon and rackets
3. Beach ball pin ball on the table top

Home Exercise Program

These exercises will help to prevent limbs and joints from becoming stiff and painful and will make dressing, bathing and self-care easier. The purpose is to increase and maintain available range of motion, increase circulation and comfort, and to prevent problems associated with lack of movement.

These are exercises that you can do on your own, using your strong side to assist your affected side. It is important to do them slowly and to move each part as far as possible.

The exercises should be performed at least twice a day and at least 5-10 times each.

Place both feet flat on the floor for good position and posture:

1. Lookup to the ceiling and down to the floor
2. Look to the right and look to the left.
3. Tilt right ear toward right shoulder. Tilt left ear towards left shoulder.
4. Raise eyebrows; open eyes and mouth wide. 1.Lower eyebrows; close eyes and mouth tight.
5. Whistle, grin, and pucker.

Cradle arms, fully supporting affected arm:

6. Bring shoulders up and hold. Relax
7. Roll shoulders forward. Pull shoulders back, so once again sitting up tall.
8. Circle shoulders forward. Circle shoulders back.
9. Lace fingers together or hold affected hand. With head up, Reach down between knees toward floor, stay in stretch. Rotate wrists right and left.
10. Circle arms around right knee, Slide down shin, stay in stretch, then come up to sitting. Slide arms down left knee.
11. Reach down between knees towards floor. While keeping back in this position extend arms out in front, then sit up straight.
12. Raise arms above head. Relax.
13. With hands clasped, stir a pot of soup in air. Change directions.
14. With hands clasped, reach forward on right side and pull arms back as if pulling a paddle through water. Repeat on left side.
15. With affected arm cradled, elbow in palm of stronger hand, Lift arms to shoulder level. Let arms relax.
16. Assume cradle position. Rock arms side to side.
17. Lace fingers together or hold at wrist. Touch right shoulder, then your lap. Touch left shoulder, then lap.
18. Stabilize elbow of weaker arm against body. Clasp weaker hand at palm. Bend wrist back toward back of hand. Bend wrist forward toward palm.
19. Stabilize elbow of affected arm against body on lap. Clasp weaker hand at palm. Bend wrist sideways, to little finger side. Slide wrist to thumb side.
20. Lace fingers together. Touch back of right hand to right knee. Rotate fist, Touch back of left hand to left knee.
21. Place affected hand on lap palm up. Straighten fingers, curl fingers into a fist.
22. Place affected hand on lap palm up. Touch tip of thumb to base of little finger. Bring thumb all the way out to thumb side of hand.