



**National Rehabilitation
University Hospital**

An tOspidéal Náisiúnta Athshlánúcháin

Ward and Home-Based Exercise for Adults with Spinal Cord Injury



A guide to getting an
effective workout while on the ward
or at home

Ward and Home-based Exercise Programme devised by the NRH Spinal Cord System of Care (SCSC) Physiotherapy Team

Just because you're not in therapy doesn't mean that you can't work out. Use this programme to get an effective workout on the ward or at home using either theraband or free weights.

Also included are recommendations for fitness exercises that raise your heart rate and the different types of equipment you can use for this.

Important Muscle Groups

This Programme mostly targets muscles on the back of your shoulder and arm that are important for everyday tasks. Below are examples of these muscles and why they are important.

Shoulder Depressors

- Help with transfers, pressure reliefs



Shoulder Extensors

- Help with manual wheelchair propulsion



Shoulder External Rotators

- Help stabilize the shoulder
- to prevent pain and injury



Scapular Retractors

- Important for posture and pulling motions



Triceps

- Help with transfers, pressure reliefs and locking the elbow



Exercise Equipment

Strengthening and Resistance Exercise

Theraband or free weights can be used as demonstrated in this programme.

Theraband is easily available in the physiotherapy department. Free weights can be purchased in retail stores such as Lifestyle or Argos, or online, for example, Amazon or eBay.

Strengthening exercises should be performed in accordance with the Scientific Exercise Guidelines for Adults with Spinal Cord Injury (information can be found on their website – see web address at the bottom of this page). These recommendations are as follows:

How Often?

At least 2 days per week

How Much?

3 sets of 8-10 repetitions

How Heavy?

That you are barely able to complete the 3rd set of 8-10 repetitions

Rest Periods?

1-2 minutes between each set

If using theraband, exercises can be made more or less difficult by (i) adjusting the tension in the theraband and (ii) by changing the colour of theraband used

Fitness and Aerobic Exercise

As well as strength training, cardiovascular exercise is important to help with your fitness, weight management and overall wellbeing.

Fitness exercises that can be performed include:

- Wheeling your wheelchair
- Hand cycling
- Swimming
- Wheelchair sports
- Circuit training

Fitness exercises should be performed in accordance with the Scientific Exercise Guidelines for Adults with Spinal Cord Injury.

These recommendations are as follows:

How Often?

At least 2 days per week

How Long?

At least 20 minutes

How Intense?

Moderate to vigorous intensity

(Moderate = feels somewhat hard but you can keep doing them for a while without getting tired; vigorous = working really hard, almost at your maximum)

'Scientific Exercise Guidelines for Adults with Spinal Cord Injury' (2020) website:

<https://www.ncsem-em.org.uk/wp-content/uploads/2020/11/Spinal-cord-injury-guidelines.pdf>

Shoulder Extensors

Theraband:

1. Attach the band to a sturdy object waist high
2. Grasp one end of the band with your arm straight
3. Keeping your arm straight, pull band toward ground until it is behind your chair back
4. Slowly return to starting position



Free Weights:

1. Bend forward and rest your chest on your thighs
2. Hold a weight with your arm straight down on the ground
3. Keeping your arm straight, pull your arm back behind you
4. Slowly return to starting position



Scapular Retractors

Theraband:

1. Attach the band to a sturdy object waist high
2. Facing in, grasp the band with your arm straight in front of you at shoulder height
3. Pull back toward your chest by bending your elbow
4. Slowly return to starting position



Free Weights:

1. Bend forward and rest your chest on your thighs
2. Hold a weight with your arm straight down on the ground
3. Bring weight toward chest by bending elbow and pulling shoulder blades together
4. Slowly return to starting position



Flies

Theraband:

1. Attach your band waist-high to a sturdy object
2. Grasp band with your arm in front of you at shoulder height, elbow slightly bent
3. Pull out to the side while driving elbow back and pinching shoulder blade to midline
4. Slowly allow arm to return to starting position



Free Weights:

1. Bend forward and rest your chest on your thighs
2. Stabilise yourself with one hand on your chair
3. Grasp weight in other hand with arm toward ground
4. Raise weight out to your side keeping your arm straight
5. Slowly return to starting position



Diagonals

Theraband:

1. Attach your band ankle-high to a sturdy object
2. Grasp one end of the band with elbow slightly bent, hand near your opposite hip
3. Pull band up and across body in a diagonal pattern
4. Slowly return to starting position



Free Weights:

1. Stabilise yourself with one hand on your chair
2. Hold weight with elbow slightly bent, arm draped across your body toward your opposite hip
3. Raise your arm up and across your body with your thumb pointing up
4. Slowly return to starting position



Triceps

Theraband:

1. Attach band to a high sturdy object
2. Facing in, grasp the band with your elbow bent, arm at your side
3. Slowly straighten your elbow until it is straight but not locked
4. Slowly return to starting position



Free Weights:

1. Stabilise yourself with one arm on your chair
2. Hold weight in other hand behind your head, elbow bent
3. Straighten elbow toward ceiling, keeping arm by your head
4. Slowly return to starting position



Shoulder External Rotators

Theraband:

1. Attach the band to sturdy object waist high
2. Facing sideways, grasp the band with the hand farthest from the wall
3. While keeping your elbow at your side and bent to 90 degrees, rotate your hand out to the side
4. Slowly return to starting position



Free Weights:

1. Stabilise yourself with one arm on your chair
2. Hold weight with elbow bent and out to side at shoulder height
3. While keeping elbow still, rotate hand upward toward the ceiling
4. Slowly return to starting position



Shoulder Depressors

Theraband:

1. Attach the band to a sturdy object as high as possible
2. Back your chair up to the band as far as possible
3. Grasp the band, and with your arm straight down at your side, press your shoulder down
4. Slowly return to starting position



Free Weights:

1. Place both hands on your chair seat, arm rests, or push rims
2. With your elbows slightly bent, lift your bottom from the chair by pressing down your shoulders.
3. Slowly return to starting position



Things To Watch Out For

Overuse Injuries and Pain – Be mindful of posture and exercise technique. Avoid overusing the same muscle groups for different exercises. Be particularly careful if you have recently taken medications that affect your pain.

Overheating – Depending on your injury level, your ability to sweat and maintain your body temperature can be altered. Be sure to drink water, wear loose clothes and try to exercise in a cool environment.

Heart Rate and Blood Pressure – Depending on your injury level, your heart rate and blood pressure may be altered. Be mindful of this when starting exercise and build up gradually. Be particularly careful if you have recently taken medications that affect your blood pressure.

Spasticity – Be mindful to avoid exercises that may reinforce your spasticity issues. Liaise with your physiotherapist regarding this.

Key things to remember:

- Build up your exercise tolerance **slowly**
- Find exercises you enjoy
- Vary your exercise routine
- Build it into your daily life
- **Have fun!**

Contact details:

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