



York and Scarborough
Teaching Hospitals
NHS Foundation Trust

Blunt Chest Wall Trauma Physiotherapy Advice

Physiotherapy and exercise guide for
patients, relatives and carers

① For more information, please contact:

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What is this leaflet about?

This is a guide for physiotherapy and exercise which will help your recovery after your blunt chest wall trauma injury.

Blunt chest trauma refers to any injury of the chest wall caused by a blunt mechanism or force. It may present as an isolated injury or as part of a group of injuries. Common causes include a car or motorcycle accident, occupational accident, or a fall. Rib fractures are amongst the most common blunt chest wall injury.

An injury to the chest or ribs can be very painful and worrying. It will help your healing if you follow the advice and exercises in this leaflet. If done properly, the exercises will not harm your chest or ribs.

This leaflet covers common questions patients often have about physiotherapy and exercises.

This booklet includes exercises and advice for:

- During your hospital stay
- After you return home

If you have any further questions that you feel have not been answered within this leaflet, please contact the physiotherapy team.

Pain management

Why is pain relief important?

Being able to move around and do your breathing exercises is very important to reduce complications such as pneumonia which may occur if you cannot breathe properly.

Which pain relief you receive will depend on your individual circumstances and your injury. You may be seen by the inpatient pain team whose role is to provide advice about your pain management.

It is unlikely that the medication will completely get rid of your pain but aims to keep you comfortable enough to breathe effectively, sleep and move around whilst you are recovering.

If your pain is preventing you from taking deep breaths or completing any of the exercises described in this leaflet, please let the nursing staff know.

How will my pain be assessed?

Whilst on the ward we will ask you to scale your pain from 0-10, with 10 being the worst imaginable pain. Doing this will provide the team with an insight into the effectiveness of your current pain relief medication. It is much easier to control mild pain so please take your medication regularly and let nursing staff know before your pain becomes too severe.

Types of pain relief

Types of pain relief commonly used include:

- Oral medications (taken by mouth).
- Intravenous medication (administered into the vein). This might include a patient-controlled analgesia button which you can press regularly to manage your pain.
- Nerve catheter (a small flexible tube inserted to deliver local anaesthetic to the area around your injury).
- Epidural (a small flexible tube inserted into your back that numbs the area around your injury).

More information about the types of pain relief available can be found in the epidurals and patient controlled analgesia leaflet.

Side effects

Pain relief medication can cause side effects such as nausea, drowsiness, confusion and constipation. Please inform your nurse if you experience any side effects. You will likely have a laxative prescribed alongside your pain relief to minimise this effect.

Exercise summary

Exercises during your hospital stay:

- Deep breathing exercises.
- Airway clearance techniques.
- Posture and shoulder movements.
- Circulatory exercises.
- Chair exercises.
- Standing exercises.
- Sitting out daily.
- General exercise and mobility.

Exercises after you have returned home:

- Deep breathing exercises.
- Airway clearance techniques.
- Posture and shoulder movements.
- Circulatory and chair exercises, if not as mobile as normal.
- Standing exercises.
- General exercise and mobility.

What exercises do I need to whilst I am in hospital?

After a chest injury you may notice that it is difficult to take deep breaths or cough because of the pain, this may last for some weeks after injury. You may also be less active than you normally are. You may have been given pain relief and/or anti-inflammatory medicine by a doctor. Make sure you take these regularly. It might help to take them prior to exercise, to help to manage any additional pain.

Be active:

Try to stay active during your hospital stay. Do not stay in bed any longer than usual, or your chest may feel more stiff and sore. The physiotherapist and nursing staff will come and see you from day one and encourage and assist you to get out of bed as soon as possible. Walking is a good way to help you to deeper breaths and also helps to retain and restore your muscle strength. Aim to walk every day and gradually increase this distance each time, until you are back to your normal level.

Deep breathing exercises and coughing:

Deep breathing exercises will help to keep your lungs well inflated and your ribcage moving, as well as preventing chest infections. They can also be used as a way to relax and calm you, as well as easing any nausea (sickness) you may feel as a result of the pain or pain relief you are using.

Coughing is our body's natural method of clearing the lungs and it is important that you try to cough if there is any phlegm (mucus) on your chest. You cannot damage your chest or ribs by coughing, but it might cause you discomfort especially in the early stages after injury.

Exercises for airway clearance:

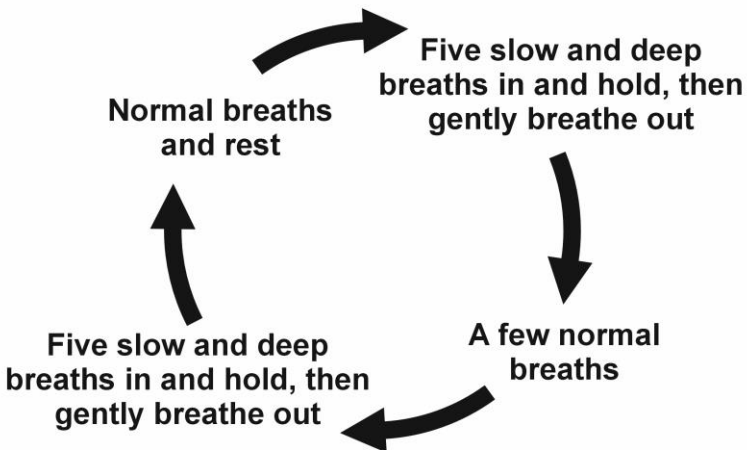
If you get the feeling there is 'something to come up' but you are struggling to clear this, you can try the following exercise to make this easier. This is one of the least painful and most effective ways.

Complete the below cycle three to four times every hour during the day.

What will you need?

- Adequate pain relief.
- Upright sitting position (either in bed or chair).

After your fifth deep breath, force the air out of your lungs as though you are steaming up a mirror or glasses. You can add, after forcing the air out of your lungs, a cough to further clear your airways.



To make coughing or “huffing” more comfortable, you may use a supportive towel to assist. Support your chest by placing a folded towel or pillow over the painful area and apply a firm downward pressure. Alternatively, you can wrap a towel around your chest and pull tightly to apply pressure. Please ask the staff on the ward for a towel if you have not already been given one during your inpatient assessment.



Chest supported with folded towel

Towel wrapped round chest



Posture and shoulder movements

Try and avoid stooping and rounding of the shoulders. This will prevent backache and the development of poor posture.

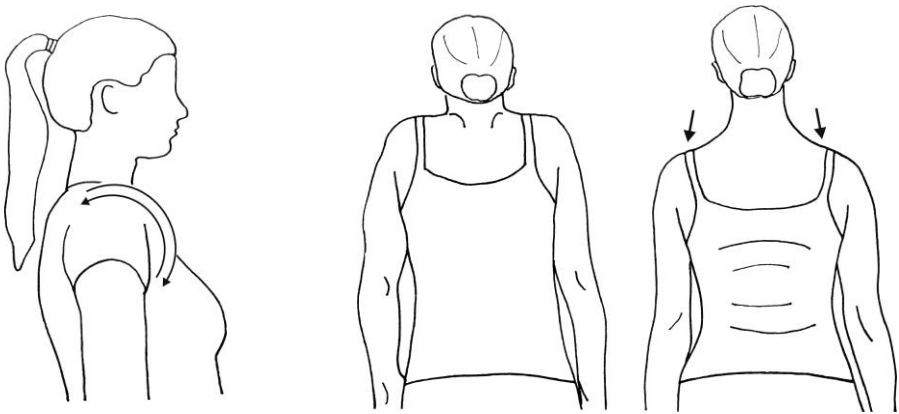
Shoulder shrugging, rolling shoulders and gentle movements, without making your pain worse, can help with tension around the neck and keep your shoulders and upper body mobile (unless you are instructed not to due to other injuries).

Following blunt chest wall trauma, you may feel like you want to reduce movement due to pain but it is important that you do some gentle exercise to prevent any stiffness or loss of strength.

Below are examples of recommended exercise:

1. Shoulder shrugs and rolls

Ensure you are sitting upright in a bed or upon a chair. Gently begin to roll your shoulders forwards then backwards. Then slowly begin to raise your shoulders up (shrug) and down again in a slow and controlled motion.

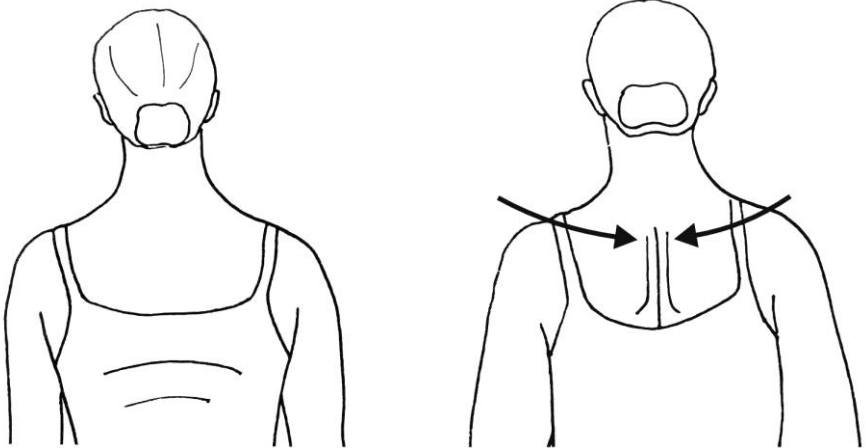


Physiotherapy exercise prescription:

Repetitions times a day

2. Scapular retraction

Sitting in an upright position, slowly bring your shoulder blades together at the back and squeeze. Slowly return to your original position.



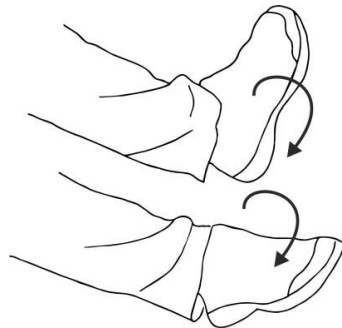
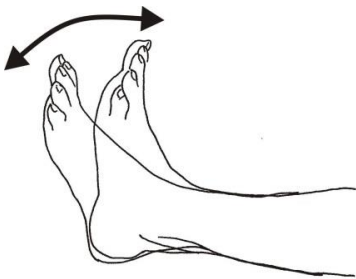
Physiotherapy exercise prescription:

Repetitions times a day

Circulation exercises:

Complete these exercises as soon as able to reduce the risk of a blood clot (deep vein thrombosis (DVT)). They help prevent DVTs by maintaining the flow of blood in your legs whilst you aren't as mobile as you normally are.

- Keep your legs and ankles uncrossed at all times.
- With your legs stretched out, briskly circle both your feet and bend them up and down.



Continue this for 30 seconds, 10 times on each side every hour throughout the day.

Sitting in a chair and walking:

Within the first day after your injury, you should aim to sit on a chair. Someone will always be there to help you if required.

Once sitting, make sure you are comfortable; a pillow behind your back or a sheet to cover the chair may help with this.

It is important to sit out for a minimum of one hour on the first day and then increase the time as the days continue. If you feel you can manage longer, continue sitting.

Gentle movement (leaning side to side, forwards and backwards) whilst in the chair will help you sit for longer and will reduce the risk of skin and pressure damage.

When it comes to walking, you will always have someone with you until you are independent and safe. There may be need for an aid to assist you initially; this should be needed for a short-term period only.

Setting yourself goals to walk distances on the ward will aid your recovery physically and mentally, as it allows you to see progress each day. It will also provide you with the positive feeling of achievement and improvement.

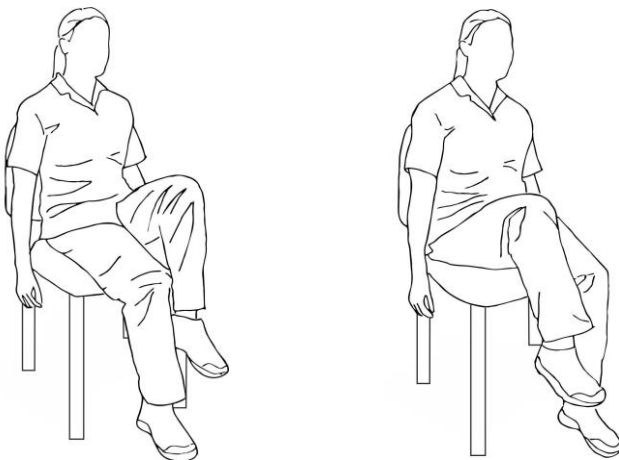
Chair and standing exercises:

When beginning these exercises after sustaining your injury, you must **remember**:

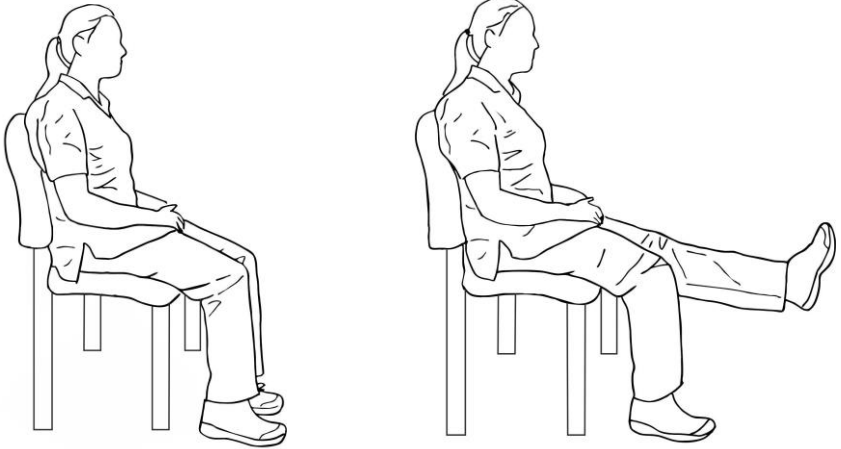
- Exercise should not cause pain, although you may feel some discomfort.
- Do not exercise if you feel unwell or are in acute pain.
- Start gently and progress each exercise as you feel comfortable.
- Do not hold your breath during the exercises.
- Keep hydrated as much as possible.
- Do not compare yourself to others, every person's recovery journey and timescales are different.

Start with exercises whilst you are sat in a chair:

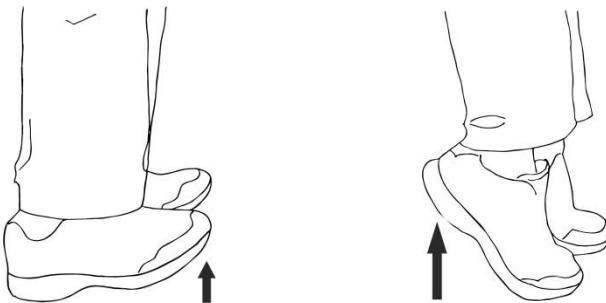
- March your knees alternatively for 30 seconds



- Bend and straighten your knees. Hold your knee straight for 10 seconds, keeping toes pointed up. Repeat five times with each leg as you are able.



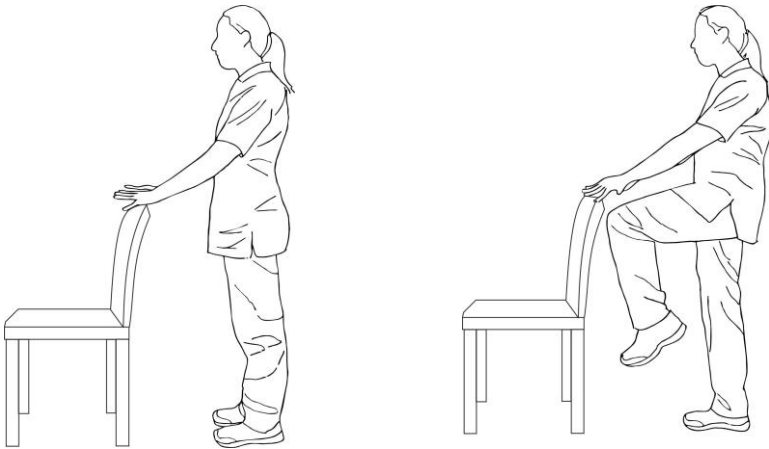
- Lift your heels and toes alternatively for 30 seconds.



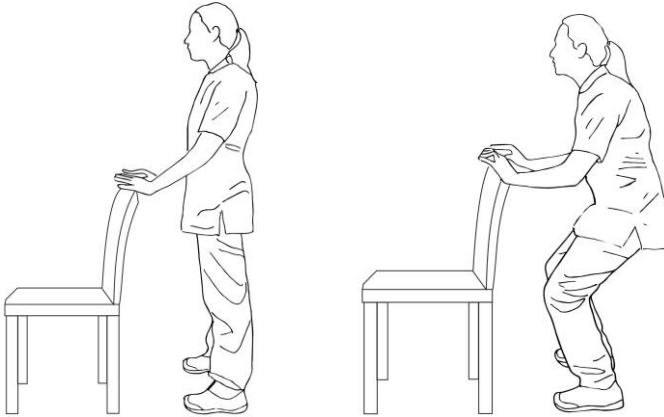
Once you can comfortably complete these exercises, progress to exercises in a standing position. These can also help with your balance as well as preventing deconditioning and maintaining your strength.

Place your hands on a supportive surface e.g. back of a bedside chair, bedside rail or windowsill. Make sure you are relaxed and standing tall throughout.

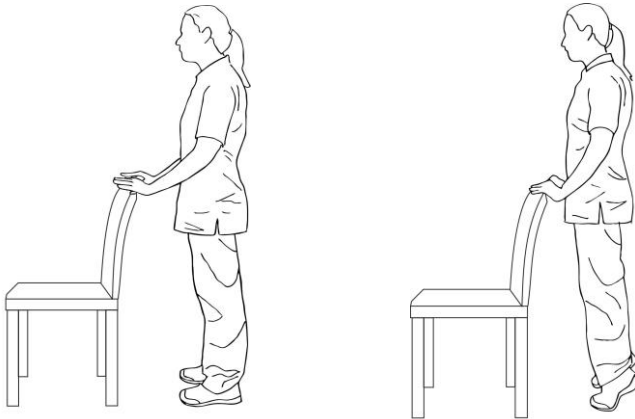
- March for 30 seconds



- Small squats. Aim to repeat 10 times, keeping the movements slow and controlled throughout.



- Push up onto your toes 10 times.



Aim to complete all exercises as often as is comfortable, with the aim to increase to three times a day.

If you find these are easy, you can progress to try and complete them: (1) on one leg, (2) with only one hand on supportive surface, (3) unsupported on both legs and (4) unsupported on one leg.

What do I need to do or be aware of when I return home?

You should continue with all the exercises on the previous pages 8-19.

These will aid your recovery at home whilst also preventing chest infections and deconditioning of your body. It is extremely important you continue with these exercises at the same level prescribed in the booklet.

Over time your exercise tolerance will gradually increase as your day-to-day activity level increases.

Regular activity

Aim to walk daily at home, each time increasing the distance and maybe the incline as time goes on.

Keeping a good baseline of fitness post-discharge will aid your recovery, allowing you to return to a level of function needed for activities in daily living.

If you wish to return to a specific sporting activity, please discuss this with your consultant.

Rest

You may find that you tire easily at first. Pacing your activity is important and this will gradually improve. It may be helpful to sleep sitting upright for the first few nights.

Driving

Check your insurance cover before you drive.

Take somebody with you the first time and progress slowly. Remember you must be able to comfortably wear a seatbelt and perform an emergency stop to drive.

Things you should not do:

- Lift, pull or push anything for six to eight weeks.
- Smoke: if you need support in stopping smoking, there is help available: Quit smoking - Better Health - NHS (www.nhs.uk) or speak to your GP.
- Try to strap up or bind your ribs. This can be harmful.
- Do not try and suppress any cough. It is important to clear the mucus.

If you have any change in your symptoms

Such as:

- An increase in pain.
- Increased shortness of breath which is not normal for you.
- Worsening cough with a change of mucus colour or amount.
- Feeling generally unwell with a temperature.

Contact your GP or local A&E department for further help or assistance if required.

Frequently asked questions (FAQs)

Will I cause further damage by completing these exercises?

If you complete the exercises as prescribed within this leaflet no further damage will be done to the injuries you have sustained. The exercises are designed to help your recovery and prevent deconditioning and chest infections.

What happens if I have a new pain when exercising?

If this occurs whilst you are on the ward, then please make the ward physiotherapist aware and the exercises can be reviewed and adapted if required. If this occurs whilst at home, use the contact numbers listed within this booklet to contact the physiotherapists, or report this to your GP. It may mean that you need to reduce the repetitions or range of movement you are achieving in the exercises for a short period until this settles.

We recommend listening to your body and stopping any exercise or activity that causes you additional pain. However, to ease the pain and discomfort of rib injuries ensure you are taking regular pain relief (as discussed with the pain team during your stay) as this will help to optimise the activities you are able to complete and make these more manageable.

Why has my pain got worse?

It is not unusual for rib injuries to become more painful before they improve. You may notice a slight increase in pain or discomfort about five to 10 days post injury; this is normal and nothing to worry about.

A bruised or fractured rib can take a number of weeks to heal, if you are concerned about anything please consult your GP.

How long should I continue with the exercises given?

You should continue with your deep breathing and physiotherapy exercises after discharge from hospital for at least **four weeks** to enable your recovery once home. As you gradually return to your normal level of activity you can reduce the amount.

It is recommended by the current NHS guidance that 150 minutes of moderate exercise is completed weekly so aim to return back to this amount.

Useful resources and websites:

NHS England

Broken or bruised ribs - NHS (www.nhs.uk)

<https://www.nhs.uk/conditions/broken-or-bruised-ribs/>

Chest Wall Injury Society

Patient Portal - Chest Wall Injury Society

(cwisociety.org)

<https://cwisociety.org/patientportal/>

Association of Chartered Physiotherapists in Respiratory
Care – Breathing Exercises

GL-05ACBT.pdf (acprc.org.)

<https://www.acprc.org.uk/media/521payl5/gl-05acbt-1.pdf>

Useful telephone numbers at York Hospital:

York Hospital	01904 631313
Physiotherapists	01904 721386 01904 725383 yhs-tr.therapysm@nhs.net
Ward 16, Nurse enhanced unit	01904 726016
ICU	01904 726040
Clinical nurse specialists	01904 726063 01904 725726
Research nurses	01904 721278
Outpatient clinic	01904 726501

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact:

Sophie Nicholls, Specialist Surgical Physiotherapist and/or Jenny Olivey, Advanced Clinical Specialist in Respiratory Physiotherapy. York Hospital, Wigginton Road, York, YO31 8HE, phone 01904 721386 or email yhs-tr.therapysm@nhs.net.

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services. PALS can be contacted on 01904 726262, or email yhs-tr.patientexperienceteam@nhs.net. An answer phone is available out of hours.

Leaflets in alternative languages or formats

If you would like this information in a different format, including braille or easy read, or translated into a different language, please speak to a member of staff in the ward or department providing your care.

Patient Information Leaflets can be accessed via the Trust's Patient Information Leaflet website:

www.yorkhospitals.nhs.uk/your-visit/patient-information-leaflets/

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