

Date 20 July 2026  
Your Ref  
Our Ref 11609

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Dear

## FREEDOM OF INFORMATION – RIB FRACTURES

I write in response to your request for information in relation to rib fractures.

Question:

### **1. Single-shot chest wall blocks in the Emergency Department**

a. Does your Trust provide single-shot ultrasound-guided chest wall blocks (e.g. serratus anterior plane block [SAPB] or erector spinae plane block [ESPB]) for adults with traumatic rib fractures in the Emergency Department prior to hospital admission?

If yes:

b. Which specialty or specialties perform these blocks (e.g. Emergency Medicine, Anaesthetics, Critical Care)?

c. Are these blocks delivered as part of a formal pathway or standard clinical practice?

d. Following a single-shot block, is it standard practice for patients to be considered for escalation to a continuous chest wall catheter (e.g. SAPB or ESPB catheter) and/or epidural analgesia?

If not:

e. If single-shot chest wall blocks are not routinely performed in the Emergency Department, are they routinely performed later during the patient's admission for traumatic rib fractures?

f. Which specialty or specialties perform these blocks ?

Answer:

|    |                                     |
|----|-------------------------------------|
| a. | No                                  |
| b. | N/A                                 |
| c. | N/A                                 |
| d. | N/A                                 |
| e. | Not routinely and by exception only |
| f. | Anaesthesia if applicable           |

Question:

### **2. Continuous chest wall catheter techniques**

a. Does your Trust provide continuous chest wall catheter techniques (e.g. SAPB or ESPB catheters) for adults admitted with traumatic rib fractures?

If yes:

b. Which specialty or specialties perform these procedures?

- c. In which clinical areas are these procedures typically performed (e.g. Emergency Department, Anaesthetic Room, Operating Theatre, Critical Care Unit, Ward)?
- d. Are patient selection criteria used (e.g. STUMBL Score, Battle Score, RibScore, or other risk stratification tools)? If so, please specify.

Answer:

|    |                                                                                                             |
|----|-------------------------------------------------------------------------------------------------------------|
| a. | Yes                                                                                                         |
| b. | Anaesthesia ( or orthopaedics / Cardiothoracics if combined with rib fixation)                              |
| c. | Mostly in the "block" procedure room in theatres, occsaionally on the major trauma ward or on critical care |
| d. | Yes - STUMBL score                                                                                          |

Question:

### **3. Policy and guidance**

- a. Please attach a copy of all the specific guidelines and/or protocol and/or standard operational procedure for the chest wall blocks (including any competence/training/education if one is in place) If no specific local guideline or SOP exists for this, please explicitly state 'No local guideline held'

Answer:

[chest-wall-analgesia-guide-v21-march-2025.pdf](#)

Question:

### **4. Physiotherapy management of rib fractures**

- a. Does your Trust provide specific physiotherapy interventions for adults with traumatic rib fractures, including patients discharged directly from the Emergency Department? Examples may include incentive spirometry, breathing exercises, respiratory physiotherapy, kinesiology taping (K-tape), or other structured interventions.

If yes:

- b. Please describe the interventions provided.
- c. Please provide copies of any associated guidelines, pathways, SOPs, patient information leaflets, or physiotherapy protocols.
- If no such documents are held, please state:"No local guideline held."

Answer:

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a. | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| b. | In ED, there is no dedicated physiotherapy service, so advice and intervention for rib fracture patients not admitted to the ward arc is delivered by the primary care provider (OT, nurse, medical team). This may include assessment of functional ability (including transfers, mobility, ADL's in context of pain), ability to deep breath/cough (supported by towel/pillow), breathlessness/oxygen saturations, and encouragement to sit upright/remain active. In major trauma ward rib fracture patients are routinely seen by a physiotherapist day of/after admission for assessment, with intervention delivered as clinically indicated in line with the 2022 international expert consensus statement on respiratory physiotherapy and |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | rehabilitation of patients with rib fractures. Intervention includes addressing pain levels, review of upper limb and neck range of motion, issue of rib fracture patient information leaflet, discussion of self-management advice then as clinically indicated ACBT, incentive spirometry, supported cough, transfers/mobilisation, and issue of exercise leaflet for neck trunk and upper limbs. In cardiothoracic wards rib fracture patients are screened by a physiotherapist after admission for assessment, with intervention delivered as clinically indicated in line with the 2022 international expert consensus statement on respiratory physiotherapy and rehabilitation of patients with rib fractures. Intervention includes addressing pain levels, review of upper limb and neck range of motion, then as clinically indicated ACBT, incentive spirometry, supported cough, transfers/mobilisation, issue of rib fracture leaflet, discussion of self-management advice and issue of exercise leaflet for neck trunk and upper limbs. |
| c. | In ED a patient information leaflet is given out (chest rib injury.pdf) or can be accessed electronically by scanning a QR code (Chest/Rib Injury • MySelfCare). In major trauma ward there is a physiotherapy guideline for rib fracture management (rib fracture guideline-major trauma.pdf), associated patient information (rib fracture v1 approved.pdf) and exercise leaflets (rib fracture UL exc.pdf). Cardiothoracic ward physiotherapists also follow the physiotherapy guideline for rib fracture management (rib fracture guideline-major trauma.pdf) and issue the associated patient information (rib fracture v1 approved.pdf) and exercise leaflets (rib fracture UL exc.pdf) as indicated.                                                                                                                                                                                                                                                                                                                                             |

Question:

**5. Other rib fracture management pathways**

a. Please provide copies of any additional local guidelines, pathways, SOPs, protocols, or care bundles relating to the management of adults with traumatic rib fractures that have not already been provided in response to Questions 3 and 4.

*This includes the Emergency Department, inpatient, surgical, medical, trauma, critical care, and physiotherapy pathways.*

*If no additional documents are held, please state: "No other local guideline held."*

Answer:

See enclosed and also - <https://www.rightdecisions.scot.nhs.uk/south-east-scotland-major-trauma-guidelines/cardiothoracics/blunt-chest-injuries/>.

Question:

**6. Patient disposition**

a. For adults with multiple traumatic rib fractures who do not require Level 2 or Level 3 care, to which ward or specialty area are they most commonly admitted?

Answer:

Major trauma ward.

Question:

**7. Specialty**

*a. In your Trust, which parent speciality or specialities (e.g. Emergency Medicine, Frailty, Respiratory, Trauma & Orthopaedics, Cardiothoracic, or General Surgery) mainly look after adults with multiple rib fractures from blunt chest wall trauma as an inpatient for the first 5-7 days?*

Answer:

Thoracic surgery (with shared care and input from Major Trauma Service & Medicine of the Elderly).

I hope the information provided helps with your request.

If you are unhappy with our response to your request, you do have the right to request us to review it. Your request should be made within 40 working days of receipt of this letter, and we will reply within 20 working days of receipt. If our decision is unchanged following a review and you remain dissatisfied with this, you then have the right to make a formal complaint to the Scottish Information Commissioner within 6 months of receipt of our review response. You can do this by using the Scottish Information Commissioner's Office online appeals service at [www.itspublicknowledge.info/Appeal](http://www.itspublicknowledge.info/Appeal). If you remain dissatisfied with the Commissioner's response you then have the option to appeal to the Court of Session on a point of law.

If you require a review of our decision to be carried out, please write to the FOI Reviewer at the email address at the head of this letter. The review will be undertaken by a Reviewer who was not involved in the original decision-making process.

FOI responses (subject to redaction of personal information) may appear on NHS Lothian's Freedom of Information website at: <https://org.nhsllothian.scot/FOI/Pages/default.aspx>

Yours sincerely

**ALISON MACDONALD**  
**Executive Director, Nursing**  
Cc: Chief Executive  
Enc.

## Chest/Rib Injury

To ensure a speedy recovery, it is important to follow these instructions:

- Take your painkillers as recommended.

### Breathing Exercises:

- Take a couple of deep breaths at least 3–4 times per hour.
- If you smoke, try to stop(!) or at least reduce the number of cigarettes smoked.
- Support the painful area of your chest with your hand when you move, cough or sneeze.
- Do not strap your chest up with plaster/bandages.
- If you become short of breath, cough up blood, develop a productive cough or a crackling sensation (similar to screwed up cellophane wrapping) over the injury site, you must seek medical advice immediately.
- Avoid lying on the affected side.

- It is important to exercise the shoulder on the affected side, since the shoulder can often become stiff following a rib injury.

*The exercise should be performed as follows:*

A stirring movement should be made with the elbow, gradually increasing the size of the circular movement. This should be repeated at regular and frequent intervals:

### Further Advice and Instructions

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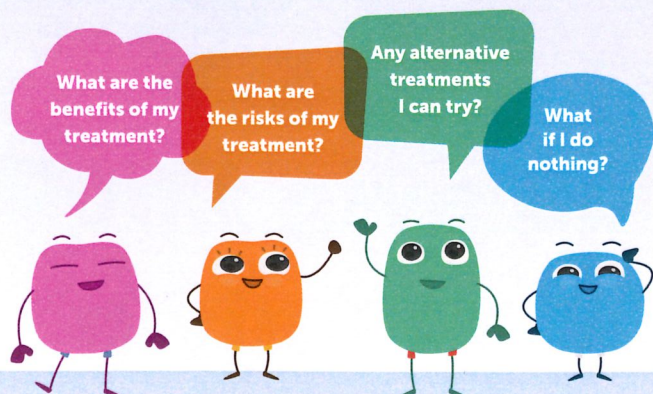
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INFORMATION BOOKLET FOR:

## Chest/Rib Injury



Minor Injuries Unit

**The Royal Infirmary  
of Edinburgh**

University Hospitals Division

51 Little France Crescent, Old Dalkeith Road,  
Edinburgh, EH16 4SA  
Call **NHS 24** on **111** to schedule an appointment

## **ADMISSION POLICY FOR MAJOR TRAUMA WARD**

The Major Trauma ward has 4 x Level 1 beds and 8 x Level 0 beds.

Level 1 beds are for patients at risk of their condition deteriorating, or those recently relocated from higher levels of care, whose needs can be met on an acute ward with additional advice and support from the critical care team.

The following patients should be admitted to the Major Trauma Ward rather than a single specialty ward:

1. Injuries to more than one body region
2. Requiring the input of 2 or more specialties
3. Significant injury to a single body region e.g.
  - High energy pelvic fractures
  - Chest wall injuries
  - High energy open long bone fractures
  - Grade III or above solid organ injuries
4. Stepping down from critical care
5. Who require a Level 1 bed

### **REFERRAL & ADMISSION PROCESS**

- All patients will initially be accepted by a Specialty Registrar or Consultant, usually an ST4+ from one of the following surgical specialties.
  - Orthopaedic surgery
  - Cardiothoracic surgery
  - Neurosurgery
  - General Surgery
- Referrals for admission to the major trauma ward should then be made to the holder of pager 2202. This is usually the Major Trauma Fellow (2202) or Advanced Nurse Practitioner (2207). They will arrange a Major Trauma Ward bed following discussion with the Nurse in Charge.
- All patients for admission to the major trauma ward must be discussed or seen by an ST4 or above from the admitting specialty
- All patients with multiple injuries should continue to be referred to Critical Care as per current pathways. The Critical Care team may deem the patient suitable for Level One care on the MTW and the patient can be admitted under the appropriate specialty parent team.

In all patients, **a single lead Consultant will be responsible for the provision and co-ordination of care will take responsibility for the patient. This will be the named consultant on TRAK.** This Consultant will be based on the dominant injury and priorities for treatment. The Trauma Team leader (TTL) will usually refer to the most appropriate team. In the event any dispute cannot be resolved and/or is leading to any delay this should be escalated by the TTL to the relevant specialty consultants to agree a named consultant.

Where care might be considered shared between consultants, **a single lead Consultant must always be allocated and documented..** The Major Trauma Service will ensure that the lead in-patient specialty Consultant is always explicit on TRAK and will support any necessary transitions of care as the patient's dominant care needs evolve over time.

## SPECIALTY INPUT INTO MAJOR WARD PATIENTS

- All patients will be seen daily by their parent team at ST2 level or above before midday.
- They must be joined by Medical and Nursing staff from the Major Trauma service.
- The following patients must be reviewed/discussed by the parent team Consultant:
  - All **new** admissions within 14 hours
  - All patients on Level 1 area
  - Significant Family concerns
  - At Senior Nurse or Major Trauma Consultant request
  - Patients where end of life care decisions are required.
- At the weekend there is no major trauma consultant. All patients should be reviewed or discussed with the parent consultant on a daily basis over the weekend.
- All decisions are documented on a structured ward round note on TRAK either during or immediately after the ward round.
- ***It is expected that representatives from the following specialties should have contact with the Major Trauma Consultant/Ward every weekday*** to maintain close links and ensure patients with multisystem injuries are receiving early input and decision making, in particular for new patients:
  - Orthopaedic surgery
  - Neurosurgery
  - General Surgery

There should also be regular contact between the Major Trauma service, Radiology and Critical Care.

## ROUTINE WARD CARE & ESCALATION

The Major Trauma Fellow/ANP will provide routine care. The parent surgical team must leave clear instructions on TRAK regarding any ongoing treatment if required, including any treatment escalation plans.

The IDL will be prepared as early as possible by the parent ward team and sent to Pharmacy with an estimated discharge date. The parent specialty consultant will usually determine patients suitable for discharge. At discharge the Major Trauma team will normally complete the IDL. Where this is not possible it is the parent team's responsibility.

A NEWS score of 3 will result in the Ward Nurses escalating to the Major Trauma Fellow/Nurse Practitioner

A News score of 5-6 will be assessed immediately by the Major Trauma Fellow/ANP who will escalate initially to:

**Monday - Friday 0800-1800** - Major Trauma Consultant

**Outwith these hours** - the Specialty Registrar on call for the parent specialty

Patients recently discharged or recently reviewed by critical care, which are deemed suitable for escalation and who deteriorate should be discussed with Critical Care.

# Pathway for Chest Trauma Patients

## Introduction/Overview

- The pathway of a chest trauma patient presenting to Emergency Department can be varied.
- The pathway will depend on the severity of trauma, type of chest trauma (blunt or penetrating), isolated thoracic trauma or polytrauma, cardiorespiratory stability.
- The pathway may change due to patient's complications or surgical approach in a later phase.
- Given the complexity of trauma patients (either with isolated thoracic trauma or polytrauma), case by case-based discussion is often required.
- Generally, patients with isolated thoracic trauma who are anticipated to receive surgical treatment (thoracic operation) should follow the cardiothoracic pathway. Patients with isolated thoracic trauma requiring conservative treatment (e.g., chest drain insertion, analgesia) and polytrauma patients should initially follow the Major Trauma pathway.



## Blunt Chest Trauma

### Major Trauma Ward

- ✓ Fractures of 3 or more ribs
- ✓ Flail chest (clinical or radiological)
- ✓ Pneumothorax or pneumomediastinum after blunt chest trauma
- ✓ Haemothorax after blunt chest trauma with initial blood loss <500ml or persistent blood loss <200ml per hour over 2-4 hours from the chest tube
- ✓ Sternal fractures with or without an abnormal ECG / troponin but without haemopericardium on echo/CT
- ✓ Pulmonary contusion after blunt chest trauma without significant respiratory compromise
- ✓ STUMBL/BATTLE score > 15

### Cardiothoracic Critical Care

- ✓ Right-sided isolated diaphragmatic injury or rupture after blunt trauma (requiring thoracotomy)
- ✓ Patients with injury of the large vessels (ascending aorta and aortic arch)
- ✓ Haemoptysis/endobronchial blood loss/massive contusion with significant impairment of mechanical ventilation/tracheobronchial tree injury
- ✓ Persisting or retained haemothorax (loculation and/or clots) or empyema or persistent air-leakage after blunt chest trauma (requiring VATS or thoracotomy in an acute or later phase)
- ✓ Massive subcutaneous emphysema or significant air-leakage over the chest tube after blunt chest trauma
- ✓ Uncontrolled pain, or pain that impairs adequate ventilation

### General ICU

- ✓ Significant pulmonary contusion after blunt chest trauma and significant hypoxia ( $PO_2 < 65\text{mmHg}$  or  $8.7\text{kPa}$ ,  $SO_2 < 90\%$ ) despite oxygen supplementation
- ✓ Patients with blunt thoracic aortic injury at the site of aortic isthmus or descending thoracic aorta (treated with endovascular stenting)
- ✓ Acute diaphragmatic injury or rupture after blunt trauma (requiring laparotomy)
- ✓ Traumatic asphyxia
- ✓ Oesophageal injury after blunt trauma

### Emergent ED Thoracotomy / Theatre / Cardiothoracic Critical Care

#### Treated with Emergent ED Thoracotomy or Theatre

- ✓ Haemothorax after blunt chest trauma (with initial massive bleeding >1,500ml)

#### Theatre/Cardiothoracic HDU/ICU

- ✓ Haemothorax after blunt chest trauma with initial blood loss >500ml or persistent blood loss >200ml per hour over 2-4 hours over the chest tube

#### Treated with Emergent ED Thoracotomy or Transferred to Cardiothoracic HDU/ICU/Theatre

- ✓ Sternal fractures with abnormal echocardiogram (e.g., haemopericardium)
- ✓ Blunt injury of the heart (blood loss/pericardial tamponade)

# Pathway for Chest Trauma Patients

## Penetrating Chest Trauma

### Cardiothoracic ICU

- ✓ Chest wall injuries after stab wound penetrating trauma causing haemothorax.
- ✓ intracardiac embolic missiles
- ✓ systemic air embolus due to central lung injury

### General ICU

- ✓ penetrating chest trauma involving other body systems/specialties ( e.g. abdominal, neck)
- ✓ diaphragmatic injury from penetrating trauma (with potential both abdominal and thoracic injuries)
- ✓ Patients with oesophageal injury from penetrating trauma

### Major Trauma Ward

- ✓ pulmonary injuries secondary to penetrating trauma (with small pneumo- or haemothorax requiring chest drain insertion)

### Treated with Emergent ED Thoracotomy, Theatre or Cardiothoracic Critical Care

*Treated with Emergent ED Thoracotomy or Theatre/Cardiothoracic ICU*

- ✓ Penetrating cardiac trauma (depending on the degree of pericardial tamponade/blood loss/haemodynamic stability)
- ✓ Patients with great vessel injury after penetrating thoracic trauma (depending on the degree of pericardial tamponade/blood loss/haemodynamic stability)

*Treated with Emergent ED Thoracotomy or Theatre*

- ✓ Pulmonary injuries secondary to penetrating trauma (with initial massive bleeding >1.500ml)

*Theatre/Cardiothoracic HDU/ICU*

- ✓ Pulmonary injuries secondary to penetrating trauma (with initial blood loss >500ml or persistent bleeding >200ml per hour over 2-4 hours or large/persistent air leak)

### After Major Trauma Ward

- Patients with isolated chest trauma admitted to Major Trauma ward should ideally be discharged home/back to health board. Where capacity is an issue then ISOLATED chest wall injuries may be stepped down to cardiothoracic ward

### Thoracic Trauma Complications

- Patients with thoracic surgical complications of chest trauma (empyema, bronchopleural fistula, organised haemothorax, chylothorax, diaphragmatic hernia, lung abscess, arteriovenous fistula, tracheoesophageal fistula, bronchial stenosis, pseudoaneurysm, great vessel fistula, pericarditis, mediastinitis, and chest wall hernia) should be transferred to Cardiothoracic ward/HDU/ICU for surgical management.

# Physiotherapy Management of Patients with Rib Fractures



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## Each patient should receive:

- Early physiotherapy respiratory assessment and intervention (within 24 hours of presentation if self-ventilating), aimed at lung volume expansion and secretion removal[1].
- Daily repeated assessment using objective measures to monitor clinical progress, response to treatment and identify deterioration[1]
- An MDT approach throughout their hospital stay to ensure adequate pain relief and to optimise functional outcomes.

## Respiratory physiotherapy assessment should include, but is not limited to:

- Auscultation
- Palpation where appropriate (consideration of pain etc)
- Review of oxygen therapy delivery, considering changes where more appropriate forms of delivery is available
- Consideration of pain relief/control
- Assessment of ability to deep breath
- Assessment of ability to cough
- Assessment of transfers/mobility
- Assessment of stair climbing ability (where required prior to discharge home)

Predictors of poor outcome should be used to identify high risk patients and guide respiratory physiotherapy management e.g. STUMBL or PIC scores [1].

## Treatment options should be tailored to the patients' specific injuries, tolerance and clinical presentation [1]. Suggested treatment options include, but are not limited to:

- Mobilisation as early as possible, including bed edge sit/transfer to chair/walking
  - Consider more challenging forms of exercises when appropriate e.g. stationery bike
- Breathing exercises e.g. active cycle of breathing technique
- Supported cough
- Incentive spirometry
- IPPB for self-ventilating patients (manual hyperinflation in line with local practice if intubated)
- Give advice and education including self-management and provide 'Rib fractures- patient information leaflet'
- Shoulder/upper limb range of movement (ROM) exercises
  - If no other upper limb/scapular injuries – bilateral upper limb passive and active ROM exercises within limits of pain, including scapular stability.
  - If concurrent upper limb/scapular injuries – follow ROM and weightbearing restrictions as dictated by orthopaedic injures, not the rib fractures.

## References

[1] Battle, C et al. 2023. *Expert consensus guidance on respiratory physiotherapy and rehabilitation of patients with rib fractures: An international, multidisciplinary e-Delphi study*. Journal of Trauma and Acute Care Surgery 94(4):p 578-583 | DOI: 10.1097/TA.0000000000003875

# Physiotherapy Management of Patients with Rib Fractures



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## STUMBL Score

How do you calculate it?

|                                    |            |                                 |
|------------------------------------|------------|---------------------------------|
| <b>Age</b>                         |            | 1 point for each decade         |
| <b>Number of rib fractures</b>     |            | 3 points per fracture (not rib) |
| <b>Pre-injury anti-coagulants</b>  | No         | 0 points                        |
|                                    | Yes        | 4 points                        |
| <b>Chronic lung disease?</b>       | No         | 0 points                        |
|                                    | Yes        | 5 points                        |
| <b>Oxygen saturations (off O2)</b> | 95% - 100% | 0 points                        |
|                                    | 94% - 90%  | 2 points                        |
|                                    | 85% - 89%  | 4 points                        |
|                                    | 80% - 84%  | 6 points                        |
|                                    | 75% - 79%  | 8 points                        |
|                                    | 70% - 74%  | 10 points                       |

What does it mean?

| <b>Risk score</b> | <b>Probability of developing complications</b> |
|-------------------|------------------------------------------------|
| 0-10              | 13%                                            |
| 11-15             | 29%                                            |
| 16-20             | 52%                                            |
| 21-25             | 70%                                            |
| 26-30             | 80%                                            |
| 31%               | 88%                                            |

# Rib Fracture Guidelines

## Trunk, Neck and Shoulder ROM Exercises



### Neck side bends

Keep your chin in and neck retracted and tilt your head towards one shoulder. Hold for a moment and return to an upright position. Repeat to the other side.

Repetition \_\_\_\_\_

Seconds \_\_\_\_\_



### Neck Rotation

Turn your head to the side as far as comfortable. Hold for a moment and return to neutral position. Breathe evenly and do the exercise slowly and in a relaxed way.

Repetitions \_\_\_\_\_

Seconds \_\_\_\_\_



### Seated trunk forward flexion

Seated on a chair, bend at the hip forward. Push your hands forward and allow your upper back and neck to follow and bend forward. Feel the stretch in your upper back, while breathing evenly.

Repetitions \_\_\_\_\_

Seconds \_\_\_\_\_



### Trunk Rotation Sitting

Sit with your feet flat on the floor. Cross your arms in front of you. Support one arm with the other if needed. Twist your upper body from side to side. Turn your head along with the movement.

Repetitions \_\_\_\_\_

Seconds \_\_\_\_\_

# Rib Fracture Guidelines

## Trunk, Neck and Shoulder ROM Exercises

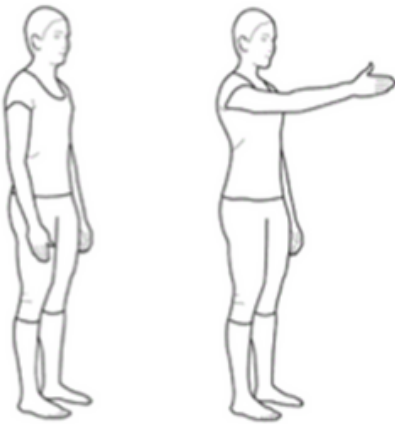


### Seated scapula retraction

Sit up straight and lift arms forwards, with your elbows straight. Pull your elbows backwards and shoulder blades together. Straighten your arms back to starting position.

Repetitions \_\_\_\_\_

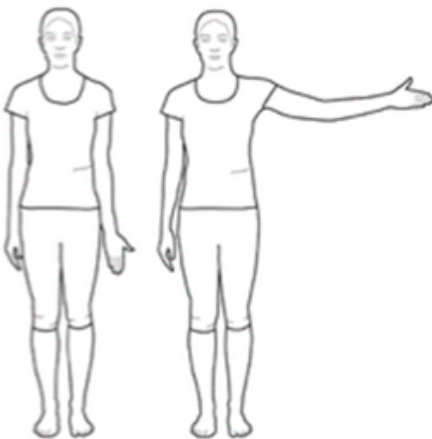
Sets \_\_\_\_\_



### Shoulder Flexion in sitting or standing

Start with your arms by your sides. Lift your arm forwards to the point of restriction or pain. Lower the arm back to the starting position.

Repetitions \_\_\_\_\_



### Shoulder Abduction in sitting or standing

Start with your arms down by your sides. Lift your arm sideways with the thumb leading the movement. Lift arm to the point of restriction or pain. Lower the arm

back to the starting position.

Repetitions \_\_\_\_\_

# Active Cycle of Breathing Technique (ACBT)

## NHS Lothian Major Trauma Service

### Rib Fractures – Patient Information Leaflet

#### BREATHING CONTROL:

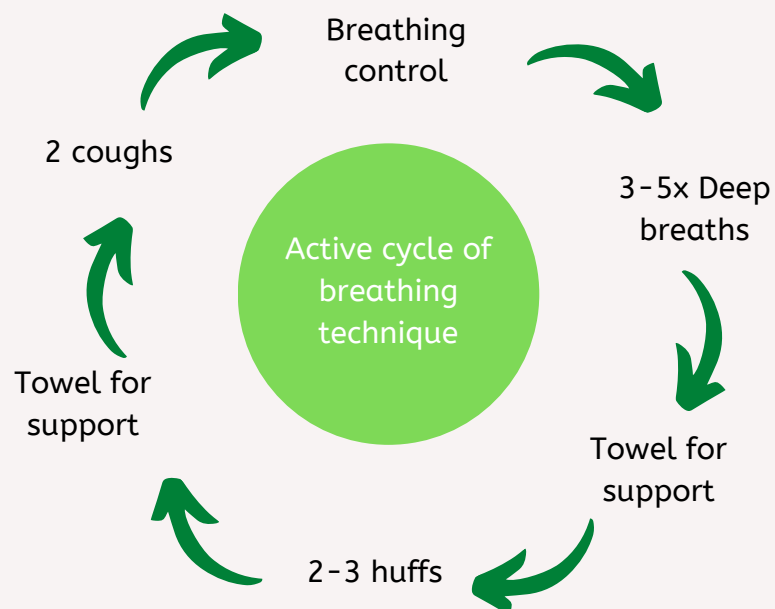
Normal, relaxed breathing at your own pace.

**DEEP BREATHING:** Breathe in slowly and as deeply as you comfortably can for 3-5 breaths. Hold each breath in for 2-3 seconds.

**For huff and cough use a towel over your wound site**

**HUFFING:** To do this, make an “O” shape with your mouth and breathe out (Like steaming up a mirror or cleaning glasses!). Huffing helps move the phlegm. Try this 2 times.

**COUGHING:** Try coughing 2 times to bring phlegm up.



Please repeat this cycle hourly during the day.



# What to expect

- Healing takes approx. 6 weeks
- Most people can recover at home with broken ribs
- Having a nerve block into your spine is common. This is known as an Erector Spinae Plane Block and provides strong pain relief.

## Pain relief

Rib fractures are very painful. Insufficient pain relief could negatively impact breathing, coughing, secretion clearance and increases the risk of pulmonary infection.

## Breathing Exercises

Your physiotherapist will encourage you to cough **as soon as you can**.

Coughing is important with rib fractures to make sure that you are able to **clear any build-up of secretions in your lungs**.

Simply place a towel or pillow over the affected ribs and gently squeeze/cuddle it into your ribs. This provides an element of protection and support for your ribs.

Instructions for breathing exercises to help keep your lungs clear are detailed on the back of this leaflet.

# Incentive Spirometer

Incentive spirometry is a lung expansion therapy.

Instructions:

1. Wrap your mouth tightly around the mouthpiece
2. Make sure you take a deep breath in through your mouthpiece
3. As you breathe in, you should see the yellow ball start to rise.
4. The disc will rise to a number printed on the cylinder; this number is the volume of oxygen you are able to inhale during one inspiration.

## Mobilising

It is important to maintain mobility when healing from rib fractures.

Mobilising as early as possible will **prevent chest infections, aid in secretion clearance, improve oxygenation and allow you to become independent again**. Ensure you are frequently moving your shoulder through range on the side of your rib fractures.

If you have any questions please ask your ward physiotherapist.

## Upper Body Exercises

You will be provided with an additional sheet of upper body exercises which will be demonstrated when appropriate.