

Patient information and discharge advice for adult patients who have undergone surgery to fix a broken sternum

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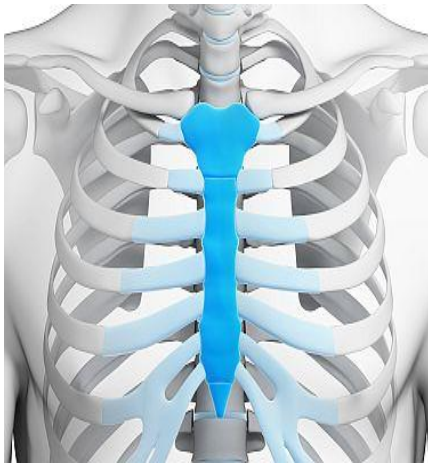
Who is this leaflet for?

This leaflet is for patients who have undergone a surgical procedure to fix broken sternum caused by trauma

Where is the sternum?

The chest is made up of 12 rib bones on each side of the body in addition to the sternum, forming the front wall of the chest.

The sternum provides the attachment point for the 2 clavicles (collar bones) on either side of the upper chest wall and the upper 7 ribs.



The above diagram highlights the sternum's (in blue) location in the chest

Causes of a fractured sternum

A sternal fracture usually occurs following a traumatic direct blow to the chest from an object or person.

This most commonly occurs, due to a road traffic accident, where the moving chest impacts in to the steering wheel or seat belt.

This kind of fracture can also be associated with contact sports

Common signs and symptoms

The following are commonly found after a fractured sternum:

- Bruising
- Pain
- Swelling over breast bone
- Air felt under the skin

How is a sternal fracture diagnosed?

Sternal fractures are usually diagnosed by examining the patient's chest and symptoms.

You trauma team will then request you to undergo x-rays and or CT scans of your chest.

How is a fractured sternum treated?

In most cases a fractured sternum is treated without an operation.

This would normally consist of suitable pain killers and breathing exercises, but in rare occasions a fractured sternum may require surgery.

The Operation

The vast majority of sternal fractures are managed without an operation.

The operation has been carried out as it was felt by the team that your sternum was either:

- Too unstable to manage without an operation
- Repaired as part of another operation on your chest
- Due to the fracture not healing

The operation is carried out under a general anaesthetic.

Your surgeon will make an incision through your skin over the fracture site. They will then stabilise the fracture using titanium plate/s and screws.

VTE (venous thrombo-embolism)

VTE is a collective term for 2 conditions:

- DVT (deep vein thrombosis) – this is a blood clot most commonly found in a deep vein that blocks the flow of blood.
- PE (Pulmonary embolism) – a potentially fatal complication where a blood clot breaks free and travels to the lungs.

Whilst you are less mobile, the risk of VTE is higher.

VTE is a major health risk in the UK. Your consultant will discuss with you if intervention with anticoagulation (blood thinners) is required.

Things that you can do to prevent VTE:

- Mobilise as instructed by the consultant and therapy teams.
- Keep well hydrated – drink plenty of water.
- We strongly advise you not to smoke.

This is a great opportunity to stop smoking.

The ward staff or your GP can help you to access smoking cessation services.

- If you have been recommended anticoagulation therapy, please comply fully with the treatment for the duration of the course.

Some patients who have suffered sternal fractures will go home with 28 days (post operation) of blood thinning injections.

Your Consultant, Pharmacist and Nursing team will speak to you regarding this.

Discharge

Whilst you were in the Major Trauma Centre, we closely observed you, monitored your blood pressure, heart rate and blood count for signs of possible bleeding and other complications related to your injury.

Now you are ready for discharge. However remember that your wounds may not have healed yet.

A discharge summary, medical advice, sick note, and medicines will be given to you on the day of discharge from the hospital.

The inpatient pain team will have spoken to you about your painkillers to take home. They will also write to your GP about the plan to step down your painkillers whilst in the community

Breathing Exercises

We realise that there is pain involved with surgery and the pain may interfere with deep breathing and walking. Please let us know if your pain is not well controlled.

Whilst in hospital you would have been showed how to use an Incentive spirometer (IS) - this is a breathing exercise device. Along with coughing and walking, it helps to prevent collapse of the lungs and pneumonia.

Your Major Trauma Therapy Team will ensure you are discharged with an Incentive spirometer as well as breathing exercises for you to do after discharge.

Wounds and Dressings

A doctor or nurse will give you advice about how your wound was closed and how to care for them.

If dressings are required for your wounds after discharge, they will be provided and explained to you.

You need to keep the scar / scars covered after your surgery. You do not need to worry about getting the wound wet.

Dressings act as a barrier against water. Many patients have concerns that standing up straight will pull at the stitches. Don't worry about this.

Getting out of bed and standing up straight will actually help you to recover more quickly.

Skin staples or stitches

If you have skin staples or stitches which need to be removed, this can usually be done by the practice nurse at your GP surgery or walk-in centre 14 days after your operation.

Discomfort

You may experience pain and discomfort around the scar, especially for the first few days or week.

Painkillers

Painkillers will be prescribed for you for about 7 – 14 days. The Trauma Acute Pain Team will discuss your painkillers with you prior to discharge and also make recommendations to yourself and GP.

The painkillers may well cause constipation, so it's important to get plenty of fibre in your diet while you are recovering.

Tiredness

Your body is using a lot of energy to heal itself, so you will feel more tired than normal – sometimes it can come upon you suddenly.

Keep a routine, get up at your normal time in the morning, get dressed and move about the house.

If you get tired, you can rest later.

Feeling emotional

If you feel upset or emotional in the days and weeks after your operation, don't worry - this is a perfectly normal reaction which many people experience.

Family and friends

Family and friends can give you practical help with the tasks you might be temporarily unable to do while you recover – such as driving, the weekly shop, or lifting heavier items.

They will keep your spirits up. If you live alone, and you do not have family or friends close by, organise support in advance - have family or friends come to stay with you for the first few days after surgery if possible.

Build up gradually

Have a go at doing some of the things you'd normally do, but build up gradually.

Everyone recovers at a different speed, so not all of the suggestions will be suitable for everybody.

Returning to work

Getting back to your normal work routine sooner rather than later can actually help you to recover more quickly. So work can be part of your recovery.

How quickly you return to work depends on a number of things.

People whose work involves a lot of heavy lifting, or standing up or walking for long periods of time, will not be able to return to work as quickly as those who have office jobs which are less demanding physically.

In most cases it's usually safe to return to work 4-6 weeks after your surgery.

If your employer has an occupational health nurse or doctor they will advise you on this.

Alternatively your GP can give you advice. Ultimately, it's your decision when you want to go back, and there's no insurance risk to your employer if you choose to do so.

You do not need your GP's permission to go back to work - this is ultimately your decision.

Depending on the nature of your job, you might want to ask your employer about returning to work on lighter duties at first. This means:

- Spending more time sitting rather than standing or walking
- Doing work that is mostly paperwork, using a computer or telephone
- Not carrying more than around 5 kg any significant distance
- Avoiding tasks such as prolonged loading or unloading, packing or unpacking.

If you have an HR Department at work, they will be able to advise you on how your absence might affect any benefits you may be receiving during your time off.

Driving

You should inform your insurance company about your operation. Some companies will not insure drivers for a number of weeks after surgery, so it's important to check what your policy says.

Before resuming driving, you should be free from the sedative effects of any painkillers you may be taking.

You should be comfortable in the driving position and able to safely control your car, including freely performing an emergency stop.

Driving exercise

It is advisable not to restart driving for about 6-8 weeks after a surgical repair of a sternal fracture.

After about six weeks, you might want to test your fitness to drive.

Do this in a safe place without putting the keys in the ignition: simply sit in the driving seat and practise putting your feet down on the pedals. Again, build up gradually.

If you feel pain, stop immediately. If you feel sore afterwards, you may need to wait a day or two and try again.

Only when you can put enough pressure on the pedals to do an emergency stop - without feeling any pain or soreness afterwards - should you think about driving again.

It is advisable not to restart driving with a long journey.

Holiday and flying

A restful holiday in this country may be undertaken at any time, providing you are able to cope with the travelling.

Holidays abroad should be deferred for at least six weeks after the operation.

At your outpatient appointment discuss your plans with the surgeon. Avoid strenuous holidays and extensive travelling at first.

Cover the scars with complete sun block when sunbathing in the first six months. It is also important to clarify your holiday insurance.

Key activities, in summary

Until informed otherwise we advise you:

1. No removal of skin staples or stitches for two weeks.
2. No work for-at least two weeks

3. No school, college, or university for at least-two weeks.
4. No driving for four weeks; you must inform the DVLA of your injury who may also advise you in regards to when you can drive.
5. No physical activity for six weeks (including physical education).
6. No strenuous physical activities for-at least, 12 weeks (three months).

These activities include skiing, skating, mountain biking, diving, skydiving, contact sports, military combat, rigorous sexual intercourse, and lifting of heavy objects.

For very specific groups of patients the interval of limited activity can range from six weeks to six months (this will be discussed with you prior to you discharge)

When should you return to hospital?

You should bear in mind that there always is a risk of developing complications after every operation. Call your doctor or attend the Accident & Emergency Department, if you have:

- Increased or persistent pain not relieved with pain relief medications
- Redness or swelling around the wound
- Discharge of pus or blood from the wound
- Increased pain in the chest
- Persistent fever
- Temperature above 38.5°C
- Shakes, swelling, chills, rigors
- Uncontrolled vomiting
- Inability to have a bowel movement after four days
- Dizziness/feelings of faintness
- Blood in your vomit, urine, or cough
- Swollen leg or both legs

Follow up appointments

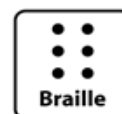
It is important that you do not miss any of your follow up appointments.

Your surgeon will inform you prior to discharge if you will require a follow up in our Major Trauma Clinic to ensure that your wound and tummy are healing and for us to also monitor how you as a whole are recovering from your injury.

Who do I contact if I have questions or concerns?

- Major Trauma Nurse Coordinators: Contact Hospital switch board on 0151 525 5980 and ask switchboard to bleep 5428. This service is available 7 days a week from the hours of 8 am to 8 pm.
- Nursing staff on Major Trauma Ward: Telephone number: 0151 529 6255
- Major Trauma Nurses 24hr answering machine. Leave name contact number and short message. Telephone number 0151 529 2551

If you think that your condition is serious then it is best to come straight to Aintree Accident & Emergency department*. Seek advice from your GP.



If you require a special edition of this leaflet

This leaflet is available in large print, Braille, on audio tape or disk and in other languages on request. Please contact:

Tel No: 0151 529 2906

Email: interpretationandtranslation@aintree.nhs.uk