Rib Injuries

Rib injuries usually heal themselves in a few weeks. Good painkillers are important so that you can breathe and cough comfortably while the injury heals. After a rib injury, if you feel unwell or more breathless than usual, obtain medical advice urgently. This leaflet is for non-severe rib injuries where patients do not require hospital admission. It does not cover severe or multiple injuries where inpatient treatment is needed. Injuries with more than three broken ribs may be the severe type.

What are rib injuries and who gets them?
The term rib injury usually means rib fracture - that is, a break in one or more of the ribs. Sometimes the ribs are not broken but there is bruising of ribs or nearby muscles. Rib injuries occur when there is a force to the chest such as from a fall, road accident or assault. Rib injuries can also be caused by the force of your own muscles - for example, with severe coughing, straining, or heavy sports. This is more likely if there is weakness of the ribs such as occurs with ‘thinning of the bones’ (osteoporosis) or other disease in the bone.

Children and babies are less likely to fracture ribs because their bones are more elastic. So, if a young child or baby has a rib fracture, it is important to know what caused the injury. If there is no clear cause, the possibility of child abuse should be considered.

How are rib injuries diagnosed?
Usually, the diagnosis is made from the details you give to the doctor (history) plus a doctor's examination. Ribs which are broken (fractured) are painful, particularly with movement, deep breaths or coughing. The injured area is tender when pressed.

Rib fractures may (but not always) show on a chest X-ray. If a rib fracture is suspected, the main purpose of a chest X-ray is to look for complications rather than to diagnose the fracture itself. Therefore, if complications are not suspected and you are otherwise well, you may not need an X-ray. X-rays are not used unless necessary, because of the radiation involved. This especially applies to women who are, or who may be, pregnant.

What is the treatment for rib injuries?
The most important treatment is to have good pain relief
The break (fracture) or bruise usually heals in about four weeks. Good pain relief during this time helps you to breathe and cough properly. Simply putting up with the pain is not a good idea, as it can lead to shallow breathing, lack of coughing and chest infections. (See ‘What are the complications of rib injuries?’, below.) Painkillers help to prevent these problems.

Effective and safe pain relief is especially important for people who are more prone to chest infections. This includes, for example, smokers and people with persistent (chronic) chest conditions such as chronic obstructive pulmonary disease (COPD) or heart failure.

What pain relief should I use?
Three types of painkillers can be used:

- Paracetamol.
Non-steroidal anti-inflammatory drugs (NSAIDs), such as naproxen, diclofenac, ibuprofen or aspirin.

Strong painkillers containing codeine or dihydrocodeine.

How should I take the painkillers?
For painful rib injuries, it is best to take painkillers regularly. Don’t wait until pain becomes severe. As the ribs heal, you can gradually cut down on the painkillers. Your doctor or nurse can suggest which painkillers to use but general advice is:

- For mild-to-moderate pain, take paracetamol.
- For moderate-to-severe pain, take paracetamol OR codeine OR paracetamol plus an anti-inflammatory painkiller. You can take paracetamol and codeine together but studies suggest the resulting pain relief is not much better than taking one or other alone. Also, the risk of side-effects is increased.

Always follow the dose instructions on the pack and do not take more than the dose advised on the pack.

Are there any side-effects of the painkillers which I should know about?
Paracetamol is not likely to give you side-effects. Codeine and dihydrocodeine may cause drowsiness or constipation. For constipation, you can take standard laxatives such as senna tablets and/or increase the fruit, fibre and fluid in your diet. It is important to treat constipation promptly because straining worsens rib pain. You can continue taking codeine together with enough laxative to relieve the constipation. If you are drowsy, do not drive and if very drowsy, you should reduce the codeine dose.

Anti-inflammatory painkillers (such as naproxen, ibuprofen or aspirin) can cause stomach ulcers or stomach bleeding. Many people can take them without problems but some people need to be very careful about taking anti-inflammatory painkillers.

- DO NOT take anti-inflammatory painkillers if you are taking anti-clotting medicines such as warfarin, heparin or similar medication.

Discuss with your doctor or nurse before taking anti-inflammatory painkillers if:

- You are aged over 60 years.
- You have a history of stomach ulcer or stomach bleeding.
- You have a history of heart disease, stroke or peripheral artery disease.
- You have asthma, high blood pressure, kidney disease or may be pregnant.
- You are already taking aspirin (including low-dose aspirin) or clopidogrel.
- You are taking these painkillers for long periods - say, for over two weeks continuously.

Your doctor may suggest a different painkiller or a medicine to protect the stomach (for example, omeprazole). Be aware of the symptoms of stomach ulcer or bleeding, which are:

- Pain in the upper part of the tummy (abdomen).
- Lack of energy (lethargy), and weakness.
- Black-coloured stools (faeces).

If you have any of these symptoms see a doctor urgently.

Are there any other treatments?
For severe pain, another option is a nerve block with local anaesthetic near to the injury.

Note: DO NOT wrap a bandage tightly round your chest. Although this may help the pain, it stops the lungs from expanding and can lead to pneumonia.

What about work?
Depending on your job and the severity of the injury, you may need time off work.

What are the complications of rib injuries?
Most rib injuries heal well with no problems. Complications can occur if internal organs are damaged by the sharp end of a broken rib.

Pneumothorax
Pneumothorax occurs if the membrane around the lung is damaged. Air enters and forms a pocket of trapped air around the lung, which squashes the lung. The word pneumothorax means air in the thorax. Symptoms include shortness of breath or pain on breathing - sometimes pain near the shoulder. A pneumothorax can show on a chest X-ray. It may need treatment to remove the trapped air, under local anaesthetic.

A pneumothorax is usually noticed soon after the injury. However, it can occur later, even several days afterwards. So be alert for symptoms such as shortness of breath, increasing chest pain, or pain that is not near the break (fracture). Obtain urgent medical advice if you have any of these symptoms.
Rarely, a dangerous pneumothorax can occur where air is trapped under pressure. It compresses the lungs and causes increasing difficulty breathing. This is called a tension pneumothorax and is a medical emergency. **Note:** anyone who has difficulty breathing or who feels more breathless than usual needs immediate medical help.

**Surgical emphysema**
A sharp fractured rib can let air from the lung get in underneath the skin. This causes a swollen or bubbly area which may crinkle when pressed. It is called surgical emphysema. It will clear up gradually. Surgical emphysema can sometimes be linked to a pneumothorax (see above) and the pneumothorax may need treatment.

**Haemothorax**
This is similar to a pneumothorax except that there is blood, not air, trapped around the lung. The blood collects at the base of the lung, so may cause shortness of breath or pain in the lower part of the chest. It is treated by draining off the trapped blood.

**Tummy (abdominal) injuries**
The lower ribs are near the liver, spleen and kidneys. Rib fractures can cause internal damage to these organs. Symptoms are pain in the tummy or back (rarely, pain may travel to the shoulder). If there is internal bleeding then you will feel faint or very unwell. Urgent surgery is needed.

**Chest infections**
Rib fractures which are painful make it difficult to breathe deeply or cough properly. This can make it difficult to clear mucus in the chest, leading to chest infections. Good pain relief helps to prevent chest infections. (See ‘What is the treatment for rib injuries?’, above.)

Even with good painkillers, some people may develop a chest infection following a rib injury. If you have symptoms such as cough, high temperature (fever), chest pain, shortness of breath or increasing phlegm (sputum), see a doctor urgently.

Complications are more likely if the injury involved a large force and if the injured person is frail or has other medical problems. If you suspect a complication, obtain urgent advice.

**Further reading & references**

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