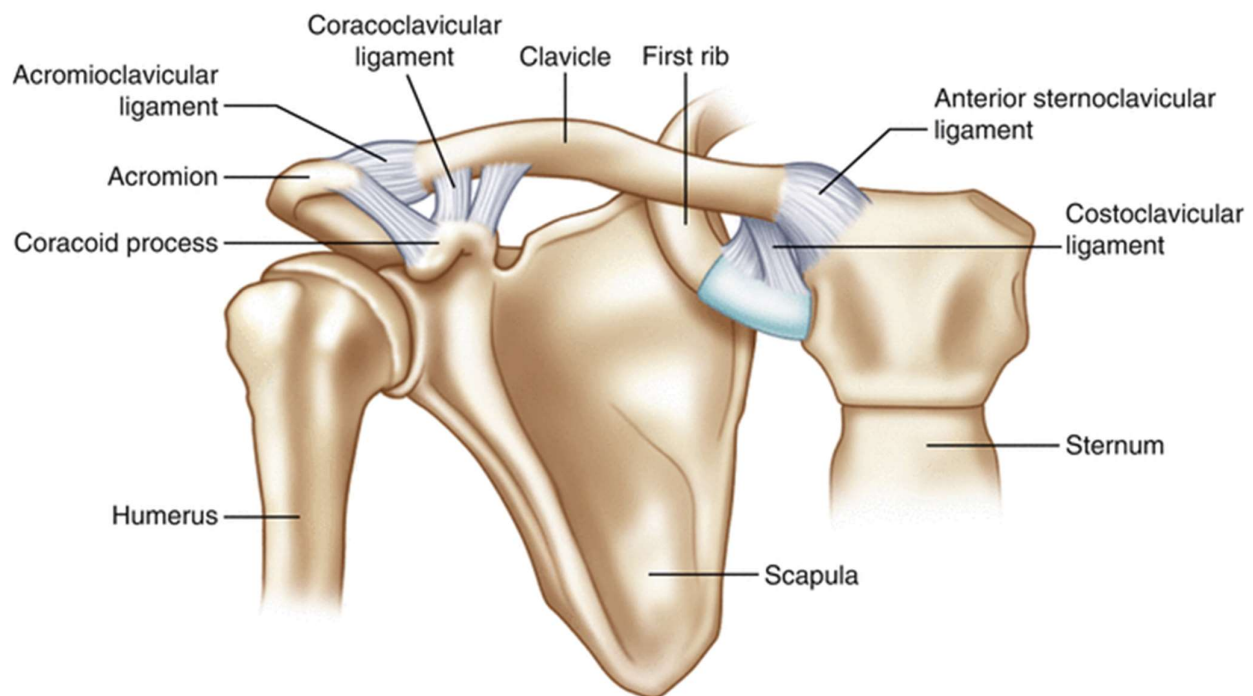


Proximal Humerus Fractures

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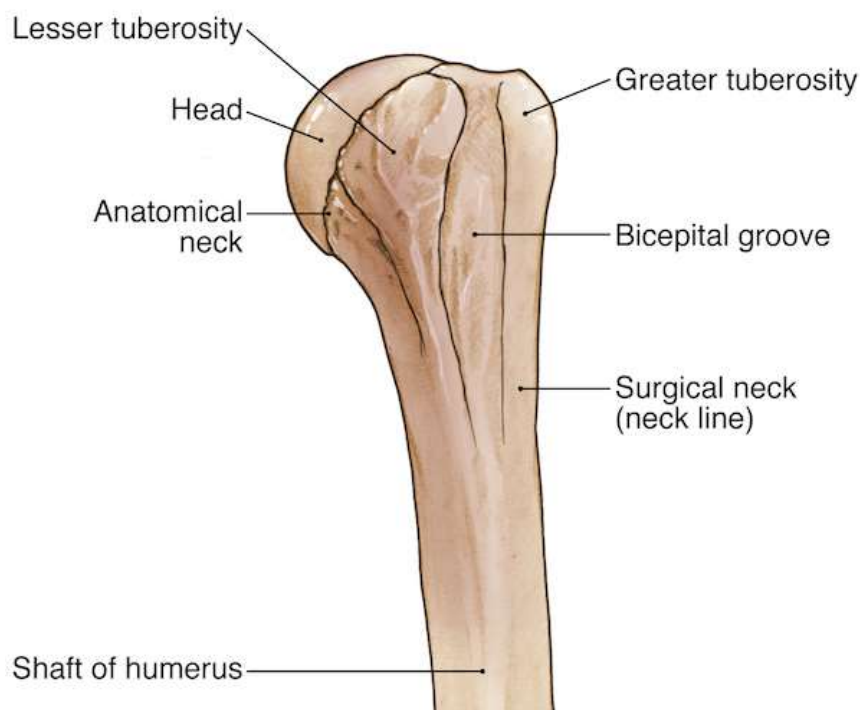
Anatomy/Description

The shoulder is a joint that functions as a ball and socket like structure. The socket refers to the glenoid cavity, made from the scapula, and the ball refers to the head of the humerus, which is the upper arm bone.

The distal end of the humerus refers to the end of the bone that is furthest away from the midline of the body, which is nearest the elbow, and the proximal end refers to the end that is closest to the shoulder.

The proximal humerus can break into 2 or more pieces, when it breaks the fragments of bone can either remain in position (non-displaced) or they can move out of position (displaced). The humeral head is made up of the greater tuberosity, the lesser tuberosity, the head and the surgical neck.

There are a range of suitable treatments that depend on the type of fracture, the patient's health and activity levels.

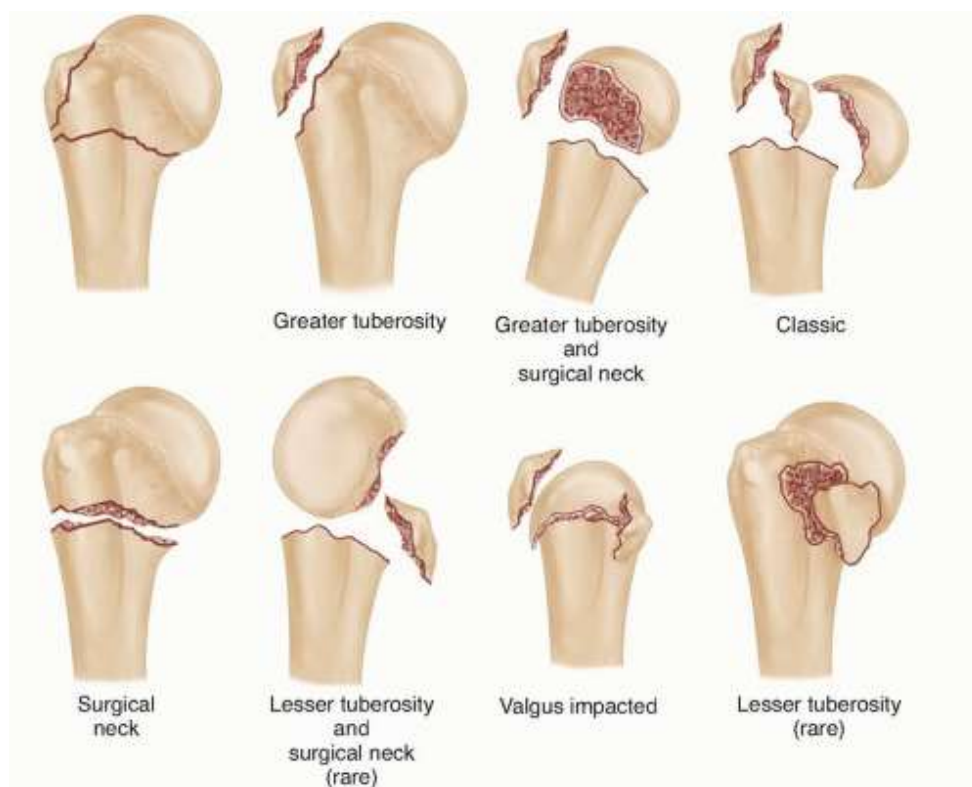


What Causes a Proximal Humerus Fracture?

Proximal humerus fractures account for a total of 5% of all fractures, most commonly occurring in older patients who have been affected by osteoporosis. These fractures are usually the result of a fall landing on an outstretched hand from standing height. However, in younger patients the usual cause of injury is high-energy/ high-impact trauma.

Types of Fractures.

There are a variety of ways in which the humeral bone can break, affecting different aspects of the bone, the severity of your fracture will determine the method of treatment.



Symptoms.

- Decreased range of motion, inability to move arm
- Pain, swelling and bruising

Treatment.

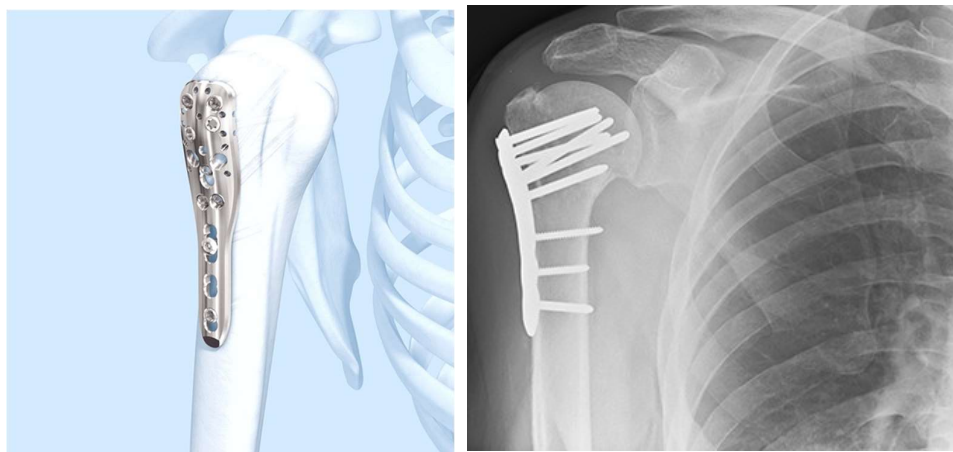
It is not necessary for all patients to have surgery. For those whose fracture is stable and undisplaced, a supportive sling can be worn for 3-6 weeks in combination with gentle hand, wrist and elbow exercises that prevent stiffness and promote the return to full range of motion.

Some fractures are more displaced and will only benefit from surgical intervention, of which there are a few options. Dependant on the type of break, general health, bone quality, and the severity of the fracture you may require either open reduction and internal fixation, an intramedullary nail, a hemiarthroplasty or even a total shoulder replacement.

Open Reduction and Internal Fixation (ORIF):

The most common form of reconstruction is achieved by fixing the bones with plates, screws and sutures. Dr Dao makes an incision approximately 10-15cm long and using specialised instruments reduces the displaced bone fragments until they have returned to their anatomical position. A plate is then secured over the top of these fragments with screws. The wound is then closed with skin stitches and small adhesive dressings. An ice pack is often applied in recovery to help defuse swelling and ease pain. Your arm will be placed in a shoulder immobilizer sling.

This type of procedure is indicated if the greater tuberosity has been displaced by 5mm or more, there are multiple bone fragments or the surgical neck has been damaged.



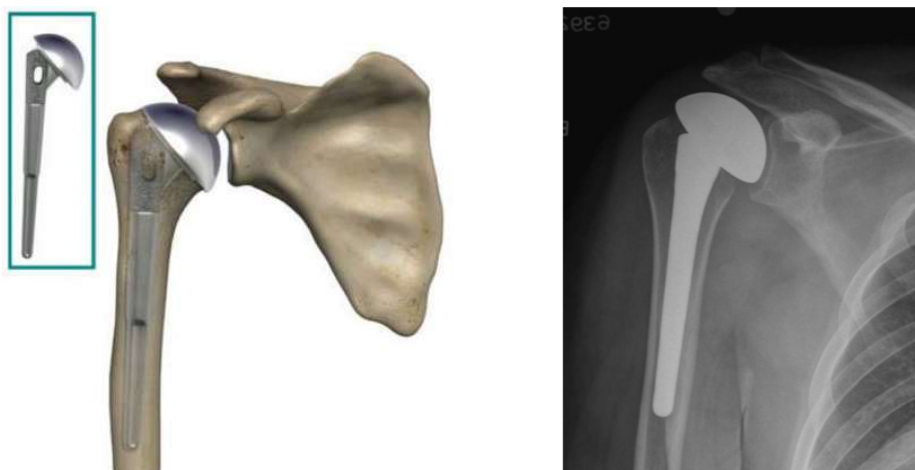
Humeral Nail/ Intramedullary Nail:

A humeral nail is indicated when there is either an open fracture, segmental fractures or severe osteoporosis. A large nail is inserted down the humeral canal to hold the fractured bone fragments in alignment. Dr Dao performs this procedure under the guidance of X-ray imaging, he makes an incision approximately 3-4cm long and inserts a guidewire down the humeral canal. He then uses special instruments to ream over the guidewire up to the fracture site, using a special 'jig' Dr Dao is able to insert the humeral nail and remove the guidewire, this arrangement allows Dr Dao to reduce the fracture via traction, using screws to stabilise and secure the nail in place. Your wound will then be closed with skin stitches and an adhesive dressing will be applied, you will require a shoulder sling or immobilizer as well.

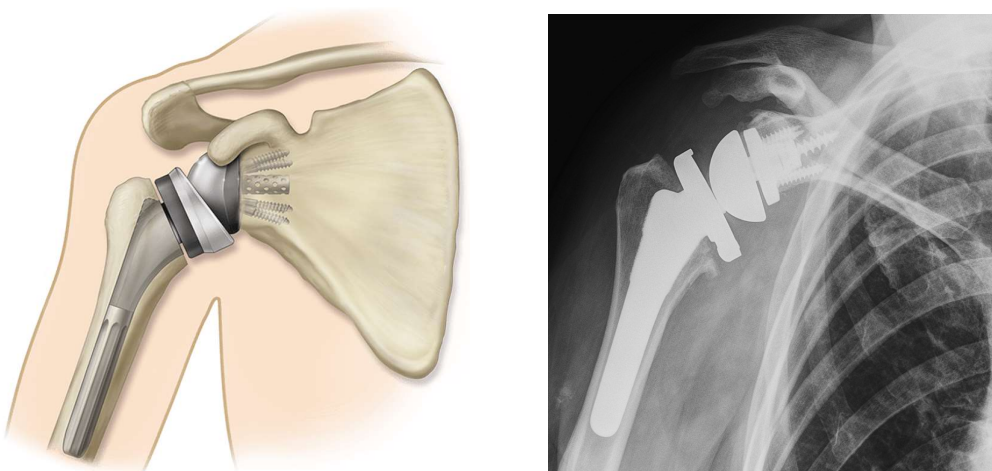


Hemiarthroplasty or Total Shoulder Replacement:

A hemiarthroplasty is the term used to describe the replacement of one half of the joint, either the ball or socket, in this case it would be the ball component; the humeral head. This procedure is recommended if the fractured humerus is so severely broken that it is too complex to realign the shattered bone fragments, or if the blood supply to these fragments has been irreversibly damaged. This procedure is performed by first sawing off the humeral head, reaming down the humeral canal and securing carefully measured prosthesis designed to mimic the natural anatomy.



A reverse total shoulder replacement is used in similar situations as a hemiarthroplasty except when the bone is poorer quality, in older patients and when the tuberosities cannot be restored.



Recovery and Follow Up After Surgery.

The outcome from a proximal humerus fracture is dependent on the type of fracture, your age, your overall health status, your expectations and adherence to rehabilitation. It is quite common to experience stiffness after a fractured humerus, and Improvements will continue occur up to 2 years after surgery.

Immediately following your procedure you will be in a sling, you should wear this sling for 6 weeks. For 8 to 12 weeks after your surgery you will not be allowed to drive, and you should not lift anything heavier than 1kg. At your 2 week post surgery appointment Dr Dao will give you some gentle hand, elbow and wrist exercises to assist in regaining function of your arm.

Frequently Asked Questions.

Q: Will the fracture heal by itself?

A. That is dependent on the type of fracture you have, as some fractures will be best managed by temporary immobilization in a sling and others will benefit from surgical intervention. Dr Dao will advise you on the most appropriate treatment for you.

Q. Is there any risks associated with the surgery?

A. All surgery has risks. Dr. Dao will discuss this with you, including, but not limited to: anaesthetic risks, the risk of wound infection or deeper infection which may require further surgery, slow healing, deltoid muscle impairment, the risk of bleeding and stiffness in the shoulder. There is also a risk of the damage to nerves and blood vessels close to the surgical area.

Q. Will the pain and discomfort in my shoulder resolve?

A. You will be prescribed post-operative medication to help with the pain in the first couple of weeks after surgery. Most people will experience improvements up to 2 years following surgery, but do report positive outcomes such as being pain free with restored function.

Q. What do I do if there is severe pain, wound discharge, increased swelling, worsening flexibility, inability to move the shoulder or any urgent concerns following surgery?

A. During business hours, please contact the rooms on 8078 0633 or outside business hours please attend your local emergency department.