

## RADIAL HEAD FRACTURES; ORIF RADIAL HEAD; RADIAL HEAD ARTHROPLASTY; CORONOID PROCESS FRACTURE; LIGAMENT REPAIR

This information aims to help you understand your condition and gain maximum benefit from your treatment. It covers the most commonly asked questions. However, every individual is different, and you should ask as many questions as you like.

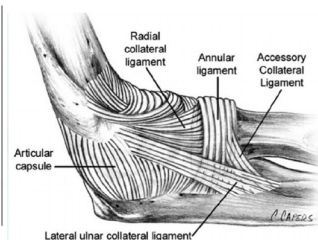
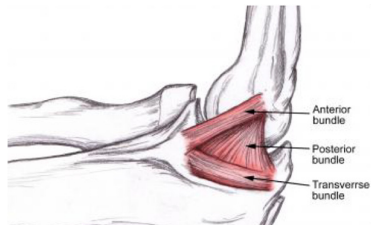
### ELBOW ANATOMY

The elbow joint is a type of hinge joint. It bends (flexion) and straightens (extension), as well as rotating to position your palm up or down. The joint is formed by the end of the upper arm bone (distal humerus) together with the 2 forearm bones (the radius and the ulna).

The point of your elbow is the end of the ulna (the olecranon). The coronoid process is a lip at the front of the ulna. The ulna articulates with the trochlea (part of the distal humerus)

The end of the radius is the radial head. The radial head articulates with the capitellum (part of the distal humerus)

Two important ligaments help to hold the bones together (the medial ulnar collateral ligament, MUCL; the lateral ulnar collateral ligament, LUCL). As well as the ligaments, the radial head and coronoid process are important in keeping the joint stable.



### SPECTRUM OF INJURIES

Injuries occur either from a simple fall or from a 'high energy' injury such as a car crash in a younger person. Sometimes the bones break without the elbow dislocating but sometimes a dislocation also occurs.

In terms of treatment planning the 'displacement' (how far the pieces are away from each other) and the amount of 'comminution' (how many pieces there are), the smoothness of the articular surface and whether the elbow dislocated are important.

However sometimes a very minor looking fracture can represent a very severe elbow injury that will have a very poor outcome without surgery.

The most common injuries that are encountered are:

#### 1) 'Simple' radial head fractures

Radial head fractures are the most common injury. The term 'simple' implies that no other important structures are injured. These fractures can be treated without surgery that are expected to heal well with a very good outcome. Sometimes ORIF (open reduction and internal fixation) of the radial head is recommended if forearm rotation is blocked.

2) Complex radial head, coronoid process fractures and fracture dislocations

In this situation there is a combination of bony and ligament injuries. These are generally severe injuries that are best treated with surgery. If surgery is needed it is either done through cuts on one side or other (or both) of the arm or through an open cut on the back of the elbow. It is very important that elbow movement is started as early as possible and certainly within three weeks of the injury.

## THE OPERATION

### RADIAL HEAD ORIF

The aim of this surgery is to bring the fracture fragments back together in their normal positions and to hold them there with metalwork.

### RADIAL HEAD REPLACEMENT

Sometimes the radial head is broken into so many pieces that it is not possible to put it back together again. In this case it is replaced with a prosthesis

### CORONOID PROCESS ORIF

Small pieces of the coronoid process do not need to be fixed. Larger pieces may need to be repaired.

### LUCL AND MUCL REPAIRS

The need for ligament repair is dictated by the type of injury and what bony repairs have been performed

You will come to hospital on the day of surgery. You will have a general anaesthetic. A nerve block may also be used. The surgery usually takes 2hrs

## AFTER SURGERY

You will stay in hospital 1 night after surgery

You will see a physiotherapist before you leave hospital.

Length of time in a splint or sling is dictated by the injury pattern and the surgery.

The speed of recovery is variable. It can be rapid or seem slow. Most improvement occurs in the first 6 months.

The end of recovery is around 12-24 months after surgery.

Further general information is available in the 'Information for patients undergoing surgery' leaflet.

### APPOINTMENTS AFTER SURGERY

7-10 days; 6 weeks, 3 months, 6 months, 12 months.

### REHABILITATION EXERCISES

Specific rehabilitation exercise sheets will be given to you in hospital and during your follow-up visits.

Only do the exercises shown to you in hospital and demonstrated to you in clinic. Your therapist will suggest whether you can do the exercises yourself at home or would be better with regular supervised physiotherapy sessions. You will need to get into the habit of doing the exercises several times a day for around 6 months.

### MILESTONES & RETURN TO WORK/SPORTS

Dictated by procedure & whether ligament repair was required

See specific rehabilitation sheets

### DRIVING

You cannot drive while you are using a sling or splint.

Once you have been told that you can remove the sling or splint you can drive when you feel that you have full control of the vehicle. It is your responsibility to make this decision.

### LIFTING

In the long-term this is dictated by whether an ORIF or a radial head replacement were performed

### LIKELY OUTCOMES

The main aim of surgery is to improve pain and function. Range of motion and strength should be close to normal though this is more difficult to predict.

Patient satisfaction rates after surgery are around 95%. No surgery will result in a joint that feels and functions completely normally after these fractures.