

# 6 The elbow

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## ELBOW JOINT

### Indication

Arthritis which may be degenerative, traumatic or inflammatory. Inflammatory arthritis, such as rheumatoid, is probably the most common condition to be injected.

### Patient presentation

Pain is felt over the elbow and, depending on the severity, may be referred into the forearm. If traumatic in origin the possibility of fracture will need to be excluded.

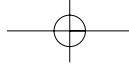
On examination, there will be a capsular pattern of more limitation of flexion than extension, with the flexion having an abnormal hard end-feel. The superior radio-ulnar joint may be involved, since it shares a common capsule with the elbow joint proper. The capsular pattern at the superior radio-ulnar joint is pain felt at the end of range of both rotations.

### Treatment by injection

Despite the complicated anatomical structure of the elbow joint, a bolus injection via the radiohumeral articulation is the easiest intra-articular route. The corticosteroid injection aims to reduce pain and inflammation, allowing recovery of the range of movement.

### Needle size

25 G  $\times$   $\frac{5}{8}$  in (0.5  $\times$  16 mm) orange needle for the lateral approach and 23 G  $\times$  1 in (0.6  $\times$  25 mm) or 23 G  $\times$   $1\frac{1}{4}$  in (0.6  $\times$  30 mm) blue needle for the posterior approach.



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### Dose

20 mg triamcinolone acetonide, 1 ml local anaesthetic, e.g. 2 ml Adcortyl<sup>®</sup>, 1 ml 1% lidocaine.

### Patient position

Seat the patient with the forearm supported in pronation with the elbow at approximately 45° of flexion.

### Palpation

Palpate the head of the radius and locate the radiohumeral joint line on the posterolateral aspect. Mark the mid-point of the joint line.

### Technique

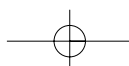
Insert the needle to lie between the head of the radius and the capitulum of the humerus (Fig. 6.1 and 6.2). Deliver the injection as a bolus.

#### Alternative technique

Position the patient with the elbow flexed to 70°. Locate the depression between the olecranon and lateral epicondyle on the posterolateral aspect of the elbow joint. Direct the needle forward and slightly downward and deliver the injection as a bolus.

### Patient advice

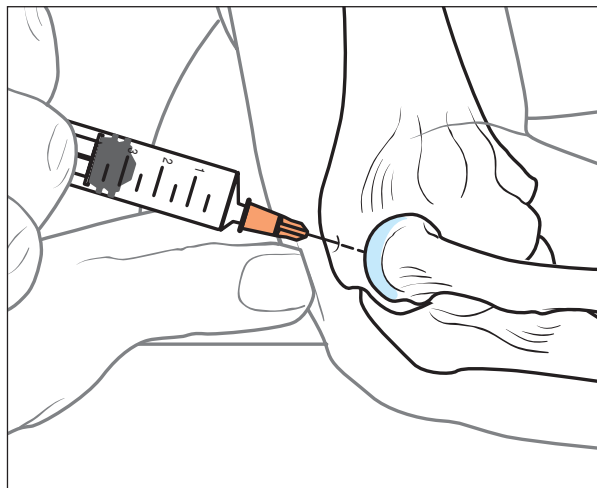
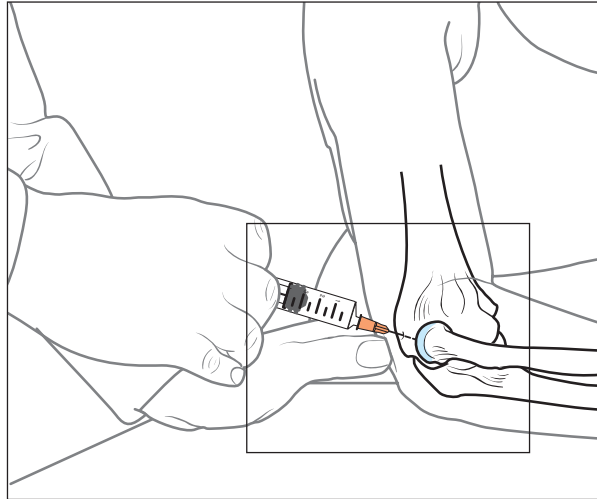
The patient should be advised to maintain a period of relative rest for approximately 2 weeks following the injection.



▶ FIGURE 6.1



▶ FIGURE 6.2



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### OLECRANON BURSITIS

#### Indication

Olecranon bursitis (student's elbow), is inflammation of the subcutaneous bursa, which is positioned between the upper end of the posterior aspect of the ulna and the skin. Bursitis may be idiopathic, related to trauma, repetitive injury, gout or arthritis, such as rheumatoid (Kumar & Clark 1994). Superficial bursitis such as this may have an infective origin, since it is vulnerable to unrecognized perforating injuries. Diagnosis of this is important before proceeding with the injection.

#### Patient presentation

Pain is felt over the posterior aspect of the elbow and swelling is both visible and palpable.

On examination there are usually no clinical findings and the condition is diagnosed by the obvious swelling over the olecranon.

#### Treatment by injection

Injection can be curative, but aspiration to check for the presence of infection is important before proceeding. Clear aspirate is normal; cloudy aspirate indicates possible infection, but bacteriological confirmation may be required.

#### Needle size

21 G × 1½ in (0.8 × 40 mm) green needle.

#### Dose

10 mg triamcinolone acetonide, 1 ml local anaesthetic, e.g. 1 ml Adcortyl®, 1 ml 1% lidocaine.

#### Patient position

Seat the patient with the elbow supported in a degree of flexion.

#### Palpation

Palpate the obvious swollen bursa and mark a convenient point for inserting the needle.

#### Technique

Insert the needle into the bursa (Fig. 6.3 and 6.4). Aspirate first to check for the presence of infection and if clear, the injection can be delivered as a bolus.

#### Patient advice

The patient should be advised to avoid further trauma to the bursa.

▶ FIGURE 6.3



▶ FIGURE 6.4

