# INJECTIONS MADE SIMPLE

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Basic rules: Hydrocortisone acetate (HCA) for soft tissue lesions

Triamcinolone (TCA) or methylprednisolone for joints

| Site | HCA | TCA | Local |
|---|---|---|---|
| Shoulder Joint | | 40 mg | 2 ml |
| ACJ | | 20 mg | 0.5 ml |
| BT | 25 - 50 mg | | 2 ml |
| SAJ/SS | 25 - 50 mg | | 2 - 4 ml |
| Elbow Joint | | 20 mg | 2 ml |
| Tennis Elbow | 50 mg | | 2 ml |
| Golfers Elbow | 50 mg | | 2 ml |
| De Quervains | 25 mg | | 1 ml |
| Thumb CMC | | 20 mg (or less) | 0.3 ml |
| Carpal tunnel | 25mg | | None (see text) |
| Knee | | 40 - 80 mg | 2 ml |
| Trochanteric Bursa | 50 - 75 mg | | 2 - 5 ml |
| GME | 50 - 75 mg | | 2 - 5 ml |
| PAE | 50 mg | | 2 ml |
| Plantar fascia | 50mg | | 2 ml |

If sticking needles into swollen joints with the aim of putting in some steroid then aspirate as much fluid as possible first. The results are better.

If differential diagnosis includes gout or infection
(very hot acute swelling, tender ++++ ...)

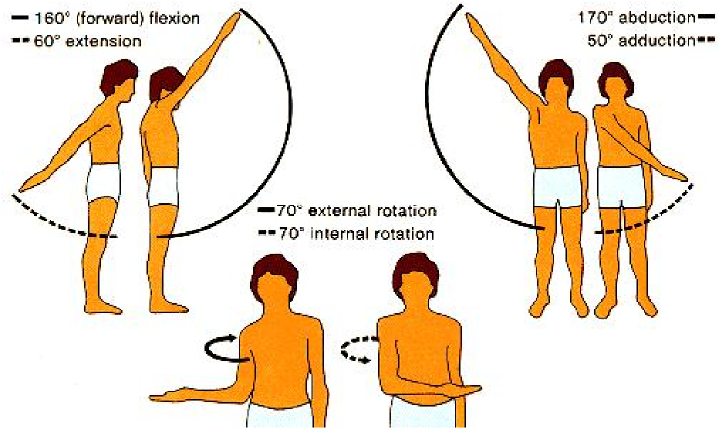
**ASPIRATE ONLY!** Then send for gram stain/crystals. Preferably take the specimen to the lab yourself to save time. Remember also that a plastic tube may shed birefringent bits, so use a glass tube for preference.

Use 1 or 2% lignocaine separately in large syringe if intending to aspirate (if you are slick its only value is to clear the needle once in the joint) or mix with steroid otherwise (when the larger volume increases your chances of infiltrating the right spot even if the needle tip is not spot on).

## THE SHOULDER

Problems arise from different bits as in the table below. They are distinguished as follows (roughly — not really as clear-cut as this!)

| | |
|---|---|
| Capsulitis | Limitation of **All** movements, active + passive. If external rotation is limited (compare with the other side) then this is what it is. |
| Acromioclavicular | Painful high abduction arc.<br>Clunk in return from abduction.<br>Tender over joint: crepitus on abd.<br>Pain if stressed (cross arms across chest and forcibly adduct) |
| SST/SAJ | Painful arc in abduction from 25-40º - 90º<br>Tender laterally over SAJ<br>Pain on IR (Stretching SST)<br>Painful arc may be abolished if arm supinated (abd. then with deltoid).<br>Pain on resisted external rotation (get pt to keep elbow tucked into side and push hand out against yours) |
| Biceps Tendon | Painful arc in F. Fl and abd.<br>Tender over tendon anteriorly (you can roll it under your fingers)<br>More easily felt with hand supinated (it comes out of bicipital groove and lies over humeral head) |
| OA | Like capsulitis, but grinds and grates. Common in older people. If in doubt (usually because capsular injection has failed) then XR. Suprascapular block may help (refer to Pain Clinic for this). |



## THE ELBOW

Avoid if possible sticking needles in olecranon bursae. They get infected. Most resolve if left alone, and if they are getting in the way then surgical removal is best.

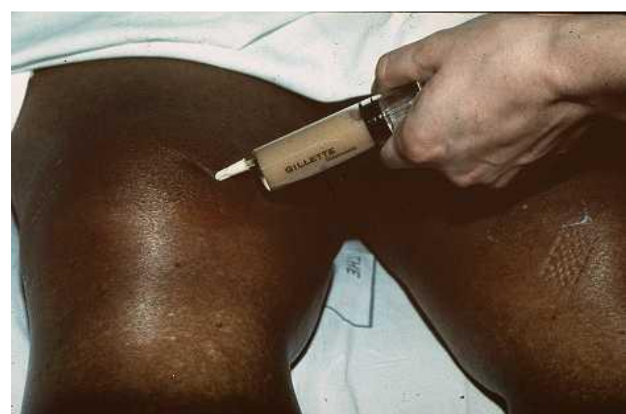
| | |
|---|---|
| Tennis Elbow | Tender over lat. epicondyle or just distally. **DESPITE MIMS AND BMJ I DO NOT RECOMMEND METHYLPRED. HYDROCORTISONE IS QUITE ENOUGH.** Potent steroids cause depigmentation and subcutaneous fat atrophy |
| Golfers Elbow | Tender over med. epicondyle.<br>Best exposed to needle by asking patient to put hand up behind back in half-nelson position. |

## THE HAND

| | |
|---|---|
| De Quervains | Tender over **EPL** or **APL**. When injecting put needle into tendon (angling along line of tendon, in a proximal direction) and they try to inject.<br>Resistance is felt. Slowly withdraw the needle until resistance suddenly "gives". You are then in the sheath. |
| Carpal Tunnel | Phalen's test (forcibly palmar flex wrist and see if paraesthesiae &/or numbness develop). Inject alongside palmaris longus (centre of wrist) and angle needle distally. Warn patient that if feels electric shock or sudden paraesthesiae to tell you (needle in nerve!) |
| Thumb CMC | Tenderness over the joint line. Distract joint by pulling thumb, inject at right angles to skin using blue needle. |

## THE KNEE

To inject the joint first find the mid point of the patella (by rocking the patella between index finger and thumb) and then insert the needle beneath it on the *medial* side (it's wider than the lateral side). There is nothing there except the joint. If there is a large suprapatellar collection this can be milked into the joint with the hand that is not holding the syringe.




The pes anserinus enthesis (common adductor insertion) is often strained and lots of middle aged ladies with knee pain and only minor OA changes on x-ray have this as the major cause of the pain. They are tender over the insertion on the medial border of the tibial head. Inject down to bone. Like all soft tissue injections it may hurt like hell if you are in the right place. An unstable knee may also produce a collateral ligament strain.

**Leave the housemaid's knee alone.** Attempted aspiration through the thick skin over the bursa may result in prolonged leakage and then infection.

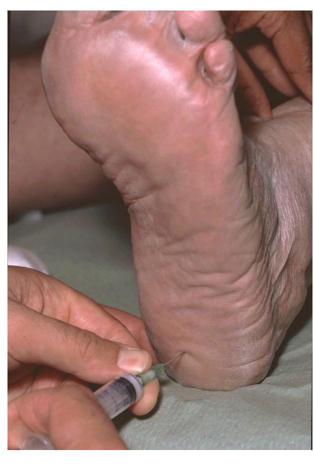
## THE HIP

Pain in the hip **joint** is felt in the **groin**. If the patient complains of pain in the tailors' or dressmakers' hip (on the outer aspect of the thigh) the problem arises from the trochanteric bursa or the insertion (enthesis) of gluteus medius (GME). The former produces tenderness over the bony prominence of the trochanter, the latter just above or behind it. Inject the most tender spot.

**PLANTAR FASCIITIS**

Heel pain. Tender at the front edge of the calcaneum, centrally or to the medial side. Inject at point of maximal tenderness.

Don't waste time doing heel X-rays. Spurs are simply calcified plantar ligament attachments and the presence of calcium represents old damage. About 30% of the population have plantar spurs and about 30% of patients with plantar fasciitis have spurs, so their presence or absence is irrelevant.



Good luck!

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A timetable of my injection clinics (Wednesday AM, roughly every 4-6 weeks) is available from my secretary Mrs Karen Brickenden, 020 8302 2678 ext 4347