Periarticular & Intra-articular Injection

DEPO MEDROL®
Injection Techniques

Depo Medrol®
methylprednisolone acetate injectable suspension

Pfizer

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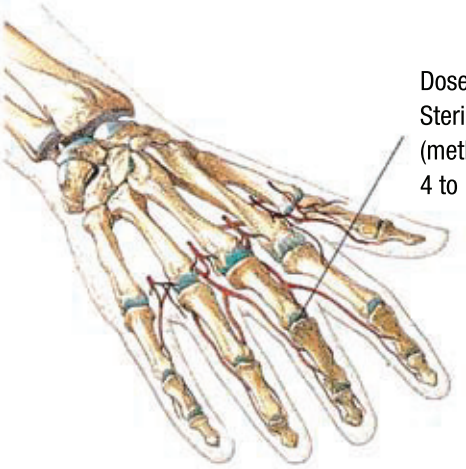
Finger, Toe & Wrist

FINGER AND TOE JOINTS

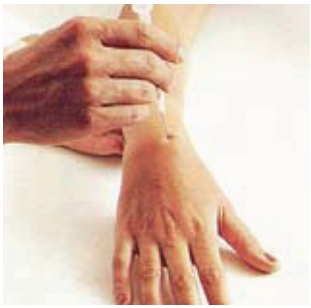
Any of the phalangeal or metacarpophalangeal joints may be injected from the lateral, medial or dorsal aspect. The object is to penetrate the joint capsule so that the medication may diffuse throughout the joint. The needle is slipped beneath the extensor tendon. A small needle, usually 20- to 24 gauge, is desirable for such injections to minimize trauma. Because the digital veins can frequently be seen through the skin, they provide a helpful landmark for the placement of the needle.

The carpometacarpal joint of the thumb presents a special problem. Care must be exercised to avoid the extensor pollicis tendon and the radial artery. The needle should enter toward the dorsal side of the extensor pollicis brevis tendon, to avoid contact with the radial artery.



Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 4 to 10 mg)

WRIST JOINTS



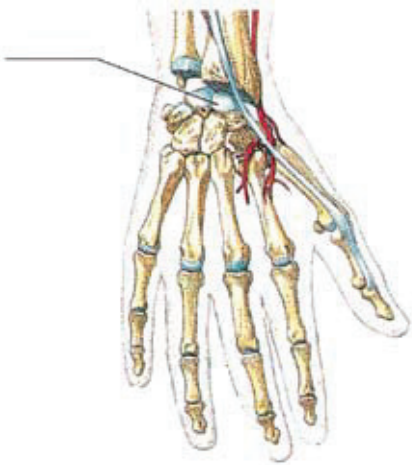
Many of the small intercarpal joints have interconnecting synovial spaces and one injection will often provide relief for the entire joint complex.

The dorsal approach is preferred because it offers a target area relatively free of critical structures; in particular, it avoids the radial artery and the ulnar nerve.

Landmarks of the bony prominences of the radius and the ulna and the tendons of the extensor policis muscles can be readily palpated by the physician.

A slight passive flexion (20° to 30°) of the wrist tends to open the joint spaces and makes it more accessible. The needle is held perpendicular to the skin and directed into the joint cavity lateral to the extensor pollicis longus tendon. If the needle can be inserted easily to the depth of 1 to 2 cm and feels free, it is correctly positioned. A 20- to 24-gauge needle with a dispossable syringe is recommended.

Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 10 to 40 mg)



Elbow

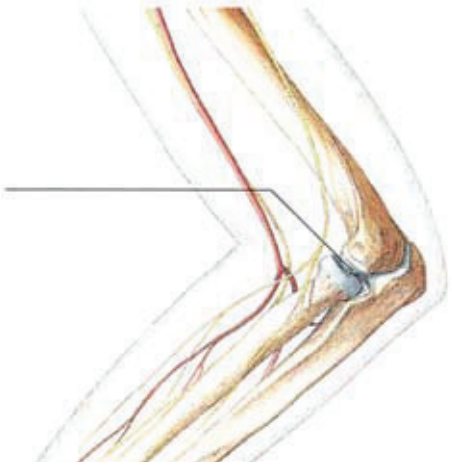
RADIOHUMERAL JOINT

Inflammatory processes in and about the elbow may develop at several sites: the elbow joint proper, the radiohumeral articulation, the tendinous insertion areas of the lateral and medial epicondyles of the humerus, and the olecranon bursa. Access to any of these regions is usually facilitated by placing the elbow at 45º flexion. This helps in the identification of bony landmarks and opens the approach to the elbow joint proper.

The radial nerve passes in the vicinity of the elbow joint capsule but by using the lateral epicondyle as a landmark and placing the needle at a right angle to the skin surface, the injection avoids this nerve.

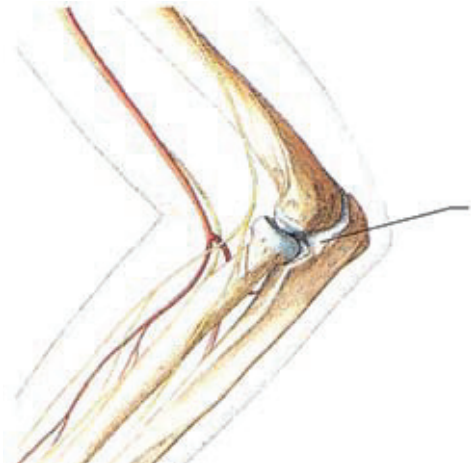
The radiohumeral articulation is reached by inserting the needle in a medial direction at the point just distal to the lateral epicondyle of the humerus and just proximal to the head of the radius. A 20- to 24- gauge needle with disposable syringe is recommended.

Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 10 to 40 mg)



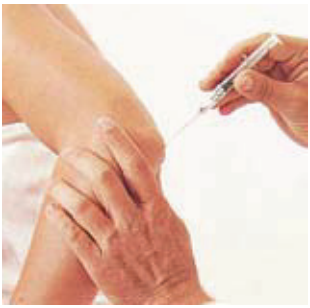
ELBOW JOINT

Injection into the elbow joint proper is made most readily and safely by directing the needle between the lateral epicondyle of the humerus and the olecranon process of the ulna and into the joint cavity. A 20- to 24- gauge needle with disposable syringe is recommended.

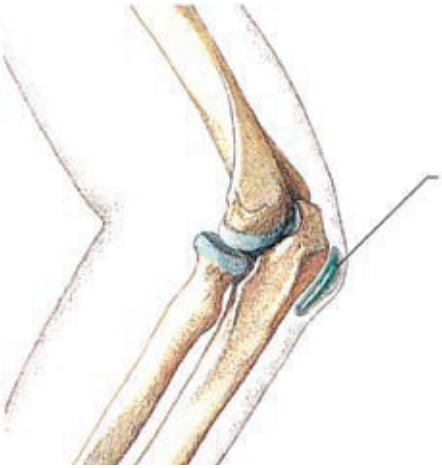


Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 10 to 40 mg)

OLECRANON BURSAL



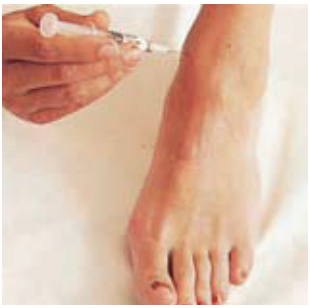
Injection of the olecranon bursa is frequently indicated in the treatment of olecranon bursitis. One technique is illustrated. A 20- to 24- gauge needle with a disposable syringe is recommended.



Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 10 to 40 mg)

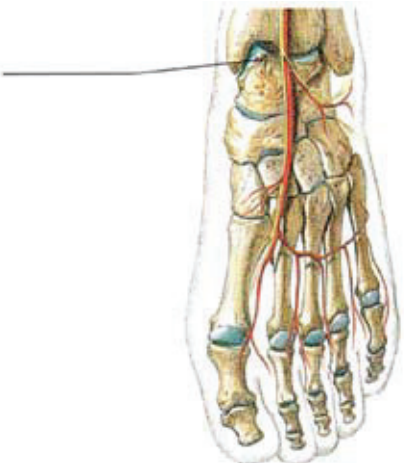
Ankle

ANKLE JOINT



An anteromedial approach is usually employed. The site of the injection is the hollow between the medial malleolous and the articulation of the tibia with the talus, with the needle aimed at the tibial astragalar articulation. The needle tip must penetrate about 3cm inward and slightly lateral through the ligaments of the joint capsule and then should be movable within the joint. A 20- to 24-gauge needle with a disposable syringe is recommended.

Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 20 to 80 mg)



Hip

ANTERIOR

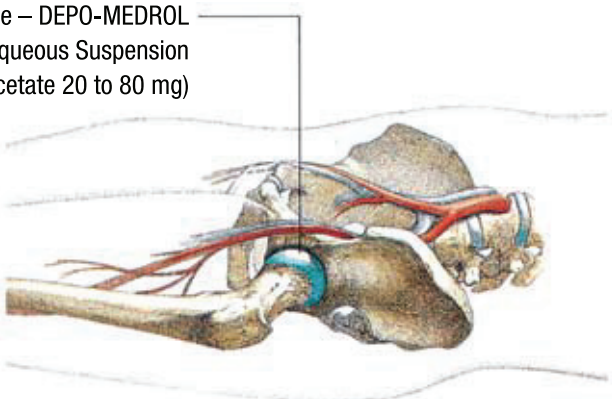
The hip is the most difficult joint to aspirate and inject. Great care must be exercised not to damage any of the blood vessels in the area. Often, when treating osteoarthritis of the hip, it is impossible to enter the joint space even with fluoroscopic guidance.

The patient is placed in a reclining position with the hip in maximal extension and internal rotation. Hip injections may be performed using the usual anterior approach or the more difficult lateral approach. A 2.5" 20-gauge needle is used for the anterior approach; a 3" needle is used for the lateral approach.

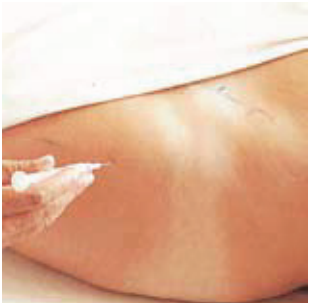
The injection site for the anterior approach is about 2 to 3 cm below the anterior superior spine of the ilum and 2 to 3 cm lateral to the femoral pulse. The needle is inserted at an angle of 60° with the skin, pointing posteromedially, through the capsular ligaments until bone is reached.

The tip of the needle is then withdrawn slightly. Fluid can be aspirated occasionally, but in any case, injection meets little resistance if the tip of the needle is in the joint space.

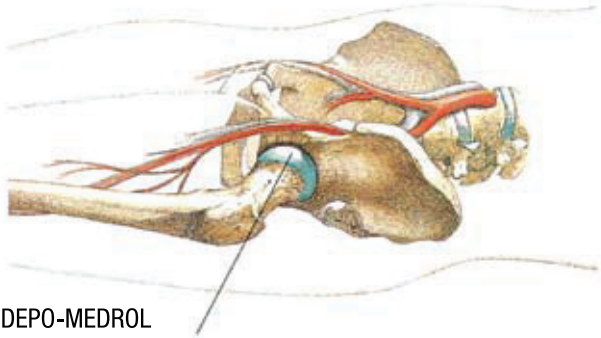
Dose – DEPO-MEDROL
Sterile Aqueous Suspension
(methylprednisolone acetate 20 to 80 mg)



LATERAL



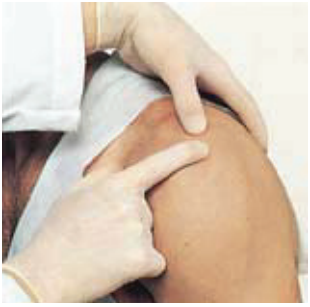
The lateral approach to the hip joint has the advantage in that the needle follows the bone to the hip joint. The needle is inserted just anterior to the greater trochanter, in a sagittal direction, pointed toward the middle of Poupart's ligament. The needle tip slides in anterior to the femur and enters the joint space anteriorly and near the upper reflection of the synovial sac.



Dose – DEPO-MEDROL
Sterile Aqueous Suspension
(methylprednisolone acetate 20 to 80 mg)

Shoulder

INTRABURSAL



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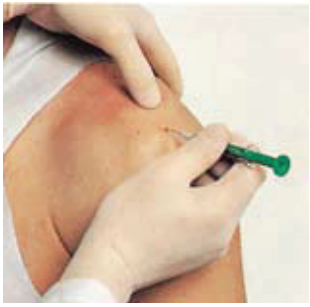


B

This periarticular procedure is indicated for management of bursitis, nonspecific synovitis and hand-shoulder and frozen-shoulder syndromes.

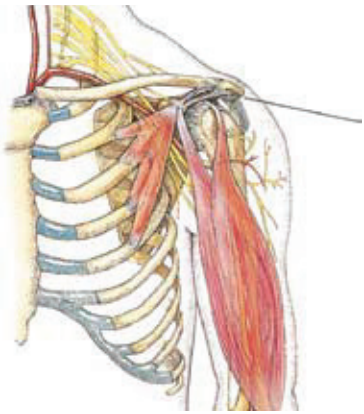
To locate the site for injection palpate the affected shoulder on the superior surface for the edge of the acromion **(A)**.

Palpate distally until you encounter the space between the acromion and the rotator cuff, which is known as the subdeltoid bursa.

Holding a sterile 20- to 24- gauge needle with a syringe containing lidocaine at a right angle to the joint surface, penetrate the deltoid muscle to the subdeltoid bursal area and inject the anesthetic. (The needle should penetrate without resistance and should give the impression of floating freely, because it is entering space rather than tissue.)'

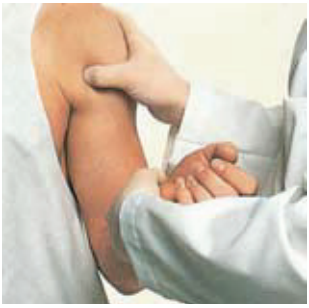
Replace the first syringe with a second containing the desired dose of DEPO-MEDROL Sterile Aqueous Suspension (usually between 10 and 40 mg, depending on the patient's condition) **(B)** After injecting DEPO-MEDROL, withdraw the needle and gently move the joint a few times.

Finally, apply a small sterile dressing to the injection site.



Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 10 to 40 mg)

BICIPITAL



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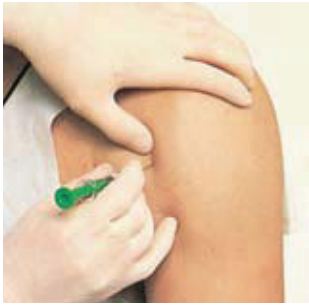


B

This periarticular technique is appropriate for management of bicipital tendinitis.

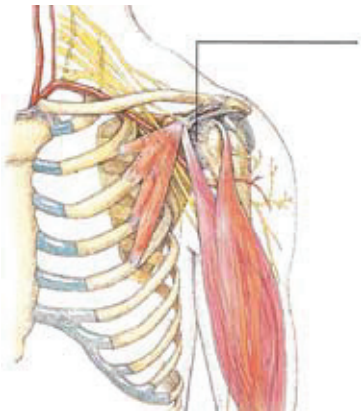
To locate the proper injection site, first place the fingers firmly on the humeral head.

Assist the patient in rotating the arm externally. Then rotate the shoulder, first inward then outward, until the bicipital groove is palpable and the tender area is identifiable through palpation **(A)**

Insert a sterile 20- to 24- gauge needle directly into the most tender area, and inject the recommended dose of lidocaine in the groove surrounding the tendon.

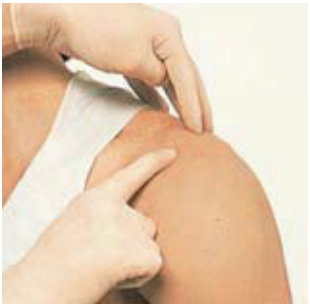
Care should be taken to inject into the tendon sheath rather than into the tendon itself.

Confirm the onset of pain relief, and replace the syringe with one containing the desired dose of DEPO-MEDROL **(B)**. Inject the corticosteroid suspension peritendinally, infiltrating the tendon area in and about the groove. The objective is to bathe the tendon but not to penetrate it. Withdraw the needle and apply a sterile dressing to the injection site.



Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 4 to 30 mg)

ACROMIOCLAVICULAR



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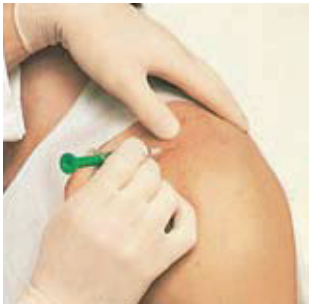


B

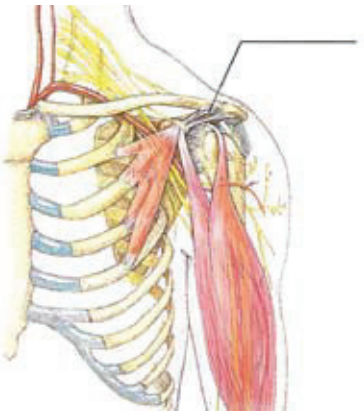
This periarticular procedure is appropriate for treatment of osteoarthritis of the acromioclavicular joint or for inflammatory arthritis of the shoulder.

The injection site is located by first tracing the contour of the clavicle distally with the finger-tips until a prominence is felt at the distal end of the clavicle. This discloses the site of the acromioclavicular joint **(A)**

Insert a 20- to 24- gauge needle anteriorly so that the needle tip is slightly inferior to the joint.

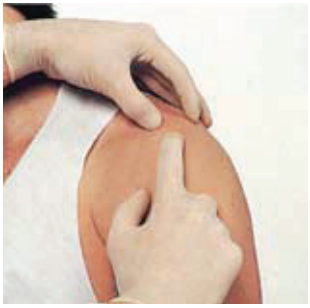
Infiltrate about the joint with the recommended amount of lidocaine solution and confirm the onset of analgesic effect.

Replace the syringe with one containing a dose of 20 to 80 mg of DEPO-MEDROL Sterile Aqueous Suspension, according to the patient's requirements **(B)**. Inject DEPO-MEDROL, withdraw the needle, and apply a sterile dressing to the injection site.

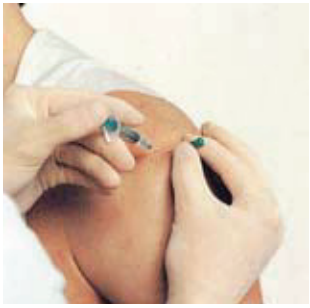


Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 4 to 10 mg)

TENDINITIS



A

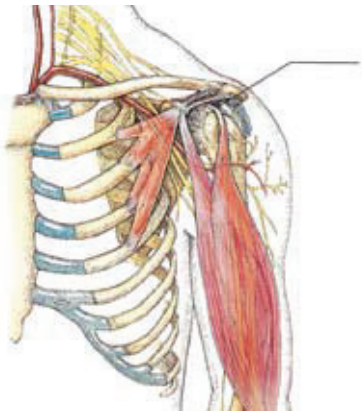


B

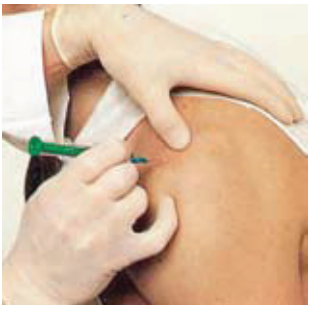
This periarticular procedure is for management of acute exacerbations of calcific tendinitis associated with painful arc-syndrome, characterized by calcific deposits in the rotator cuff tendon.

Corticosteroid injection must be used with meticulous care in disorders involving the tendon; the objective is to infiltrate the calcific deposit and the peritendinal bursa and tissue with DEPO-MEDROL. Sterile Aqueous Suspension (methylprednisolone acetate).

The site for injection is located by first palpating the superior surface of the shoulder to locate the edge of the acromion. Palpate distally to locate the space between the acromion and the rotator cuff **(A)**. Determine the area of maximum tenderness; then with a sterile 18 gauge needle and a syringe containing lidocaine, attempt to aspirate the calcium deposit. A gritty texture is often felt as the needle penetrates calcium.



Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 4 to 30 mg)

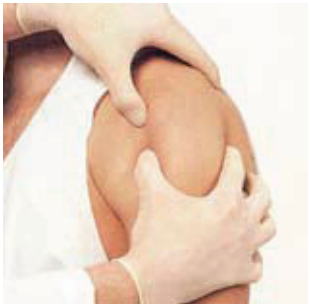


C

Once analgesia is established, multiple needling may be performed to dislodge calcium particles into a bursa. A large deposit may be washed with 5 ml of either lidocaine or sterile saline solution with lidocaine to flush the fragments out of the bursal space. In this case, a second 18- gauge needle with dry sterile syringe should be positioned close to the first so that, as pressure builds up, the washed saline may exudate through the second needle **(B)**.

Following this procedure, remove the second needle; to the first needle, attach a syringe containing the recommended dose of DEPO-MEDROL **(C)**. Inject the corticosteroid suspension, withdraw the needle, and apply a sterile dressing.

INTRA-ARTICULAR



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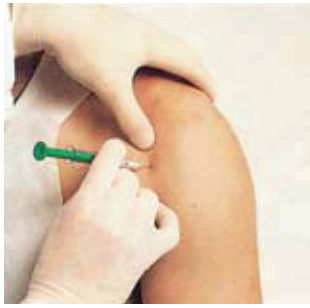


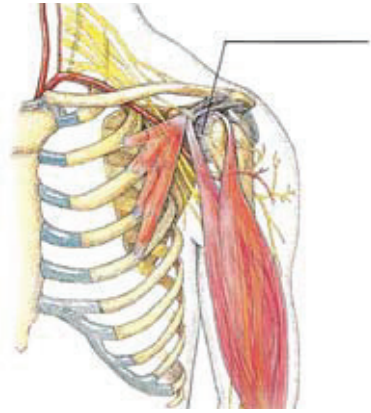
B

This technique is used primarily for uncontrolled rheumatoid arthritis. Injection into the articular space must be performed with caution because of the potential to cause damage to soft tissues and create adverse changes in the bony structures of the joint.

The appropriate injection site is found by first tracing the contour of the clavicle distally until the prominence at the distal end denotes the acromioclavicular joint **(A)**.

The needle is inserted just medially to the head of the humerus and below the tip of the coracoid process. The needle should be angled to avoid the arterial branches surrounding the joint capsule. The needle should find unobstructed passage through the capsule and directly enter the joint cavity.

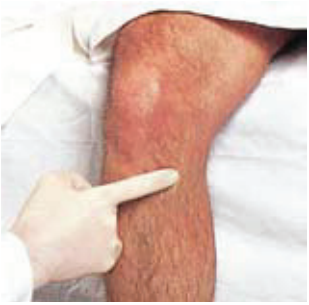
Using a 20- 24- gauge needle, first inject the recommended amount of lidocaine; then with the needle in place, attach a second syringe and inject a 20- to 80- mg dose of DEPO-MEDROL Sterile Aqueous Suspension **(B)**.



Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 20 to 80 mg)

Knee

ANSERINE BURSAL



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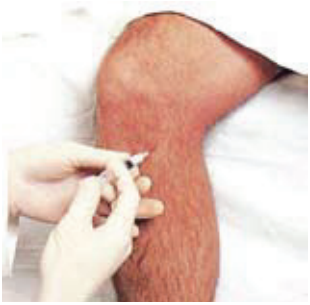


B

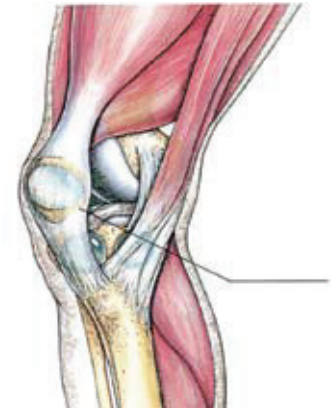
This injection is appropriate for the management of chronic bursitis and soft-tissue inflammation.

The patient should be seated on the examination table. To locate the injection site, palpate below the patella for the tibial crest. Inferior and medial to the tibial crest, note the tendinous attachment of the three muscles of the thigh; the sartorius, gracilis, and semitendinosus. The anserine bursa lies between the pes anserine tendon and the medial collateral ligament at its attachment to the tibia. (A)

Direct a 20- 24- gauge needle parallel to the insertion of the muscle group at its attachment below the tibial crest. The needle should be inserted under the muscle at the point of maximal tenderness and swelling. Care should be taken not to penetrate the tibia.

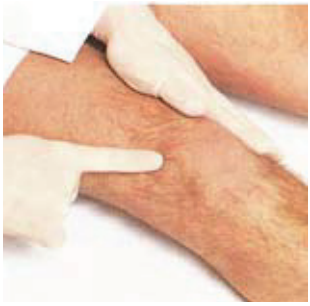
No aspiration is desired with this injection. Once the needle has been properly situated, inject the desired does of DEPO-MEDROL Sterile Aqueous Suspension (B)

Withdraw the needle, and apply a sterile dressing to the injection site.

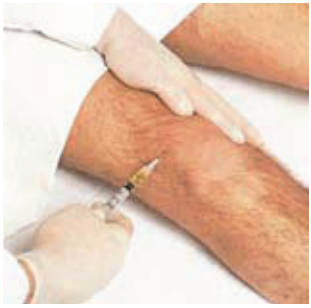


Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 4 to 30 mg)

PREPATELLAR BURSAL



A



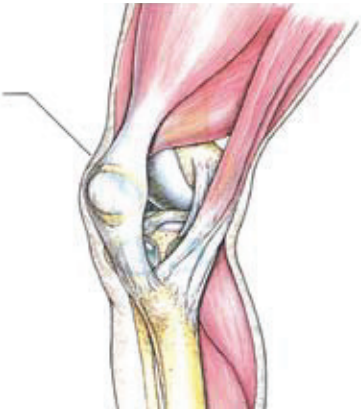
B

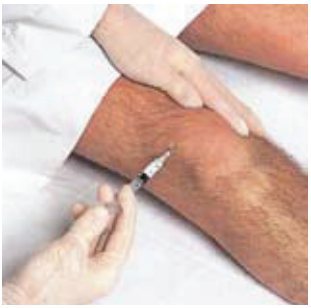
This technique is appropriate for the management of chronic bursitis and inflammation (housemaid's knee).

With the patient's leg extended on the examination table, locate the prepatellar bursa between the skin and the patella, superior to the patella **(A)**.

Direct an 20- 24- gauge needle toward the center of swelling from the lateral aspect of the bursa, and insert the needle about the patella. It is advisable to aspirate any fluid from the prepatellar bursa before injecting the steroid preparation **(B)**.

Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 40 to 80 mg)



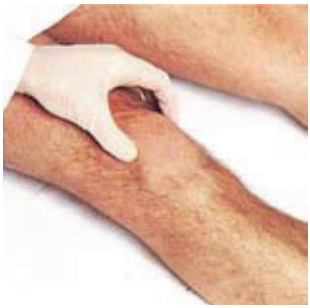


C

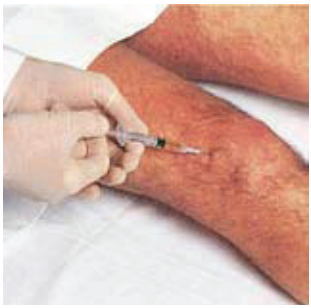
Leaving the needle in place, replace the syringe with another containing the desired dose of DEPO-MEDROL Sterile Aqueous Suspension, and slowly inject the corticosteroid **(C)**.

Withdraw the needle carefully, and apply a sterile dressing to the injection site.

INTRA-ARTICULAR



A



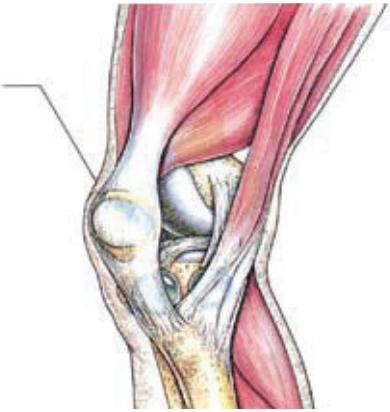
B

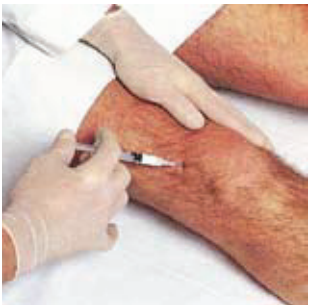
This procedure is indicated for chronic inflammation, recurrent effusions, synovitis, and polyarthritis.

The patient's knee should be extended on the examination table. To locate the site of injection, palpate the superior lateral aspect of the patella, and measure one finger-breadth lateral to this point. This location will provide the most direct access to the synovium **(A)**.

Direct an 18- or 19- gauge needle at an angle 45° distal and 45° into the knee, tilted just below the patella. The needle should be inserted under the patella and into the synovium, and all fluid should be aspirated. The appearance of blood in the aspirate may indicate improper positioning of the needle **(B)**,

Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 40 to 80 mg)



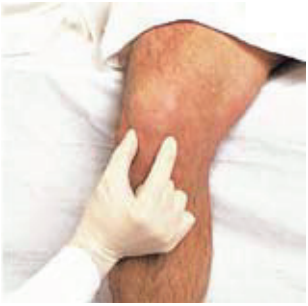


C

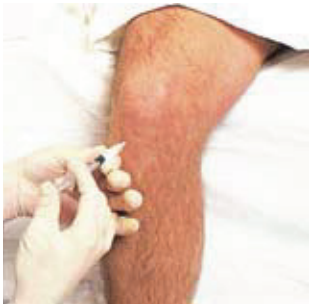
While keeping the needle in place, replace the syringe with one containing the desired dose of DEPO-MEDROL Sterile Aqueous Suspension (usually between 40 and 80 mg, depending on the patient's condition) and inject the steroid preparation **(C)**,

Once the DEPO-MEDROL has been injected, gently withdraw the needle and move the joint a few times. Then apply a small sterile dressing to the injection site.

PATELLAR TENDINITIS



A



B

This periarticular injection can be used in the management of tendinitis of the patellar tendon, provided the injection is restricted to the soft tissues about the tendon and not directed into the tendon itself.

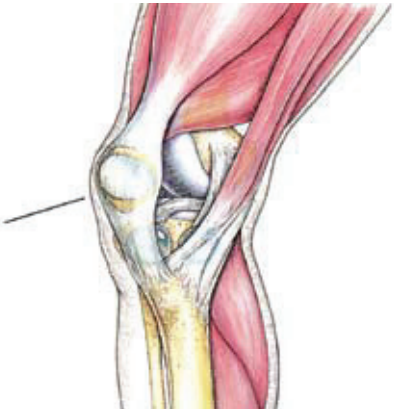
The patient should be seated on the examination table. To locate the correct site, palpate the patellar tendon inferior to the patella, and examine the area for the point of maximal tenderness. This will usually lie directly over the tendon (A).

The needle should be positioned immediately over the tender point. Insert a small-gauge needle (20- 24- gauge) at this site, taking care not to penetrate the tendon or bone.

Inject the desired dose of DEPO-MEDROL Sterile Aqueous Suspension. If the needle has been properly placed in the soft tissues and not in the tendon itself, no resistance should be encountered when the corticosteroid preparation is injected (B).

Withdraw the needle, and apply a sterile dressing to the injection site.

Dose – DEPO-MEDROL Sterile Aqueous Suspension (methylprednisolone acetate 4 to 30 mg)



References:
Waldman SD. *Atlas of Pain Management Injection Techniques*. Philadelphia, Pennsylvania; W.B Saunders Company 2000

Saunders S. *Injection Techniques in Orthopaedic and Sports Medicine*. London; W.B Saunders Company 2002

Depo-Medrol+Lidocaine: For information please see approved PI.
Indication: Depo Medrol is indicated for the treatment of conditions responsive to steroid injection therapy.
Contra Indications: Depo Medrol is contraindicated for intrathecal administration; for intravenous administration; Systemic fungal infections; Known hypersensitivity to components. Administration of live or live, attenuated vaccines is contraindicated in patients receiving immunosuppressive doses of corticosteroids.
Adverse reactions: Systemic adverse reactions may be observed: Infection, Opportunistic infection, Injection site infection, Peritonitis, Drug hypersensitivity, Anaphylactic reaction, Cushingoid, Hypopituitarism, Glucose tolerance impaired, Alkalosis hypokalaemic, Dyslipidaemia, Increased requirements for insulin (or oral hypoglycemic agents in diabetics), Sodium retention, Fluid retention, Increased appetite (which may result in Weight increased), Lipomatosis, Affective disorder (including Affect lability, Depressed mood, Euphoric mood, psychological dependence, Suicidal ideation), Psychotic disorder (including Mania, Delusion, Hallucination, Schizophrenia [aggravation of]), Confusional state, Mental disorder, Anxiety, Personality change, Mood swings, Abnormal behaviour, Insomnia, Intracranial pressure increased (with Papilloedema [Benign intracranial hypertension]), Convulsion, Amnesia, Cognitive disorder, Dizziness, Headache, Exophthalmos, Cataract, Glaucoma, rare instances of blindness associated with intralesional therapy around the face and head, Glucocorticoids should be used cautiously in patients with ocular herpes simplex for fear of cornea perforation, Vertigo, Cardiac failure congestive (in susceptible patients), Hypertension, Hypotension, Hiccups.Gastric haemorrhage, Intestinal perforation, Peptic ulcer (with possible Peptic ulcer perforation and Peptic ulcer haemorrhage), Pancreatitis, Oesophagitis ulcerative, Oesophagitis, Abdominal pain, Abdominal distension, Diarrhoea, Dypepsia, Nausea, Angioedema, Ecchymosis, Petechiae, Skin atrophy, Skin striae. Skin hyperpigmentation, Skin hypopigmentation, Hirsutism, Rash, Erythema, Pruritus, Urticaria, Acne, Hyperhidrosis, Osteonecrosis, Pathological fracture, Growth retardation (in children), Muscle atrophy, Myopathy, Osteoporosis, Neuropathic arthropathy, Arthralgia, Myalgia, Muscular weakness, Menstruation irregular, Impaired healing, Oedema peripheral, Injection site reaction, Abscess sterile, Fatigue, Malaise, Irritability, Alanine aminotransferase increased, Aspartate aminotransferase increased, Blood alkaline phosphatase increased, Intraocular pressure increased, Carbohydrate tolerance decreased, Blood potassium decreased, Urine calcium increased, suppression of reactions to skin tests, Blood urea increased, Nitrogen balance negative (due to protein catabolism), Tendon rupture (particularly of the Achilles tendon), Spinal compression fracture. In situ administration can cause dermal and subdermal atrophy.

Special warnings and precautions for use: Children, diabetics, hypertensive patients and patients with psychiatric antecedents, certain infectious diseases such as tuberculosis or certain viral diseases such as herpes and zona associated with ocular symptoms should be under strict medical surveillance and should be treated during an as short as possible period.
A risk/benefit decision must be made in each individual case as to dose and duration of treatment and as to whether daily or intermittent therapy should be used. Routine laboratory studies should be made at regular intervals during prolonged therapy. Upper GI X-rays are desirable in patients with an ulcer history or significant dyspepsia. Medical surveillance is recommended in case of discontinuation of a chronic treatment. In patients on corticosteroid therapy subjected to unusual stress, increased dosage of rapidly acting glucocorticoids before, during and after the stressful situation is indicated. Glucocorticoids may mask some signs of infection, and new infections may appear during their use. There may be decreased resistance and inability to localize infection when glucocorticoids are used. The use of DEPO-MEDROL® in active tuberculosis should be restricted. Glucocorticoids should be used with caution in non specific ulcerative colitis. Caution must also be used in diverticulitis, fresh intestinal anastomoses, active or latent peptic ulcer, renal insufficiency, hypertension, osteoporosis and myasthenia gravis, when steroids are used as direct or adjunctive therapy.
For information please see prescribing information as approved by MOH in November 2012

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