

### KNEE INJECTION – PROCEDURE CHECKLIST

<b>Confirm Indication</b>	<ol style="list-style-type: none"> <li>1. Knee osteoarthritis with insufficient response to PT and NSAIDs</li> <li>2. Aseptic inflammatory arthritis</li> </ol> <p>** For viscosupplements: only indicated for OA and only after failed response to CSI</p>
<b>Consider Contraindications</b>	<ol style="list-style-type: none"> <li>1. Hardware in the joint</li> <li>2. Infection in overlying skin, joint or peri-articular structures</li> <li>3. Potential knee surgery in &lt;3 months</li> <li>4. Prior inadequate response (&lt;1mo benefit) to CSI</li> </ol>
<b>Obtain Consent</b>	<p>Explain in simple terms &amp; confirm patient’s understanding:</p> <ol style="list-style-type: none"> <li>1. Procedural process</li> <li>2. Risks &amp; techniques to mitigate them</li> <li>3. Potential benefits</li> <li>4. Risks of not performing &amp; alternatives.</li> </ol>
<b>Organize Supplies</b>	See reverse side for details
<b>Draw-up solutions</b>	<ol style="list-style-type: none"> <li>1. Clean each vial alcohol swab (if sterile cap was previously removed)</li> <li>2. Using the larger needle aspirate ~2cc of lidocaine, then 1cc of triamcinolone or methylprednisolone</li> </ol>
<b>Positioning</b>	<p><u>Superior-lateral approach</u></p> <ul style="list-style-type: none"> <li>• Supine with knee fully extended or slightly hyper-extended</li> <li>• Quadricep relaxed, patella mobile</li> </ul> <p><u>Anterior (medial or lateral) approach</u></p> <ul style="list-style-type: none"> <li>• Sitting upright with foreleg dangling from chair/bed with knee ~90 degrees</li> </ul>
<b>Identify Entry Site</b>	<p><u>Superior-lateral approach</u></p> <ul style="list-style-type: none"> <li>• Draw straight lines along the superior and lateral margins of the patella and mark the point where the lines bisect as the insertion point.</li> </ul> <p><u>Anterior (medial or lateral) approach</u></p> <ul style="list-style-type: none"> <li>• Identify and mark the inferior-medial/lateral border of the patella and patella tendon, then superior margin of tibial plateau.</li> <li>• Identify insertion point ~1cm superior to tibial plateau and ~1cm medial/lateral to patella tendon.</li> </ul>
<b>Timeout</b>	Confirm name, DOB, procedure, location, allergies
<b>Sterile Prep</b>	<ol style="list-style-type: none"> <li>1. Apply chlorhexidine using scrub/friction &gt;30sec or providone-iodine and allow to dry.</li> <li>2. Maintain sterile site with ‘no-touch’ technique</li> </ol>
<b>Local anesthetic</b>	Apply ethyl chloride spray for 5-10 seconds or until skin turns white. (optional)
<b>Needle Insertion</b>	<ol style="list-style-type: none"> <li>1. Insert quickly through the skin at the marked insertion point to a depth of 2-4cm <ul style="list-style-type: none"> <li><u>Superior-lateral direction</u> <ul style="list-style-type: none"> <li>• Advance needle under the patella, parallel to the floor, perpendicular to femur.</li> </ul> </li> <li><u>Anterior (medial or lateral) direction</u> <ul style="list-style-type: none"> <li>• Advance needle parallel to the floor and directed towards the center of the joint, ~45deg medial/lateral.</li> </ul> </li> </ul> </li> <li>2. Attempt aspiration prior to injection of needle.</li> </ol>
<b>Extraction</b>	Obtain hemostasis and apply band-aid



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<b>Supplies</b>	
Marker	21-25g 1.5" needle (for injecting)
Alcohol swab	Chlorhexidine (or providone-iodine swab)
Lidocaine 1% (5cc)	2x2 gauze
Triamcinolone or Methylprednisilone 40mg/ml (1cc)	Band-aid
5-10cc syringe	Ethyl chloride spray (optional)
18-21g needle (for drawing up)	

**References**

McNabb, J. W. (2014). A Practical Guide to Joint & Soft Tissue Injections. United States: Wolters Kluwer Health.

AAOS. (2018). Essentials of Musculoskeletal Care. United States: Jones & Bartlett Learning, LLC.