Knee Aspiration & Injection Trainer with Ultrasound Capabilities

An anatomically accurate adult knee model for injection and aspiration of synovial fluid from the knee joint, from both the lateral and medial aspects, using ultrasound-guidance or palpation.
The robust sealed knee includes knee joint, patella, patellar tendon, and the suprapatellar space.

Key anatomical landmarks are clearly visible and easy to detect under ultrasound, enabling injection and aspiration aim to be practiced, and accuracy improved. Discrete muscle, skin and fat layers, provide realistic tissue and needle response.

### Skills

- Injection into joint cavity
- Aspiration of synovial fluid from both the lateral and medial aspects
- Competence using ultrasound technology to perform systematic scanning techniques and examination of the knee joint
- Identification of anatomical landmarks using ultrasound guidance or the palpation method
- Patient positioning and management
- Recognition of joint effusion
- Ballottement

### Internal Anatomy of Knee Model

- Skin
- Subcutaneous fat, quadriceps tendon & patellar ligament
- Prefemoral fat pad
- Suprapatellar fat pad
- Hoffa (Infrapatellar) fat pad
- Femur
- Medial & lateral collateral ligament
- Tibia
- Patella
- Joint space & synovial recess
- Meniscus
- Muscle mass of quadriceps

The following key anatomical landmarks are clearly visible under ultrasound:
Performing knee aspirations and injections are fundamental skills required for Undergraduate Medical Education, Physical Medicine and Rehabilitation, and Rheumatology

<table>
<thead>
<tr>
<th>Undergraduate Medical Education</th>
<th>“Knee Examination (including Manoeuvres); Musculoskeletal Joint Aspiration Technique; Joint Fluid Examination”</th>
<th>Association of American Medical Colleges: Recommendations for Clinical Skills Curricula for Undergraduate Medical Education, Appendix B; Clinical Testing and Procedural Skills, p. 23</th>
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<tbody>
<tr>
<td>Rheumatology</td>
<td>“Recognize the indications for and demonstrate competence in arthrocentesis, joint and soft tissue injections. Demonstrate competency in obtaining synovial fluid from diarthrodial joints, bursae, and tenosynovial structures”</td>
<td>Core Curriculum Outline for Rheumatology Fellowship Programs, June, 2015; p. 16</td>
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<tr>
<td>Physical Medicine and Rehabilitation</td>
<td>“Ultrasound guidance for needle placement; Peripheral joint/intra-articular injection (use for small, medium OR major joints, including hip); acute and chronic musculoskeletal syndromes, including sports related injuries, occupational injuries, rheumatologic disorders, and use of musculoskeletal ultrasound”</td>
<td>Accreditation Council for Graduate Medical Education Program Requirements, p. 18</td>
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</table>

### Product Qualities

- Discrete muscle and skin layers provide realistic tissue and needle response
- Anatomically accurate synovial sac and palpable patella
- Realistic color and consistency of synovial fluid
- 1000+ stabs per module with 21 gauge needle
- Precise, palpable anatomy with bony landmarks
- Robust, sealed knee unit that holds all anatomy
- Key internal landmarks visible under ultrasound
- Compatible with all standard ultrasound machines
- Echolucent material allows aspiration and injection under ultrasound-guidance or using the palpation method
- Suitable for undergraduate and postgraduate medical study
- Knee skin is watertight
- Can be used with leg supports for supine position, or without leg supports for side of bed position
- Allows for ultrasound-guided technique as well as palpation
- Separate Fluid Bag & Stand ensure the model is easy to use and mobile
- Clear indicator on Fluid Bag to prevent overfilling
- Latex free
- Skin washable using mild soap and water

- **70104** 1 Ultrasound Knee Module for Aspiration & Injection
- **70106** 1 Fluid Bag and Stand
- **70107** 1 Synovial Fluid (including Syringe)
- **70108** 1 Needle Set – 3 Green (21 gauge) Needles, 1 Syringe, 1 Sharps Bin
- **BKS1846195004** Joint and Soft Tissue Injection (5th edition)
  1 Leg Unit, including Removable Supports
  1 Carry Case for Knee
Other products in our Joint Injection Range

For practicing soft tissue joint injection used for the treatment of injuries and arthritis.

Developed in collaboration with Dr Trevor Silver, whose book on Joint and Soft Tissue Injection (5th edition) is included.

**Skills**
- Injection techniques
- Patient posture and management
- Palpation techniques
- Identifying anatomical landmarks

**Product Qualities**

| Easy-to-use Feedback Console: LEDs light up when correct injection sites have been acquired | 30010 | 30080 | 30031 | 30100 |
| Supplied with ‘No Trace’ marker for illustrating underlying anatomical landmarks | • | • | • | - |
| Contains latex | • | • | • | - |

**NB:** Not suitable for ultrasound training

**Shoulder for Joint Injection**

**Elbow for Joint Injection**

**Hand & Wrist for Joint Injection**

**Foot & Ankle for Joint Injection**

**For demonstration or to order**

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