

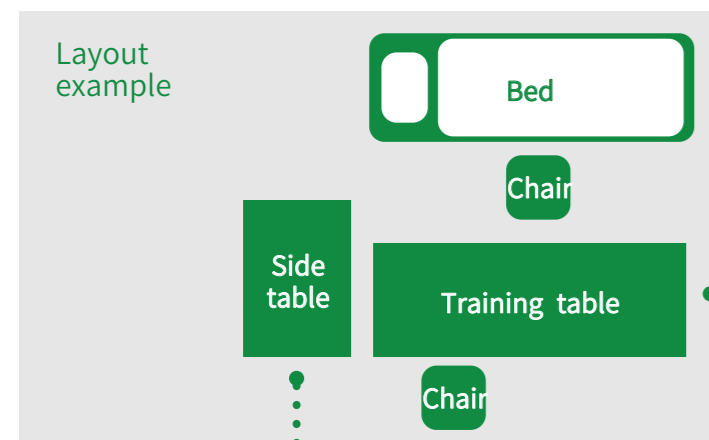


Use your simulator effectively!

Lumbar Puncture Simulator II

Case:  Osaka City University, Faculty of Medicine
Skills Simulation Center
WEB ▶▶ <http://www.med.osaka-cu.ac.jp/ssc/>

STEP 1 ITEMS TO PREPARE



※ In case of using a standardized patient along the simulator to practice the selection of the puncture site on the body, prepare a bed as shown in the above layout example.

On the training table

- M43B Lumbar Puncture Simulator II
- Spinal needle with a three-way stopcock
- Manometer
- Red circle seal (for marking)
- Tray (for hygienic items)
- Cup (for CSF collection)
- Forceps or tweezers (for sterilization)
- Drape
- Cotton ball for sterilization

On the side table

- Spare supplies (Spinal needles, cup, etc.)
- Sterilized gloves
- Cap
- Water 1.5L (simulated CSF)
- 50ml syringe (for cleanup) *Included Simulator set
- Garbage bags

Good to know TRAINING TRICKS

Let's make change the trainees' attitude from "I will wait until someone else teaches me" to "I will learn by myself".

POINT Don't teach to the trainees too soon.

Don't give immediate assistance to the trainees when they are struggling. Wait to allow them to forge their capability to solve problems by themselves.

Even if they fail at any task, letting them thinking back on their failure and its reason will make them learn about it.

In the actual clinical working place, advice may not always be given at once. In those moments, the capability of thinking and solving problems by themselves will be important for their grown as professionals.

POINT Practice in pairs

It's recommended to make the training session in pairs. One person performs the procedure, while the other one supports the simulator.

This way, the person holding the simulator can watch their partner and imagine how himself/herself will do next. Also they can notice rooms for improvement and earn a better learning experience.

On the other hand, the operating trainee will feel the mental strain of being watched by someone else, and both trainees will go through the training session with a higher sense of alertness.

POINT Self-revision using the simulator

With Lumbar Puncture Simulator II, it's possible to see the place on the spinal cord where the puncture was applied by taking off the skin on the lumbar area.

Also, since the lumbar spine model that shows from the 2nd to the 5th lumbar vertebrae is included, it is possible to learn the opening and shutting movement of the vertebrae according to the body's position.

STEP 2 CARRYING OUT THE TRAINING

The below example is for one hour of training session.

The training would be more effective if the trainees receive an explanation some days beforehand.

Preparatory Meeting	Share the training contents and flow among instructors to advance the training session more smoothly.
Orientation	<div style="float: right; border: 1px solid black; padding: 2px;">15 min.</div> <ul style="list-style-type: none"> ● The previous studies and experience of the trainees about lumbar puncture are reviewed. ● The trainees receive an explanation about the training's flow.
Demonstration of the procedure	<div style="float: right; border: 1px solid black; padding: 2px;">15 min.</div> <div style="margin-bottom: 10px;"> <p>① Selection of The Puncture Site SP or Simulator</p> <ul style="list-style-type: none"> ● The demonstrator palpates the ilium and find the Jacoby's line. Then marks L4/5 lumbar intervertebral space. <p><small>* Using a SP for this step allows a closer-to-life demonstration. The SP lies on his/her side and holds the knees to round the back.</small></p> </div> <div> <p>② Puncture, Collecting Cerebrospinal Fluid Simulator</p> <ul style="list-style-type: none"> ● Affix the red seal to the puncture's site on the body. ● After advising the patient that the cotton ball is cold, sterilize the puncture area. ● Wear the sterilized gloves and place the drape on the simulator. <p><small>(In case that the training time is limited, adjust the time by omitting wearing the gown, etc.)</small></p> </div> <div style="margin-top: 10px;"> <p>POINT Let's explain how to use the utensils.</p> <p><small>The training session would advance more smoothly if the trainees learn beforehand an explanation about how to use the spinal needle with three-way stopcock when measuring initial CSF pressure and collecting cerebrospinal fluid.</small></p> </div> <div style="margin-top: 10px;"> <ul style="list-style-type: none"> ● Carry out the puncture. Demonstrate how to advise the patient when they are going to apply the puncture, and ask the patients to indicate if the pain expands to the leg. ● Advance the needle 3 to 5cm and verify that CSF outflows. Then measure the initial pressure and collect the CSF while explaining to the trainees. </div> <div style="margin-top: 10px;"> <p>POINT Let's study some failure cases as well.</p> <p><small>Since the needle is pricked horizontally respect the floor and perpendicularly to the patient's body, if the patient's shoulder line is not perpendicular to the bed, the needle will get diagonally into the body, making easy to occur a failure in the procedure. It's important to keep the patient in a posture perfectly perpendicular to the bed.</small></p> </div>
Training session	<div style="float: right; border: 1px solid black; padding: 2px;">30 min.</div> <p>Training in Pairs</p> <ul style="list-style-type: none"> ● Ten minutes of hands-on training, and three minutes of debriefing per person. ● One person applying the puncture, and the other one holding the simulator. Then take turns. <p>POINT It's recommended that the instructor doesn't point the trainee's mistakes immediately on the practice but during the debriefing time.</p>

 **KYOTO KAGAKU**
URL <http://www.kyotokagaku.com>
e-mail rw-kyoto@kyotokagaku.co.jp

KYOTOKAGAKU HEAD OFFICE & FACTORIES
15 Kitanekeya-cho, Fushimi-ku,
Kyoto 612-8388, JAPAN
TEL: +81-75-605-2510
FAX: +81-75-605-2519

KYOTOKAGAKU MEM TRAINING CENTRE
Second fl. NREG Hongo-3-chome bldg.,
3-26-6 Hongo, Bunkyo-ku, Tokyo 113-0033,
JAPAN
KYOTOKAGAKU AMERICA INC.
North and South American regions
3109 Lomita Boulevard, Torrance, CA 90505-5108, USA
TEL: 1-310-325-8860 FAX: 1-310-325-8867