

Straight Leg Raise (SLR) with sensitising movements

The test is used to determine whether the hip range of motion (ROM) during the Straight Leg Raise is limited due to restricted nerve mobility.

SLR with dorsiflexion

Positioning

- Child is in a supine position on the bench
- Head is flat on the bench
- Arms lie beside the trunk

Procedure

- Maximal dorsiflexion
- Full extension of the knee
- Move the leg into hip flexion at a speed of approximately 5°/s
- Additionally, measure the hip range of motion (ROM) at the onset of resistance (R1)
- Move until the child gives a signal to stop the movement (test pain P2_{test}) or until the resistance is too high (R2)
- Measure the hip ROM at this point (stop 1). Ask the child to localise and describe the sensation
- Release the dorsiflexion
- Ask the child if you can continue to move the leg
- If the child agrees, continue the movement; if the child disagrees, return the leg to the bench
- Stop the movement at the position where the child gives you a signal or until the resistance is too high (R2)
- Measure the ROM (stop2), and ask to localise and describe the sensation of the symptoms

Instruction

„I'll start to move your leg slowly away from the bench. Please let me know if you feel that I should stop moving your leg. I'll ask you to describe the sensation in your leg. After I release your foot, I'll ask if I can continue moving your leg. If you allow me, I'll continue until you give me another sign to stop. If you don't want me to continue, I'll return your leg to the bench.“



SLR with neck flexion

Positioning

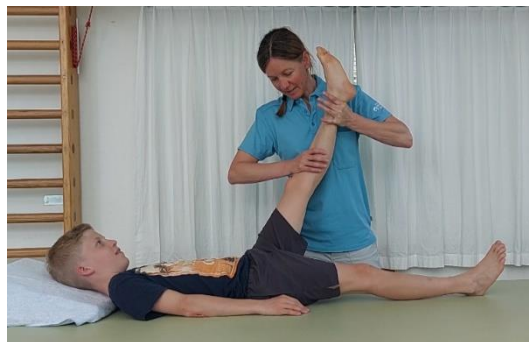
- Child is in a supine position on the bench
- Arms lie beside the trunk
- An assistant holds the neck in flexion, or a wedge is used to position the head (inclination 20–30°).

Prodedure

- Full extension of the knee
- Move the leg into hip flexion at a speed of approximately 5°/s
- Measure the hip range of motion (ROM) at the onset of resistance (R1).
- Continue the movement until the child signals to stop the movement (test pain $P2_{\text{test}}$) or until the resistance is too high (R2)
- Measure the hip ROM at this point (stop 1), and ask the child about the location and nature of the symptoms.
- Bring the head back to the bench and remove the wedge (done by the assistant).
- Ask the child if you may continue to move the leg.
- If the child agrees, continue the movement; if the child disagrees, return the leg to the bench.
- Stop the movement at the position where the child signals again, measure the ROM (stop 2), and ask about the location and nature of the symptoms.

Instruction

„I'll start to move your leg slowly away from the bench. Please let me know if you feel that I should stop moving your leg. I will ask you about how your leg feels. After we remove the wedge from under your head, I'll ask if I can continue moving your leg. If you allow me, I'll carry on until you give me another signal to stop. If you don't want me to continue, I'll return your leg to the bench.“



Protocol Straight Leg Raise (SLR)

Name child:

Date:

Name therapist:

Time:

Right:

| | With sensitising movement, ROM (°) | | Without sensitising movement (°) | Difference |
|----------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|
| | First resistance (R1) | Stop 1 (P2 _{test} or R2) | Stop 2 (P2 _{test} or R2) | Stop 2 – Stop1 Positive/Negative |
| Dorsiflexion | | | | |
| Sensation and localisation | | | | |
| Neck flexion | | | | |
| Sensation and localisation | | | | |
| Interpretation | | | | |

Left:

| | With sensitizing movement, ROM (°) | | Without sensitizing movement (°) | Difference |
|----------------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | First resistance (R1) | Stop 2 (P2 _{test} or R2) | Stop 2 (P2 _{test} or R2) | Stop 2 – Stop 1 Positive/Negative |
| Dorsiflexion | | | | |
| Sensation and localisation | | | | |
| Neck flexion | | | | |
| Sensation and localisation | | | | |
| Interpretation | | | | |

Interpretation of the test results: A positive test results if the difference between stop 2 and stop1 exceed 5° (stop 2 minus stop 1), in both test situations (with dorsiflexion, and neck flexion). Positive mean that the nervous structures do limit the range of motion of the straight leg raise.

P2_{test}: maximally tolerable symptoms

R2: Resistance becomes too great to overcome

Sensation: e.g. strain, pain, resistance, tension

Localisation: thigh, lower leg, popliteal space, front or back