

Straight Leg Raise (SLR) with sensitizing movements

The test is applied to differentiate if the „Straight Leg Raise“ hip Range of motion (ROM) is limited due to nerve mobility.

SLR with dorsiflexion

Position

- Child is in supine position on bench
- Pelvis has to be fixated by a belt
- Contralateral leg has to be fixated above the knee by a belt
- 2cm-thick foam for head support

Manual

- Full extension of the knee and maximal dorsiflexion
- Move the leg at a speed of approximately 5°/s into hip flexion
- In addition measure the hip ROM at the onset of resistance (R1)
- Move until the child gives a sign to stop the movement or until the resistance is too high
Measure the hip ROM (stop 1), Ask the child to localize and describe the sensation of the symptoms
- Release the dorsiflexion
- Ask the child, if you can continue to move the leg
- If the child agrees, continue to move/ if the child disagrees, return the leg to the bench
- Stop the movement at the position where the child give you a sign, measure the ROM (stop2), and ask to localizie and describe the sensation of the symptoms

Instruction

„I start to move your leg slowly away from the bench. Please let me know if you feel that I have to stop moving your leg. I will ask you to describe the sensation in your leg. After I release your foot, I will ask you, if I can continue to move your leg. If you allow me I will continue until you give me a sign again to stop the movement. If you do not want me to continue the movement, I will return your leg to the bench.“



SLR with neck flexion

Position

- Child is in supine position on bench
- Pelvis has to be fixated by a belt
- Contralateral leg has to be fixated above the knee by a belt
- 2cm-thick foam for head support and also a wedge (inclination 20-30°)

Manual

- Full extension of the knee
- Move the leg at a speed of approximately 5°/s into hip flexion
In addition, measure the hip ROM at the onset of resistance (R1)
- Move until the child gives a sign to stop the movement or until the resistance is too high
Measure the hip ROM (stop 1), ask the child about the localization and sensation of the symptoms
- Remove the wedge (done by assistant)
- Ask the child, if you can continue to move the leg
- If the child agrees, continue to move/ if the child disagrees, return the leg to the bench
- Stop the movement at the position where the child gives you a sign, measure the ROM (stop 2), and ask about the localization and sensation of the symptoms

Instruction

„I start to move your leg slowly away from the bench. Please let me know if you feel that I have to stop moving your leg. I will ask you about your feeling in the leg. After we remove the wedge under your head, and I will ask you, if I can continue to move your leg. If you allow me I will continue until you give me again a sign to stop the movement. If you do not allow me, I will return your leg to the bench.“



Protocol Straight Leg Raise (SLR)

Name child:
 Name therapist:

Date:
 Time:

Right:

	With sensitizing movement, ROM (°)		Without sensitizing movement (°)	Difference
	First resistance (R1)	Stop 1 (P2)	Stop 2 (P2)	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)	Stop 2 (P2)	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 exceeds 5° (stop 2 minus stop 1), in both test situations (with dorsiflexion, and neck flexion). Positive means that the nervous structures do limit the range of motion of the straight leg raise.

P2: maximal tolerated symptoms
 Sensation: e.g. pain, resistance, tension
 Localisation: thigh, lower leg, popliteal space, front or back