

## 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 assisant)
- 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 (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 sing 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 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: maximal tolerated symptoms  
Sensation: e.g. pain, resistance, tension  
Localisation: thigh, lower leg, popliteal space, front or back