

Knee to Wall Test

Patient name: _____ Age: _____

Assessor: _____

Date of assessment: _____

Materials

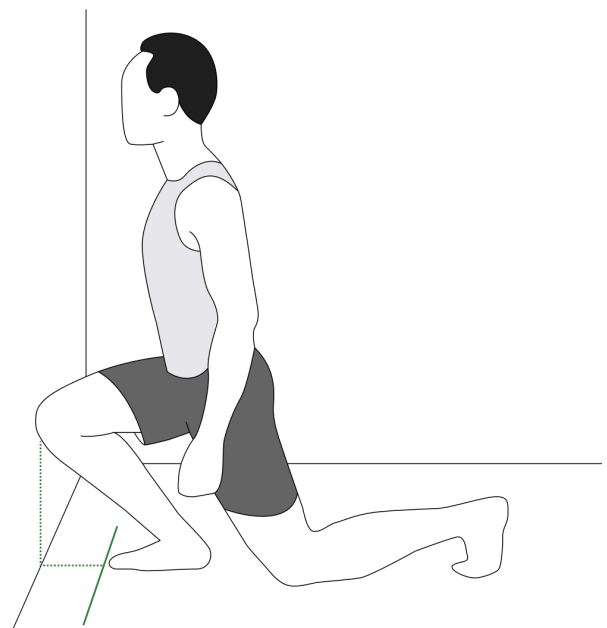
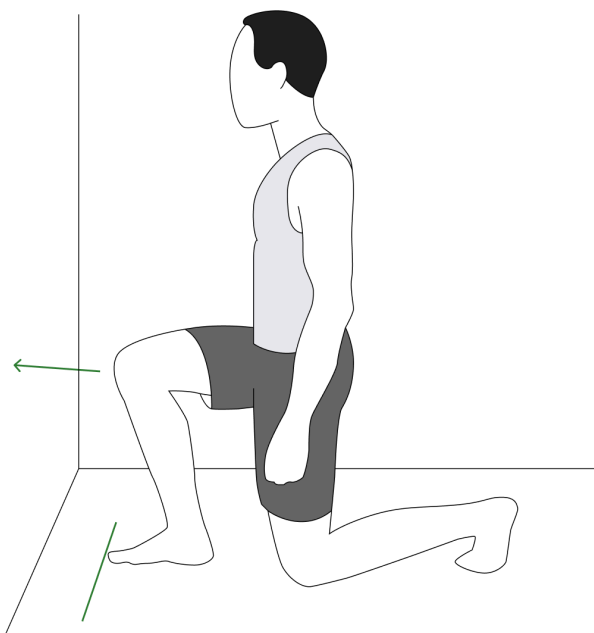
- Wall for support
- Tape measure (measured in centimeters)
- Marker or tape to create a vertical line on the wall

Preparation

- Ensure the test is performed against a wall with a tape measure placed on the floor in front of it.
- Draw a vertical line on the wall aligned with the tape measure to serve as a reference point.

Instructions

1. Ask the patient to stand facing the wall with their feet hip-width apart.
2. Have them place their test foot on the tape measure, ensuring an imaginary line runs through the heel and big toe.
3. Instruct them to keep the opposite leg behind them for support.
4. Ask the patient to bend their front knee forward while keeping their heel flat on the ground.
5. Have them continue lunging until their knee touches the wall or until they feel resistance.



6. If the patient can touch the wall easily, ask them to move their foot slightly further away and repeat the movement.
7. Instruct them to find the maximum distance at which they can still touch the wall while keeping the heel in contact with the floor.
8. Once the patient reaches their maximal dorsiflexion, measure the distance from the tip of their big toe to the wall in centimeters.
9. Each centimeter corresponds to approximately 3.6° of ankle dorsiflexion.
10. Repeat the test on the opposite ankle to assess any asymmetry in mobility.
11. Document the results and note any signs of stiffness, discomfort, or restricted movement.

Dorsiflexion range

Left:

Right:

Results

Normal range: 10 cm or more from the wall. Indicates good ankle dorsiflexion mobility with no significant restrictions.

Restricted ankle mobility: Less than 5 cm from the wall. Suggests limited ankle dorsiflexion, which may be due to calf muscle tightness, joint restrictions, or previous injuries. This restriction can impact functional movements like walking, squatting, or running.

Asymmetry in ankle mobility: A difference of 1.5 cm or more between the left and right foot. May indicate a clinically significant asymmetry in ankle dorsiflexion range of motion. This imbalance can increase the risk of compensatory movement patterns and injury.

Severe restriction: Inability to touch the knee to the wall at any distance. Suggests a serious restriction at the ankle joint, potentially caused by bony impingement, ligamentous tightness, or muscular stiffness. Further assessment or intervention may be required.

Additional notes and recommendations

Bennell, K., Talbot, R., Wajswelner, H., Techovanich, W., Kelly, D., & Hall, A. (1998). Intra-rater and inter-rater reliability of a weight-bearing lunge measure of ankle dorsiflexion. *Australian Journal of Physiotherapy*, 44(3), 175–180. [https://doi.org/10.1016/s0004-9514\(14\)60377-9](https://doi.org/10.1016/s0004-9514(14)60377-9)

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Cirrone, A. (2022). *Assessing a clinical test of ankle joint range of motion: Influence of variations in foot and tibia length*. DigitalCommons@SHU. <https://digitalcommons.sacredheart.edu/acadfest/2022/all/139/>