

Navicular Drop Test (NDT)

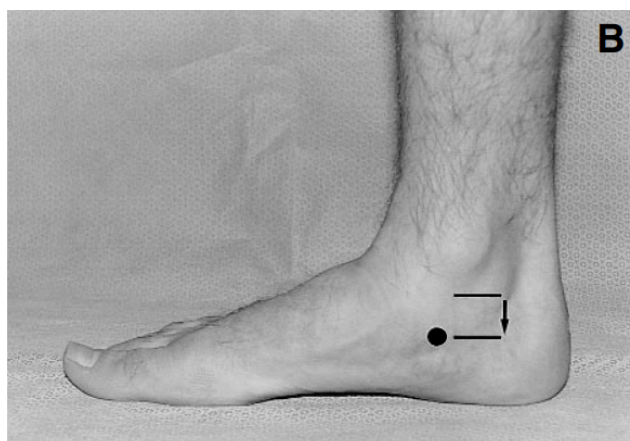
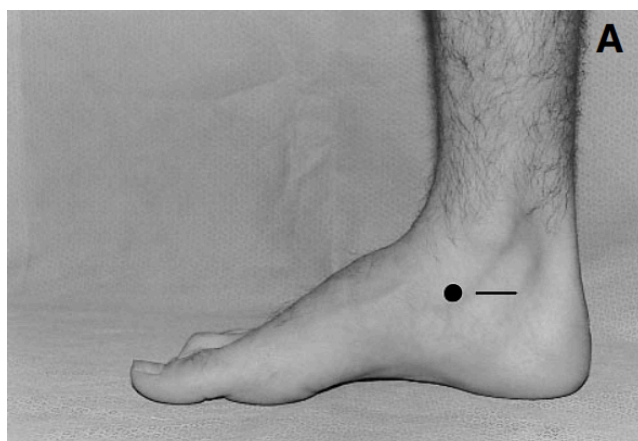
Patient's name: _____ Age: _____ Gender: _____

Examiner: _____ Date: _____

Test procedures

1. Mark the most prominent part of the navicular tuberosity.
2. With the patient in a standing or sitting position, bring the talus into a neutral non-weight-bearing position. Ensure the foot is in the subtalar joint neutral position, with the talar head congruent.
3. Measure the distance from the navicular tuberosity to the supporting surface (floor or step) (image A).
4. Ask the patient to relax, allowing the foot to drop naturally and bear weight.
5. Measure the amount of sagittal plane excursion (image B) of the navicular using a ruler.

Alternatively, you may perform the test in reverse by measuring from the relaxed position up to the talar neutral position while the patient stands.



Using a piece of paper or index card

This alternative involves using a piece of paper or index card.

1. Mark the most prominent part of the navicular tuberosity.
2. With the patient in a standing or sitting position, bring the talus into a neutral non-weight-bearing position. Ensure the foot is in the subtalar joint neutral position, with the talar head congruent.
3. Mark the start position of navicular tuberosity on an index card placed along the inside of the foot.
4. Ask the patient to relax, allowing the foot to drop naturally and bear weight.
5. Mark the end position of navicular tuberosity on an index card placed along the inside of the foot.
6. Measure the change with a ruler.

Test results			
Left foot		Right foot	
Height while not bearing weight		Height while not bearing weight	
Height while bearing weight		Height while bearing weight	
Amount of excursion measured		Amount of excursion measured	
Classification of left foot		Classification of right foot	
Supinated foot < 5 mm		Supinated foot < 5 mm	
Neutral foot 5-9 mm		Neutral foot 5-9 mm	
Pronated foot Greater than 9 mm (1 cm onwards)		Pronated foot Greater than 9 mm (1 cm onwards)	
<p><i>Note: Different researchers have set different cutoff values, and the length of the foot significantly influences results; even a measure above 10 mm / 1 cm may still be neutral for people with large feet.</i></p>			
Additional notes			

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Nielsen, R. G., Rathleff, M. S., Simonsen, O. H., & Langberg, H. (2009). Determination of normal values for navicular drop during walking: A new model correcting for foot length and gender. *Journal of Foot and Ankle Research*, 2(1). <https://doi.org/10.1186/1757-1146-2-12>