

Star Excursion Balance Test

The Star Excursion Balance Test is a rehabilitation tool that uses a series of single-limb squats and reaching tasks to assess dynamic postural control (how well you can keep your balance whilst performing challenging standardised movements). This test is used frequently following ACL reconstruction to assess improvements during rehabilitation and to help in the decision of when is safe to return to sport.

You will need:

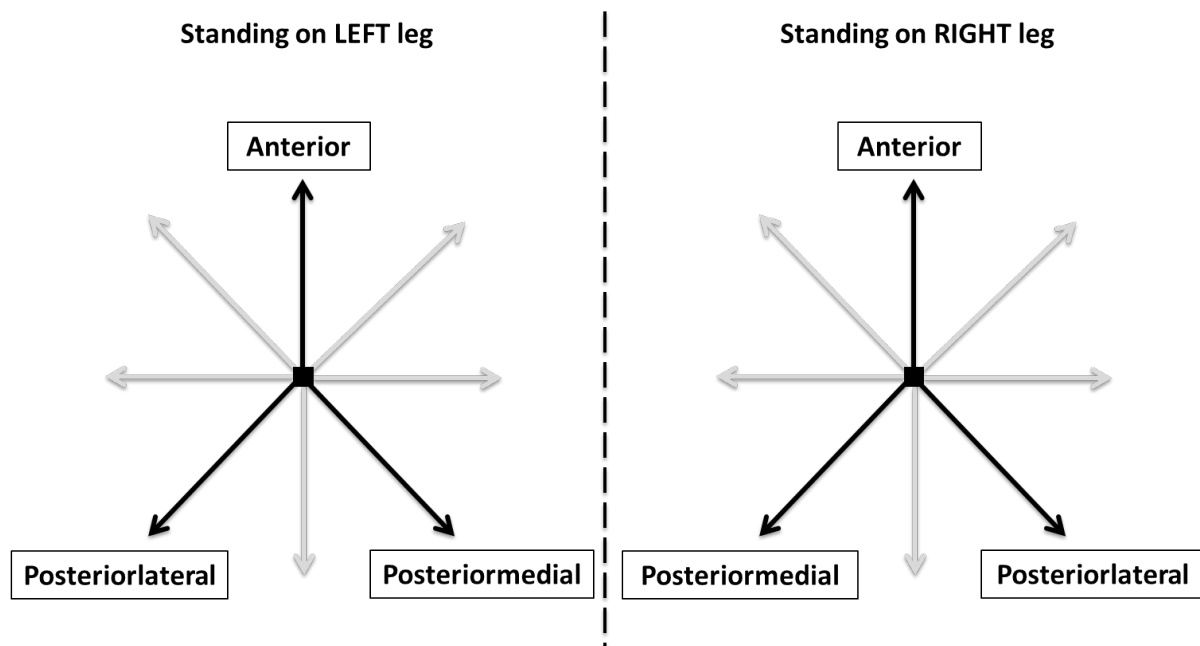
Tape measure

Pencil

Sticky tape for the floor

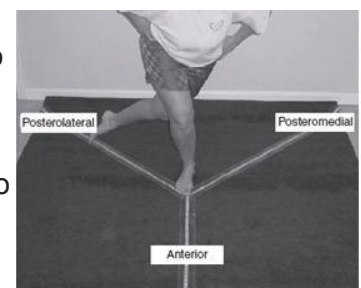
Set-Up and the Test

Mark out a grid of 3 lines, see lines in picture below highlighted in **bold**. The posterior lines are each 135 degrees from the straight line. Use the same grid for each leg, although note the difference in labelling for scoring purposes.



Stand bare foot in the middle of the grid on the leg that you're going to test, with your heel at the centre of the grid and your big toe on the Anterior line straight out in front of you

Reach as far as possible along each of the 3 lines and get someone to **mark** and **measure** this position. Make sure you return the reaching leg back to the start position before your swap directions/lines.



Perform 6 practice trials 5 minutes before you take the test.

Perform 3 trials for each line/direction and record the average score.

Swap legs and repeat the test.

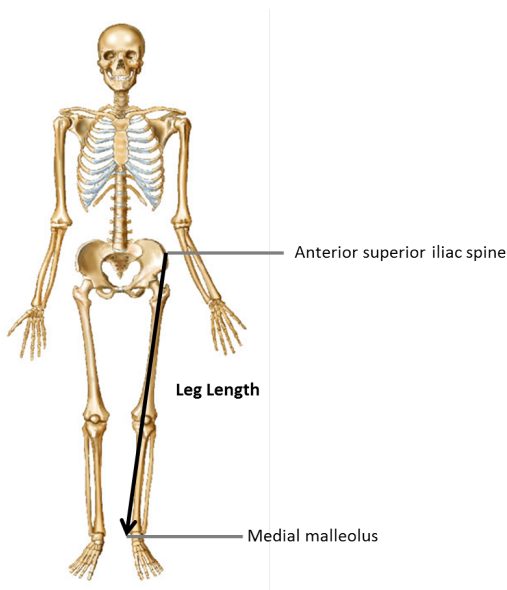
The trial has to be repeated if any of the following happens:

You make a heavy touch on the line (not a light controlled tap with your toe),
You rest your reaching foot on the ground,
You lose balance, or cannot return to the starting position under control

How to calculate your scores:

You need to measure the length of each leg and use this in the calculation below, this is because people with longer legs will be able to reach further.

Get someone to measure your left and right leg length, by placing a tape measure at the top of the anterior superior iliac spine (ASIS) and running it down to the medial malleolus (inside of ankle bone) see picture. To find the ASIS place your hands on your pelvic bones and run your fingers forward, down, and in until you feel a bony lip.



Your score:

$$\left[\frac{\text{Distance Reached (cm)}}{\text{Leg Length (cm)}} \right] \times 100$$

Record your average score over the 3 directions and write this into youTrack Your Progress table. Tables are provided overleaf to help you record your scores.

Pre programme

Direction	Left leg reach	Right leg reach
Anterior (%)		
Posteriorlateral (%)		
Posteriormedial (%)		
Average (%)		

End a Phase 1

Direction	Left leg reach	Right leg reach
Anterior (%)		
Posteriorlateral (%)		
Posteriormedial (%)		
Average (%)		

End a Phase 2

Direction	Left leg reach	Right leg reach
Anterior (%)		
Posteriorlateral (%)		
Posteriormedial (%)		
Average (%)		

End a Phase 3

Direction	Left leg reach	Right leg reach
Anterior (%)		
Posteriorlateral (%)		
Posteriormedial (%)		
Average (%)		