

SINGLE-LEG ASSESSMENT PROTOCOL

Step-up

Objective: To assess symmetrical lower-extremity mobility and stability and trunk mobility and stability during a single-leg (step-up) movement

Equipment:

- ▶ Bench; select a bench height that allows the client to start with the hip and knee at approximately a 90-degree angle.

Instructions:

- ▶ Briefly discuss the protocol so the client understands what is required.
- ▶ Ask the client to stand with the feet shoulder-width apart with the arms hanging freely to the sides.
- ▶ Instruct the client to place one leg up squarely on the bench while maintaining an upright posture.
- ▶ Instruct the client to push off with the heel of the foot on the bench while simultaneously bringing the opposite leg up to a 90-degree angle.
- ▶ Instruct the client to return slowly to the starting position in a one-two-three rhythm.
- ▶ Ask the client to perform five to 10 single-leg (step-up) movements.
- ▶ Switch the leg positioned on the bench and repeat the above steps.
- ▶ It is important not to cue the client to use good technique, but instead observe his or her natural movement.

Observations:

- ▶ Anterior view:
 - First repetition: Observe the stability of the foot (i.e., evidence of pronation, supination, eversion, or inversion).
 - Second repetition: Observe the alignment of the stance-leg knee over the foot (i.e., evidence of knee movement in any plane).
 - Third repetition: Watch for excessive hip adduction greater than 2 inches (5.1 cm) as measured by excessive stance-leg adduction or downward hip-tilting toward the opposite side.
 - Fourth repetition: Observe the stability of the torso.
 - Fifth repetition: Observe the alignment of the moving leg (i.e., lack of dorsiflexion at the ankle, deviation from the sagittal plane at the knee or ankle, or hiking of the moving hip).
- ▶ Side view:
 - First repetition: Observe the stability of the torso and stance leg.
 - Second repetition: Observe the mobility of the hip (i.e., allowing 70 degrees of hip flexion without compensation— anterior tilting) of the moving leg.

Interpretation:

- ▶ Identify origin(s) of movement limitation or compensation.
- ▶ Evaluate the impact on the entire kinetic chain.