

FRONT-PLANK WITH BENT LEG LIFT

Teaching points

Patients should be able to perform a front plank with appropriate technique before attempting this exercise. You can place a stick along the patient's spine and head to ensure it makes a straight line (head not tilted upwards, buttocks not elevated, natural lumbar lordosis, thoracic spine not too rounded). Because the plank is a difficult position to hold you may wish to allow the patient to tilt the pelvis posteriorly slightly for more stability. Another variation of this exercise is to perform the hip extension with a straight knee.

Poor technique: head elevated



Poor technique: head lowered, rounded thoracic spine



Poor technique: buttocks elevated



Poor technique: excessive lumbar lordosis



Alternative technique: straight leg lift



Alternative technique: slight posterior pelvic tilt



Once the leg movement is introduced there may be a tendency towards excessive erector spinae activity.

Signs of this occurring include:

- Excessive lordosis
- Head lifted
- Observation of excessive erector spinae activity
- Patient reports 'lower back muscles working'
- Patient cannot 'feel the buttock muscles working'

To address this you may wish to use the following techniques:

- Place your hands on the erector spinae and ask the patient to 'relax the muscles under my hands'
- Ask the patient to contract the gluteal muscles while lifting the leg²⁴
- Prescribe the exercises with a smaller range of motion – stopping the leg movement at the point in which the patient starts to use their erector spinae
- Allow the patient to tilt the pelvis posteriorly