

APPENDIX K

Hip range of motion measurement procedure:

Hip forward flexion: (Livingston, 1992 and Gangat, 2004)

1. Attach the master sensor to the thigh in any orientation.
2. Place the subject in neutral position (supine) with the opposite hip stabilised by the examiner.
3. With the leg extended in neutral position, zero the sensor
4. Have subject flex hip maximally. Record the angle.

Hip backward extension: (Livingston, 1992)

1. Attach the master sensor to the thigh in any orientation.
2. Place the subject in neutral position (prone).
3. With the leg extended in neutral position, zero the sensor.
4. Have subject extend maximally. Record the angle.

Hip abduction/adduction: (Gangat, 2004)

1. Attach the master sensor to the thigh in any orientation.
2. Place the subject in the side-lying position.
3. With the leg extended in neutral position, zero the sensor.
4. Have subject abduct maximally and record the angle.
5. Flex the knee to 90 degrees and zero the sensor.
6. Extend the hip slightly, have subject adduct maximally off the back of the table, and record the angle.

Hip external/internal rotation: (Cibulka et al. 1998 and Ellison et al. 1990)

1. Place the subject in the prone position, and place a strap around the posterior superior iliac spines to prevent pelvic movement.
2. Place the hip to be measured in 0 degrees abduction while the contralateral hip is abducted 30 degrees.
3. Flex the knee of the hip to be measured to 90 degrees and attach the inclinometer just below the ankle.
4. Ensure that the tibia is aligned at 90 degrees, and zero the sensor.
5. Have subject externally rotate maximally and record the angle.
6. Have subject internally rotate maximally and record the angle.