

MOGULS SKILL ASSESSMENT – FUNCTIONAL MOVEMENT - RUBRIK

Double Leg Squat Task:

- Equipment: nil
- Instructions: stand facing a wall, toes half a foot length from the wall, with your feet hip width distance apart, hands behind head / elbows out, squat down as far as you can in a slow, controlled manner, maintaining your balance
- Recording: qualitative assessment based on athletic stance, eccentric control, contribution of movement from hip/knee/ankle, knee tracking over second toe, depth of range, COM remaining over centre of feet, range in depth of squat

Score	Criteria
9 to 10	Able to demonstrate double leg squat with precision, consistently showing all key concepts through full range (with out butt wink scoring 10)
7 to 8	Able to demonstrate double leg squat with consistent show of most key concepts through 90 / flat femur
6 to 5	Able to demonstrate double leg squat with satisfactory but inconsistent show of key concepts
4 to 3	Able to demonstrate double leg squat with some of the key concepts beginning to appear
2 to 1	Able to demonstrate double leg squat but the key technique concepts were not present
0	Unable to demonstrate double leg squat

Single Leg Squat Task: (Crossley, Zhang, Schache, Bryant, & Cowan, 2011)

- Equipment: box (40cm high box as a guide for someone 165cm tall – adjust height for taller/shorter athlete)
- Instructions: standing on one leg on a box, arms out in front, squat down as far as you can in a slow, controlled manner, maintaining your balance
- Recording: qualitative assessment based on athletic stance, eccentric control, thoracic shift/rotation, pelvic shift/rotation, hip adduction, femoral internal rotation, knee valgus, COM remaining over centre of foot, depth of range & ankle stability.

Score	Criteria
9 to 10	Able to demonstrate single leg squat with precision, consistently showing all key concepts
7 to 8	Able to demonstrate single leg squat with consistent show of most key concepts
6 to 5	Able to demonstrate single leg squat with satisfactory but inconsistent show of key concepts
4 to 3	Able to demonstrate single leg squat with some of the key concepts beginning to appear
2 to 1	Able to demonstrate single leg squat but the key technique concepts were not present
0	Unable to demonstrate single leg squat

Double Leg Landing Task:

- Equipment: 40 cm bench/box
- Instructions: standing on a 40 cm bench/box with your feet hip width distance apart, arms out in front, step down onto the ground in a controlled manner, maintaining your balance
- Recording: qualitative assessment based on athletic stance, smooth absorption, hip/knee/ankle stability, hip adduction, femoral internal rotation, knee valgus, COM remaining over centre of feet & ankle stability

Score	Criteria
9 to 10	Able to demonstrate double leg landing with precision, consistently showing all key concepts
7 to 8	Able to demonstrate double leg landing with consistent show of most key concepts
6 to 5	Able to demonstrate double leg landing with satisfactory but inconsistent show of key concepts
4 to 3	Able to demonstrate double leg landing with some of the key concepts beginning to appear
2 to 1	Able to demonstrate double leg landing but the key technique concepts were not present
0	Unable to demonstrate double leg landing

Hop For Distance Test: (Myers, Jenkins, Killian, & Rundquist, 2014)

- Equipment: nil
- Instructions: standing on one leg, hop as forward far as you can and land on the same leg using arms however you like
- Recording: measure toe to toe, three or more trials permitted, furthest distance recorded on each leg

Score	Males	Females
9 to 10	≥ 210.00 + cm	≥ 170.00 cm
7 to 8	200.00-209.99 cm	160.00-169.99 cm
6 to 5	190.00-199.99 cm	150.00-159.99 cm
4 to 3	180.00-189.99 cm	140.00-149.99 cm
2 to 1	170.00-179.99 cm	130.00-139.99 cm
0	≤ 169.99 cm	≤ 129.99 cm

Mobility Assessment

Sit & Reach Rest: hamstring flexibility

- Equipment: measuring tape, step or box
- Instructions: sit with your feet up against the step, with one hand on top of the other and middle fingers aligned reach forward with both hands whilst keeping knees extended
 - Hold position for at least 2 second (no bouncing allowed)
- Recording: measure distance from distal aspect of great toe to tip of middle finger (value will be positive if athlete can reach beyond toes, and will be negative if athlete cannot reach beyond toes)

Score	Criteria
9 to 10	≥ Positive 6.00 cm
7 to 8	Positive 0.01-5.99 cm
6 to 5	0 cm
4 to 3	Negative 0.01-5.99 cm
2 to 1	Negative 6.00-11.99 cm
0	≤ Negative 12.00 cm

Knee To Wall Test: ankle mobility (Hoch & McKeon, 2011)

- Equipment: wall, measuring tape
- Instructions: standing facing a wall with the second toe, centre of heel and knee perpendicular to the wall, perform a lunge at a distance from the wall at which you can maintain heel contact and make knee contact with the wall
- Recording: measure distance from wall to the tip of the great toe

Score	Criteria
9 to 10	≥ 15.00 cm
7 to 8	12.00-14.99 cm
6 to 5	10.00-11.99 cm
4 to 3	8.00-9.99 cm
2 to 1	5.00-7.99 cm
0	≤ 4.99 cm

Hands Behind Back Test: shoulder/thoracic spine mobility (Frohm, Heijne, Kowalski, Svensson, & Myklebust, 2012)

- Equipment: measuring tape
- Instructions: standing with feet shoulder width apart, make a fist with each hand placing thumbs inside fists and place fists as close as possible behind the back
 - Combined IR with adduction and extension and ER with abduction and flexion – requires normal scapular mobility and thoracic spine extension
- Recording: measure distance between lower point of top fist and highest point of low fist

Score	Criteria
9 to 10	≤ 4.99 cm
7 to 8	5.00-9.99 cm
6 to 5	10.00-14.99 cm
4 to 3	15.00-19.99 cm
2 to 1	20.00-24.99 cm
0	≥ 25.00 cm

OR

Shoulder Flexion By Goniometer Test (preferred method) : shoulder flexion active range / mobility

- Equipment: goniometer OR coaches eye app with angle measure in app purchase
- Instructions: standing with feet shoulder width apart, the athlete lifts one arm at a time in front to their maximum active shoulder flexion range.
- Recording: measure from side on the angle between the humerus and thoracic spine. Repeat for both sides.

Score	Criteria
9 to 10	≤ 175 degrees
7 to 8	165 – 174 degrees
6 to 5	155 – 164 degrees
4 to 3	145 – 154 degrees
2 to 1	135 – 144 degrees
0	≥ 135 degrees

References:

- Crossley, K. M., Zhang, W. J., Schache, A. G., Bryant, A., & Cowan, S. M. (2011). Performance on the single-leg squat task indicates hip abductor muscle function. *American Journal of Sports Medicine*, 39(4), 866-873.
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- Hoch, M. C., & McKeon, P. O. (2011). Normative range of weight-bearing lunge test performance asymmetry in healthy adults *Manual Therapy*, 16(5), 516-519.
- Myers, B. A., Jenkins, W. L., Killian, C., & Rundquist, P. (2014). Normative data for hop tests in high school and collegiate basketball and soccer players. *International Journal of Sports Physical Therapy*, 9(5), 596-603.
- Stiffler, M. R., Sanfilippo, J. L., Brooks, M. A., & Heiderscheit, B. C. (2015). Star excursion balance test performance varies by sport in healthy division I collegiate athletes. *Journal of Orthopaedic and Sports Physical Therapy*, 45(10), 772-780.