Competency

Functional Movement Screen

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Student Name

The student will be knowledgeable of the FMS (Cook et al) and demonstrate the 7 movement patterns with a partner, giving each movement a score.

Components

Screen Guidelines & Tips

- Place the person in the start position for the movement pattern and provide simple instructions for completing the movement pattern
- Where applicable, measure both sides of the body independently; the lower score of the two sides is recorded
- Note any imbalances, asymmetry or compensatory behaviors during the movement pattern
- Note differences between the sexes in performing some of the movement patterns
- Patterns are scored 3-0; total screen score maximum of 21
- Total screen score: $\geq$14 indicates reduced injury risk; $\leq$13 indicates increased injury risk

Movement Patterns

1. **Deep Squat**—The athlete starts with the feet at approximately shoulder width apart. The dowel is grasped with both hands and the arms are pressed overhead while keeping the dowel in line with the trunk and the elbows extended. The athlete is instructed to descend slowly and fully into a squat position while keeping the heels on the ground and the hands above the head.
2. **Hurdle Step**—The athlete assumes the start position by placing the feet together and aligning the toes just in contact with the base of the hurdle or 2 × 6 board. The height of the hurdle or string should be equal to the height of the tibial tubercle of the athlete. The dowel is placed across the shoulders below the neck and the athlete is asked to step up and over the hurdle, touch the heel to the floor (without accepting weight) while maintaining the stance leg in an extended position and return to the start position. The leg that is stepping over the hurdle is scored.
3. **In-Line Lunge**—Lunge length is determined by measuring the distance from the ground to the tibial tubercle. A piece of tape or a tape measure is placed on the floor at the determined lunge distance. The arms are used to grasp the dowel behind the back with the top arm externally rotated, the bottom arm internally rotated and the fists in contact with the neck and low back region. The hand opposite the front or lunging foot should be on top. The dowel must begin in contact with the thoracic spine, back of the head and sacrum. The athlete is instructed to lunge out and place the heel of the front/lunge foot on the tape mark. The athlete is then instructed to slowly lower the back knee enough to touch the floor while keeping the trunk erect and return to the start position. The front leg identifies the side being scored.
4. **Shoulder Mobility Test**—Determine the length of the hand of the athlete by measuring from the distal wrist crease to the tip of the third digit. This distance is used during scoring of the test. The athlete is instructed to make a fist with each hand with the thumb placed inside the fist. The athlete is then asked to place both hands behind the back in a smooth motion (without walking or creeping them upward)—the upper arm in an externally rotated, abducted position (with a flexed elbow) and the bottom arm in an internally rotated, extended, adducted position (also with a flexed elbow). The tester measures the distance between the 2 fists. The flexed (uppermost) arm identifies the side being scored.

   Shoulder Clearing Test—After the shoulder mobility test is performed, the athlete places a hand on the opposite shoulder and attempt to point the elbow upward and touch the forehead. If painful, this clearing test is considered positive and the previous test must be scored as 0.
5. **Active Straight-Leg Raise**—The athlete begins in a supine position, arms at the side. The tester identifies the midpoint between the ASIS and the middle of the patella and places a dowel on the ground, held perpendicular to the ground. The athlete is instructed to slowly lift the test leg with a dorsiflexed ankle and a straight knee as far as possible while keeping the opposite leg extended and in contact with the ground. Make note to see where the lower extremity ends at its maximal excursion. If the heel clears the dowel, a score of 3 is given; if the lower part of the leg (between the foot and the knee) lines up with the dowel, a score of 2 is given; and if the patient is only able to have the thigh (between the knee and the hip) line up with the dowel, a score of 1 is given.
6. **Trunk Stability Pushup**—The athlete assumes a prone position with the feet together, toes in contact with the floor and hands placed shoulder width apart (level determined by sex), as though ready to perform a pushup from the ground. The athlete is instructed to perform a single pushup in this position with the body lifted as a unit. If the athlete is unable to do this, the hands should be moved to a less-challenging position per criteria and a pushup attempted again. The chest and stomach should come off the floor at the same time and no "lag" should occur in the lumbar spine.

Extension Clearing Test—Performed at the end of the trunk stability pushup test and graded as pass or fail, failure occurring when pain is experienced during the test. Spinal extension is cleared by using a full-range prone press-up maneuver from the beginning pushup position; if pain is associated with this motion, a score of 0 is given.

7. **Rotatory Stability Test**—The athlete assumes the starting position of quadruped with the shoulders and hips at 90° of flexion. The athlete is instructed to lift a hand off the ground and extend the same side shoulder (allowing the elbow to flex) while concurrently lifting the knee off the ground and flexing the hip and knee. The athlete needs to raise the extremities only approximately 6 inches from the floor while bringing the elbow and knee together until they touch and then return them to the ground. The test is repeated on the opposite side. The upper extremity that moves during testing is scored. Completion of this task allows a score of 3. If unable to perform, the athlete is cued to perform the same maneuver with the opposite LE and UE, which allows a score of 2 to be awarded. Inability to perform a diagonal stability results in a score of 1.

   Flexion Clearing Test—Performed at the end of rotary stability test and again is scored as positive if pain is reproduced. From the beginning position for this test, the athlete rocks back into spinal flexion and touches the buttocks to the heels and the chest to the thighs. The hands should remain in contact with the ground. Pain on this clearing test overrides any score for the rotary stability test and causes the athlete to receive a score of 0.

Scoring

Test	3	2	1
Deep Squat	 • Upper torso is parallel with tibia or toward vertical • Femur below horizontal • Knees aligned over feet • Dowel aligned over feet	 • Upper torso is parallel with tibia or toward vertical • Femur below horizontal • Knees aligned over feet on a 2x4 • Dowel aligned over feet	 • Tibia and upper torso are not parallel • Femur not below horizontal • Knees not aligned over feet • Lumbar flexion noted
Hurdle Step	 • The hips, knees and ankles remain aligned in the sagittal plane • Minimal movement in the lumbar spine • Dowel and hurdle remain parallel	 • Alignment is lost between hips, knees and ankles • Movement in the lumbar spine • Dowel and hurdle do not remain parallel	 • Contact with foot and hurdle • Loss of balance at any time
In-Line Lunge	 • Minimal to no torso movement • Feet remain in sagittal plane of the 2x6 • Knee touches 2x6 behind the heel of front foot	 • Movement noted in torso • Feet do not remain in sagittal plane on the 2x6 • Knee does not touch 2x6 behind the heel of front foot	 • Loss of balance at any time
Shoulder Mobility	 • Fists should be within one hand length	 • Fists should be within one and a half hand lengths	 • Fists fall greater than one and a half hand lengths	

Active Straight Leg Raise	 • Malleoi resides between mid-thigh and ASIS	 • Malleoi resides between mid-thigh and mid-patella	 • Malleoi resides below mid-patella	
Trunk Stability Push-Up	 • Males perform one repetition w/thumbs above head • Females perform one repetition w/thumbs in line with chin	 • Males perform one repetition w/thumbs in line with chin • Females perform one repetition w/thumbs in line with clavicle	 • Males unable to perform one repetition w/thumbs in line with chin • Females unable to perform one repetition w/thumbs in line with the clavicle	
Rotatory Stability	 • Performs one unilateral rep while keeping torso parallel to board • Knee and elbow touch in line with the board	 • Performs one diagonal rep while keeping torso parallel to board • Knee and elbow touch in line with the board	 • Unable to perform diagonal repetitions	

Student Notes

Mastery _____ _____

ATC Signature Date Mastered