

# Functional Movement Screen

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## What is the FMS?

- Developed by Gray Cook, Lee Burton, and Keith Fields as a simple method to identify movement pattern asymmetries and/or deficiencies.
- A simple means to rate and rank basic movement patterns needed in everyday physical activity.
- A look at an individual “from 30,000 feet”.

## What it is **NOT**:

- A diagnostic tool.
- An assessment.
- A test.



## **Before starting;**

- Measure the tibia length, floor to the top center of the tibial tuberosity
- Measure the hand length, distance from the distal wrist crease to the tip of the longest digit.

## **Scoring the FMS;**

- Completed perfectly as verbally described, score a 3.
- Completed with compensation(s), score a 2.
- Unable to perform the pattern as described, score a 1.
- If there is pain with the movement pattern, score a 0 and refer them to their primary clinician.

## **Total Score, seven screens, 21 points**

- Goal is to score a 14 – reduced risk of injury with physical activity.
- Score of 13 or less, increased risk of injury with physical activity.

# Functional Movement Screen Scoring Sheet

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Age: \_\_\_\_\_

Level: \_\_\_\_\_

Team/School: \_\_\_\_\_ Height: \_\_\_\_\_ Hand Dominance: q R q L Swing Dominance: q R q L

Sport/Position: \_\_\_\_\_ Weight: \_\_\_\_\_ Leg Dominance: q R q L Throw Dominance: q R q L

Test	Score	Dysfunction	Grading Criteria III	Grading Criteria II	Grading Criteria I
<b>1. Deep Squat</b>  <b>TOE TOUCH TEST:</b> q Able q Not able	3 2 1 0	_____	<ul style="list-style-type: none"> <li>Upper torso is parallel with tibia or toward vertical</li> <li>Femur below horizontal</li> <li>Knees aligned over feet</li> <li>Dowel aligned over feet</li> </ul>	<ul style="list-style-type: none"> <li>Upper torso is parallel with tibia or toward vertical</li> <li>Femur below horizontal</li> <li>Knees aligned over feet</li> <li>Dowel aligned over feet on a 2x4</li> </ul>	<ul style="list-style-type: none"> <li>Tibia and upper torso are not parallel</li> <li>Femur not below horizontal</li> <li>Knees not aligned over feet</li> <li>Lumbar flexion noted</li> </ul>
<b>2. Hurdle Step</b>  Inches: _____  Left Leg Up  Right Leg Up	3 2 1 0  3 2 1 0  3 2 1 0	_____	<ul style="list-style-type: none"> <li>The hips, knees, and ankles remain aligned in the sagittal plane</li> <li>Minimal movement in the lumbar spine</li> <li>Dowel and hurdle remain parallel</li> </ul>	<ul style="list-style-type: none"> <li>Alignment is lost between hips, knees, and ankles</li> <li>Movement in the lumbar spine</li> <li>Dowel and hurdle do not remain parallel</li> </ul>	<ul style="list-style-type: none"> <li>Contact with foot and hurdle</li> <li>Loss of balance at any time</li> </ul>
<b>3. In-Line Lunge</b>  Inches: _____  Left Leg Forward  Right Leg Forward	3 2 1 0  3 2 1 0  3 2 1 0	_____	<ul style="list-style-type: none"> <li>Minimal to no torso movement</li> <li>Feet remain in sagittal plane of the 2x6</li> <li>Knee touches 2x6 behind the heel of front foot</li> </ul>	<ul style="list-style-type: none"> <li>Movement noted in torso</li> <li>Feet do not remain in sagittal plane on the 2x6</li> <li>Knee does not touch 2x6 behind the heel of front foot</li> </ul>	<ul style="list-style-type: none"> <li>Loss of balance at any time</li> </ul>
<b>4. Shoulder Mobility</b> Distance (tip of middle finger to distal crease): _____  Impingement Tests: Left Right	3 2 1 0 L top: _____ R top: _____  3 2 1 0 3 2 1 0	SCORE 6.5=9.75, 6.75=10.1, 7.0=10.5, 7.25=10.86, 7.5=11.25, 7.75=11.63, 8=12 8.25=12.38, 8.5=12.75, 8.75=13.1, 9=13.5	<ul style="list-style-type: none"> <li>Fists should be within one hand length</li> </ul>	<ul style="list-style-type: none"> <li>Fists should be within one and a half hand lengths</li> </ul>	<ul style="list-style-type: none"> <li>Fists fall greater than one and a half hand lengths</li> </ul>
<b>5. Active Straight Leg Raise</b>  L: _____ R: _____	3 2 1 0  L: _____ R: _____	_____	<ul style="list-style-type: none"> <li>Malleoli resides between mid-thigh and ASIS</li> </ul>	<ul style="list-style-type: none"> <li>Malleoli resides between mid-thigh and mid-patella</li> </ul>	<ul style="list-style-type: none"> <li>Malleoli resides below mid patella</li> </ul>
<b>6. Truck Stability Push Up</b>  Prone Press Up Test: _____	3 2 1 0	_____	<ul style="list-style-type: none"> <li>Males perform one repetition with the thumbs above head</li> <li>Females perform one repetition with thumbs in line with the chin</li> </ul>	<ul style="list-style-type: none"> <li>Males perform one repetition with thumbs in line with the chin</li> <li>Females perform one repetition with thumbs in line with the clavicle</li> </ul>	<ul style="list-style-type: none"> <li>Males unable to perform one rep with hands in line with chin</li> <li>Females unable to perform one rep with thumbs in line with clavicle</li> </ul>
<b>7. Rotary Stability Quadruped</b>  Kneeling Lumbar Flexion Test Left Up Right Up	3 2 1 0  3 2 1 0  3 2 1 0	_____	<ul style="list-style-type: none"> <li>Performs one unilateral rep while keeping torso parallel to board</li> <li>Knee and elbow touch in line with the board</li> </ul>	<ul style="list-style-type: none"> <li>Performs one diagonal rep while keeping torso parallel to board</li> <li>Knee and elbow touch in line with the board</li> </ul>	<ul style="list-style-type: none"> <li>Unable to perform diagonal repetitions</li> </ul>

Total Score Tests 1-7: \_\_\_\_\_/21

Initials of Tester: \_\_\_\_\_

# Scoring the Deep Squat

## 3

- Torso is parallel with tibia or toward vertical
- Femur is below horizontal
- Knees do not track inside of feet
- Dowel aligned over feet



## 2

- Torso is parallel with tibia or toward vertical
- Femur is below horizontal
- Knees do not track inside of feet
- Dowel aligned over feet
- Heels are elevated



## 1

- Tibia and torso are not parallel
- Femur is not below horizontal
- Knees track inside of feet
- Dowel is not aligned over feet



An individual receives a score of zero if pain is associated with any portion of this test.  
A medical professional should perform a thorough evaluation of the painful area.



# Scoring the Hurdle Step

## 3

- Hips, knees and ankles remain aligned in the sagittal plane
- Minimal to no movement in lumbar spine
- Dowel and hurdle remain parallel



## 2

- Alignment is lost between hips, knees and ankles
- Movement in Lumbar Spine
- Dowel and hurdle do not remain parallel



## 1

- Inability to clear the cord during the hurdle step
- Loss of Balance



An individual receives a score of zero if pain is associated with any portion of this test. A medical professional should perform a thorough evaluation of the painful area.

# Scoring the Inline Lunge

## 3

- Dowel contact maintained
- Dowel remains vertical
- Minimal to no torso movement
- Dowel and feet remain in sagittal plane
- Knee touches the center of the board
- Front foot remains in start position



## 2

- Dowel contact not maintained
- Dowel does not remain vertical
- Movement in torso
- Dowel and feet do not remain in sagittal plane
- Knee does not touch center of the board
- Flat front foot does not remain in start position



## 1

- Loss of balance by stepping off the board
- Inability to complete movement pattern
- Inability to get into set up position

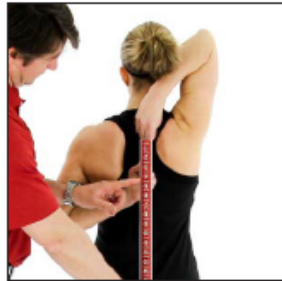


An individual receives a score of zero if pain is associated with any portion of this test. A medical professional should perform a thorough evaluation of the painful area.

# Scoring the Shoulder Mobility

3

- Fists are within one hand length



2

- Fists are within one and a half hand lengths



1

- Fists are not within one and a half hand lengths



An individual receives a score of zero if pain is associated with any portion of this test.

A medical professional should perform a thorough evaluation of the painful area.

## CLEARING TEST

Perform this clearing test bilaterally. If the individual receives a positive score, document both scores for future reference. If there is pain associated with this movement, give a score of zero and perform a thorough evaluation of the shoulder or refer out.





# Scoring the Active-Straight Leg Raise

## 3

- Vertical line of the malleolus resides between mid-thigh and ASIS
- The non-moving limb remains in neutral position



## 2

- Vertical line of the malleolus resides between mid-thigh and joint line
- The non-moving limb remains in neutral position



## 1

- Vertical line of the malleolus resides below the joint line
- The non-moving limb remains in neutral position



An individual receives a score of zero if pain is associated with any portion of this test.  
A medical professional should perform a thorough evaluation of the painful area.

# Scoring the Trunk Stability Push-Up

## 3

- Men perform a repetition with thumbs aligned with the top of the forehead
- Women perform a repetition with thumbs aligned with the chin
- The body lifts as a unit with no lag in the spine



## 2

- Men perform a repetition with thumbs aligned with the chin
- Women perform a repetition with thumbs aligned with the clavicle
- The body lifts as a unit with no lag in the spine



## 1

- Men are unable to perform a repetition with thumbs aligned with the chin
- Women are unable to perform a repetition with thumbs aligned with the clavicle



An individual receives a score of zero if pain is associated with any portion of this test.  
A medical professional should perform a thorough evaluation of the painful area.

## EXTENSION CLEARING TEST

Extension is cleared by performing a press-up in from the floor with hands under the shoulders. If there is pain associated with this motion, give a positive (+) score with a final score of zero and perform a more thorough evaluation or refer out. If the individual does receive a positive score, document both scores for future reference.



# Scoring the Rotary Stability

## 3

- Performs a correct unilateral repetition
- Unilateral limbs remain over the board
- Without touching down, touch the same-side elbow to the same-side knee over the board



## 2

- Performs a correct diagonal repetition
- The diagonal knee and elbow meet over the board
- Without touching down, touch the opposite elbow and knee over the board



## 1

- Inability to perform a diagonal repetition



An individual receives a score of zero if pain is associated with any portion of this test.  
A medical professional should perform a thorough evaluation of the painful area.

## FLEXION CLEARING TEST

Flexion can be cleared by first assuming a quadrupedal position, then rocking back and touching the buttocks to the heels and chest to the thighs. The hands should remain in the front of the body, reaching out as far as possible. If there is pain associated with this motion, give a positive (+) score with a final score of zero and perform a more thorough evaluation or refer out. If the individual receives a positive score, document both scores for future reference.



- Today was only a brief description of the FMS.
- There are still plenty of “tips” to learn through experience to becoming a proficient FMS screener.

- **Pros;**
  - Quick easy screen, takes about 10 – 12 mins per athlete.
  - The score becomes a universal “language” among certified screeners.
  - Most all athletes struggle with the same screen.
- **Cons;**
  - Assigning a number to the movement can become subjective, i.e. one screener might give them a “2” while another screener might give them a “1”.
  - Not real conducive to screening a large number of athletes by a solo coach.



# Questions...



# Thank You.

