

The Functional Movement Screen  
and Exercise Progressions

Manual



# Philosophy of FMS

1997 @ lecture, screen, → interpretation

FMS main focus = injury prevention, functional evaluation  
exercise,

practice in prevention = injury.

↳ Chronic type of injury. Not isolate a part of the body, but a whole, body moves as a whole more efficient.

Quick and easy way disfunction

one MC, military use it. good results,

★ How we interpret info differs

★ identify who is at risk = re-injury

• Determine asymmetries

• proper progression consistency and post-injury.

where are they at base-line level

Strength } → how much is enough  
flexibility }  
power }

★ previous injury is the most effective indicator  
① & risk factor

② Lack of neuromuscular control  
asymmetry. → imbalance

ankle injury → less dorsiflexion → glute. → back pain

→ movement pattern disfunction → golf.

do things they are at best.

identify their weakness, and work on it.

★ what you can't do or what you should not do?

any screen → minimum standard.

SFMA

Stabilize →  
from infant

motor control

proper motor  
sequence

How do you know if someone  
cardio-vascular problem  
need to know CV disease  
risk factors?

↓  
sport injury.

if a person is at  
high injury

over training by  
military.

## About the Authors

### **Gray Cook:**

Gray's is a board-certified orthopedic clinical specialist with the American Physical Therapy Association. He is also a certified strength and conditioning specialist with the National Strength and Conditioning Association. He is a Level I coach with the U. S. Weight Lifting Federation. He combines his clinical skills with over seven years of professional teaching and lecturing experience. Gray has lectured nationally and internationally in the fields of physical therapy, sports medicine and performance enhancement.

### **Lee Burton:**

Lee received his Doctor of Philosophy in Health Promotion and Wellness from Virginia Tech. He attained his Certification of Athletic Training through the National Athletic Trainer's Association-Board of Certification and his Certification of Strength and Conditioning through the National Strength and Conditioning Association. Lee is currently the Program Director for Athletic Training at Averett University.

### **Keith Fields:**

Keith received his Master's Degree in Exercise Physiology from the University of North Carolina at Greensboro in 1995. He serves as a Reebok Master Trainer and is a member of the Reebok University Program Development Team. His professional background includes certifications by the American College of Sports Medicine as a Health/Fitness Instructor, and by the National Strength & Conditioning Association as a Certified Strength & Conditioning Specialist. Keith's background is extensive in the areas of fitness, strength training and therapeutic exercise. He has worked at length in developing therapeutic exercise progressions for outpatient physical therapy populations.

# FUNCTIONAL MOVEMENT SCREEN DESCRIPTIONS

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The Functional Movement Screen (FMS®) captures fundamental movements, motor control within movement patterns, and competence of basic movements uncomplicated by specific skills. It will determine the greatest areas of movement deficiency, demonstrate limitations or asymmetries, and eventually correlate these with an outcome. Once you find the greatest asymmetry or deficiency, you can use measurements that are more precise if needed.

The original idea of the screen was to portray movement-pattern quality with a simple grading system of movement appraisal; it's not intended to diagnose or measure isolated joint movement. Attempting to measure in isolation does a disservice to the pattern—the body is too complex to take isolated movements seriously in the initial stages of screening.

This system was developed to rate and rank movement patterns in high school athletes, but through a two-year refining process, we discovered uses beyond its original intended purpose. While we have not changed the screen since its official introduction in 1998, the information gathered from its use has broadened our scope of corrective exercise, training and rehabilitation. The screen has taught us how to use it, and helped us gain timely and valuable feedback from our attempts at movement correction.

Our collective expertise has come from working against the screen's standard, not from modifying the screen every time things got confusing or inconvenient. We have changed the way we look at the screen data many times, but we have not changed the way we collect the information. In a way, this work represents our evolution, not that of the screen. The screen patiently waited for us to see and understand all it was providing in return for about 10 minutes worth of time.

This chapter covers the FMS. It, along with the two Selective Functional Movement Assessment (SFMA®) chapters that follow, is the juicy part of this book. Take the time to read this section to gain a complete understanding of the screen before implementing it with your clients.

## THE FMS TESTS

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The FMS is comprised of seven movement tests that require a balance of mobility and stability. The patterns used provide observable performance of basic, manipulative and stabilizing movements by placing clients in positions where weaknesses, imbalances, asymmetries and limitations become noticeable by a trained health and fitness professional.

When the screen's movements mimic athletic moves, it is merely coincidence. The screen is not a training tool, nor is it a competition tool. It's purely an instrument for rating and ranking movements.

The screen's usefulness is its simplicity, practicality and ability to fill a void in the toolbox we use to judge performance and durability. It is not intended to determine why a dysfunctional or faulty movement pattern exists. Instead, it's a discovery of which patterns are problematic. The FMS exposes dysfunction or pain—or both—within basic movement patterns.

Many people are able to perform a wide range of activities, yet are unable to efficiently execute the movements in the screen.<sup>39</sup> Those who score poorly on the screens are using compensatory movement patterns during regular activities. If these compensations continue, sub-optimal movement patterns are reinforced, leading to poor biomechanics and possibly contributing to a future injury.

The public's knowledge of the intricacies of the FMS is minimal at best. To introduce your client to the process, suggest a visit the Functional Movement Systems website at [functionalmovement.com](http://functionalmovement.com) to watch the introductory video. The website also has video demonstrations of the seven FMS moves and the three clearing tests.

You'll find scripted instructions for use with your client testing later in the text.

## KEYS TO THE SCREEN

To administer the FMS correctly, you'll need to be familiar with the following bony structures or superficial landmarks.

- **Tibial tuberosity**
- **Anterior superior iliac spine (ASIS)**
- **Lateral and medial malleolus**
- **The most distal wrist crease**
- **Joint line of the knee**

### FMS KIT EQUIPMENT AND ASSEMBLY

The optional test kit equipment is self-contained in a two-by-six box, however you are able to use your own testing tools. There is a cap on one end of the two-by-six that can be removed so the pieces used for the FMS can slide out. The pieces are—

- **A four-foot dowel rod**
- **Two smaller dowel rods**
- **A small-capped piece**
- **An elastic band**

Once removed, the two small dowel pieces are inserted in holes in the two-by-six. The dowel pieces must be forced into the two holes in the box in order to be snug. The small-capped piece is inserted into a small hole at the end of the two-by-six, which balances the hurdle once it is upright. The elastic band is then placed around the two upright pieces, making the hurdle.

**Two-by-six box**—used to carry equipment and to add compensation for the deep squat test. It is also used in the inline lunge and rotary stability tests for reliability and for reference during testing.

**Four-foot dowel**—used for the deep squat, inline lunge, hurdle step, shoulder mobility measurement and active straight-leg raise. The dowel is used in these tests for reliability and for more efficient scoring.

**Hurdle**—composed of the board serving as the base, two two-foot PVC dowels and an elastic band that goes around the dowels. It is used for the hurdle step, and allows for body-relative testing and improvement in scoring accuracy.

### WHERE TO STAND DURING SCREENING

Where to stand during testing is a common question, because you might have three or four different criteria to review during each test, each putting you in a quandary of trying to be in two places at once. This is one of the reasons the client will perform three repetitions in each movement. If needed, this allows more than one opportunity to see the pattern.

Two things to consider when observing the movements of the screen are distance and movement. Considering these two things will take care of most of the issues involved in trying to see everything during the screen.

#### DISTANCE

Step back from the client to create enough distance, allowing you to see the whole picture at once. Most of the confusion over where to stand comes from being too close and too focused on one area of the test. Stand far enough away to allow a more global focus. View the entire movement and let the test criteria become evident.

#### MOVEMENT

The client has three attempts to perform each test, so don't be afraid to move around during the test. There are certain tests where standing to the side or facing the person provide the best vantage points. Take advantage of all three trials and move around if the score is not obvious from one point of view.

### LIST OF FMS TESTS

- Deep Squat Movement Pattern
- Hurdle Step Movement Pattern
- Inline Lunge Movement Pattern
- Shoulder Mobility Movement Pattern
- Active Straight-Leg Raise Movement Pattern
- Trunk Stability Pushup Movement Pattern
- Rotary Stability Movement Pattern

## DEEP SQUAT MOVEMENT PATTERN

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### PURPOSE

The *deep squat pattern* is part of many functional movements. It demonstrates fully coordinated extremity mobility and core stability, with the hips and shoulders functioning in symmetrical positions. While full deep squatting is not often required in modern daily life, general exercise and sport moves, active individuals still require the basic components for the deep squat.

Extremity mobility, postural control, pelvic and core stability are well represented in the deep squat movement pattern. The deep squat is a move that challenges total body mechanics and neuromuscular control when performed properly. We use it to test bilateral, symmetrical, functional mobility and stability of the hips, knees and ankles.

The dowel held overhead calls on bilateral, symmetrical mobility and stability of the shoulders, scapular region and the thoracic spine. The pelvis and core must establish stability and control throughout the entire movement to achieve the full pattern.

### DESCRIPTION

The client assumes the starting position by placing the instep of the feet in vertical alignment with the outside of the shoulders. The feet should be in the sagittal plane with no lateral outturn of the toes. The client rests the dowel on top of the head to adjust the hand position resulting in the elbows at a 90-degree angle.

Next, the client presses the dowel overhead with the shoulders flexed and abducted and the elbows fully extended. Instruct the client to descend slowly into the deepest possible squat position, heels on the floor, head and chest facing forward and the dowel maximally pressed overhead. The knees should be aligned over the feet with no valgus collapse.

As many as three repetitions may be performed, but if the initial movement falls within the criteria for a score of three, there is no need to perform another test. If any of the criteria for a score of three are not achieved, ask the client to perform the test with the board from the earlier described FMS kit under the heels. If any of the criteria for the score of two are not achieved while using the FMS board, the client receives a score of one.

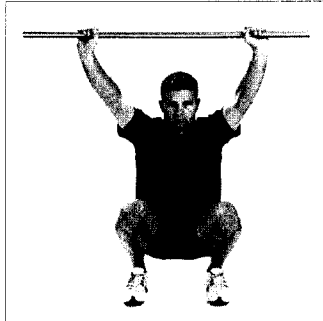
### TIPS FOR TESTING

1. Observe the client from the front and side.
2. All positions including the foot position should remain unchanged when the heels are elevated, with either the FMS kit or a similar size board.
3. Do not judge the pattern or interpret the cause of the score while testing.
4. Do not coach the movement; simply repeat the instructions if needed.
5. Was there pain?
6. When in doubt, score low.

### IMPLICATIONS OF THE DEEP SQUAT MOVEMENT PATTERN

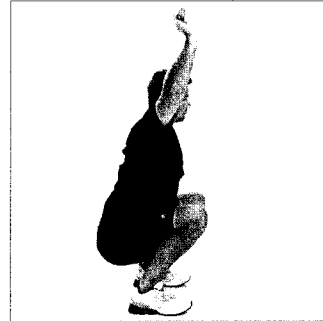
- Limited mobility in the upper torso can be attributed to poor glenohumeral or thoracic spine mobility, or both.
- Limited mobility in the lower extremities, including poor closed kinetic chain dorsiflexion of the ankles or poor flexion of the knees and hips can cause poor test performance.
- People might perform poorly because of poor stabilization and control.

# DEEP SQUAT



3

内子奇肩能同竟



No coach  
durzy motor  
teck

Upper torso is parallel with tibia or toward vertical | Femur below horizontal  
Knees are aligned over feet | Dowel aligned over feet

shoes?  
be consistent



2

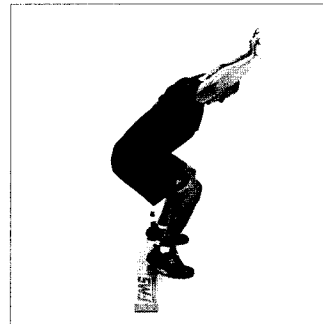


≥ trials

Upper torso is parallel with tibia or toward vertical | Femur is below horizontal  
Knees are aligned over feet | Dowel is aligned over feet | Heels are elevated



1



Tibia and upper torso are not parallel | Femur is not below horizontal  
Knees are not aligned over feet | Lumbar flexion is noted

The athlete 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.

## HURDLE STEP MOVEMENT PATTERN

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### PURPOSE

The *hurdle step movement pattern* is an integral part of locomotion and acceleration. Although we do not step to this level in most activities, the hurdle step will expose compensation or asymmetry in stepping functions. The step test challenges the body's step and stride mechanics, while testing stability and control in a single-leg stance.

The movement requires proper coordination and stability between the hips, moving asymmetrically with one bearing the load of the body while the other moves freely. The pelvis and core must begin with and maintain stability and alignment throughout the movement pattern. The arms are still as they hold a dowel across the shoulders, giving the observer further representation of the static responsibility of the upper body and trunk in the stepping movement.

Excessive upper body movement in basic stepping is viewed as compensation; it is not seen when proper mobility, stability, posture and balance are available and functioning. The hurdle step challenges bilateral mobility and stability of the hips, knees and ankles. The test also challenges stability and control of the pelvis and core as it offers an opportunity to observe functional symmetry.

### DESCRIPTION

Take a height measurement of the client's tibia to begin this test. Since it can be difficult to find the true joint line between the tibia and femur, the top center of the tibial tuberosity serves as a reliable landmark.

To adjust the previously described hurdle to the correct height, have the client stand with the outside of the right foot against the base of the hurdle, in line with one of the hurdle uprights. Slide the hurdle's marking cord to the center of the tibial tuberosity, and adjust the other side until the cord is level and displays accurate tibial tuberosity height on both indicators.

The other measurement option is to use the dowel to measure the distance from the floor to the tibial tuberosity, and raise the cord to that level.

Have the client stand directly behind the center of the hurdle base, feet touching at both the heels and toes, and with the toes aligned and touching the base of the hurdle.

Position the dowel across the shoulders, below the neck. Ask the client to step over the hurdle to touch the heel to the floor while maintaining a tall spine, and return the moving leg to the starting position. The hurdle step is performed slowly and under control.

If any of the criteria for a score of three are not achieved, the client receives a score of two. If any of the criteria for the score of two are not achieved, score this a one.

### TIPS FOR TESTING

1. Ensure the cord is aligned properly.
2. Tell the client get as tall as possible at the beginning of the test.
3. Watch for a stable torso.
4. Observe from the front and side.
5. Score the hurdle-stepping leg.
6. Make sure the toes of the stance leg stay in contact with the hurdle during and after each repetition.
7. Do not judge the pattern or interpret the cause of the score while testing.
8. Do not coach the movement; simply repeat the instructions if needed.
9. Was there pain?
10. When in doubt, score low.

### IMPLICATIONS OF THE HURDLE STEP MOVEMENT PATTERN

- Problems may be due to poor stability of the stance leg or poor mobility of the step leg.
- The main thing to consider is that no single part is being tested; a pattern is being tested. Imposing maximal hip flexion of one leg while maintaining apparent hip extension of the opposite leg requires relative bilateral, asymmetric hip mobility and dynamic stability.



each 3 must be perfect,

## HURDLE STEP

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3



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



2



Alignment is lost between hips, knees and ankles | Movement is noted in lumbar spine  
Dowel and hurdle do not remain parallel



1



Contact between foot and hurdle occurs | Loss of balance is noted

The athlete 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.

## SHOULDER MOBILITY REACHING MOVEMENT PATTERN

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### PURPOSE

The *shoulder mobility reaching pattern* demonstrates the natural complementary rhythm of the scapular-thoracic region, thoracic spine and rib cage during reciprocal upper-extremity shoulder movements. Although the full reciprocal reaching pattern is not seen in basic activities, it uses each segment to its range of active control, leaving little room for compensation. Removing compensation provides a clear view of movement ability.

The cervical spine and surrounding musculature should remain relaxed and neutral, and the thoracic region should have a natural extension before doing the alternate upper-extremity patterns.

This pattern observes bilateral shoulder range of motion, combining extension, internal rotation and adduction in one extremity, and flexion, external rotation and abduction of the other.

### DESCRIPTION

First, determine the client's hand length by measuring the distance from the distal wrist crease to the tip of the longest digit. The client will stand with the feet together, and make a fist with each hand, thumbs inside the fingers. The client then simultaneously reaches one fist behind the neck and the other behind the back, assuming a maximally adducted, extended and internally rotated position with one shoulder, and a maximally abducted and externally rotated position with the other.

During the test, the hands should move in one smooth motion, and should remain fist. Measure the distance between the two closest points of the hands to determine the client's symmetrical reach.

Have the client perform the shoulder mobility test a maximum of three times bilaterally. If any of the criteria for a score of three are not achieved, the client receives a score of two. If any of the criteria for the score of two are not achieved, score this a one.

### TIPS FOR TESTING

1. The top shoulder identifies the side being scored. This simply represents the pattern and does not imply the functional ability of a body part or side.
2. If the hand measurement is the same as the distance between the two points, score low.

3. If pain is present in the clearing test, the client receives a zero.
4. Make sure the client does not try to walk the hands toward each other following the initial placement.
5. Do not judge the pattern or interpret the cause of the score while testing.
6. Do not coach the movement; simply repeat the instructions if needed.
7. Was there pain?
8. When in doubt, score low.

### IMPLICATIONS OF THE SHOULDER MOBILITY REACHING MOVEMENT PATTERN

- The most obvious is the widely accepted explanation of increased external rotation gained at the expense of internal rotation in overhead throwing athletes. Although this is true to some extent, this is not the first thing to consider.
- Scapular stability depends on thoracic mobility. This should be the primary focus.
- Excessive development and shortening of the pectoralis minor, latissimus dorsi and rectus abdominus muscles can cause the postural alterations of forward or rounded shoulders. This postural problem leaves unrestricted mobility of the glenohumeral joint and scapula at a disadvantage.
- A scapulothoracic dysfunction may be present, resulting in decreased glenohumeral mobility secondary to poor scapulothoracic mobility or stability.
- The test requires an asymmetric movement because the arms travel in opposite directions. The test also requires both arms reaching simultaneously, coupled with postural control and core stability.

### CLEARING EXAM

There is a clearing exam at the end of the shoulder mobility test. You're not scoring this, but instead are watching for a pain response. If pain is produced, a positive (+) is recorded on the score sheet, and a score of zero is given to the entire shoulder reach test.

The client places a palm on the opposite shoulder and lifts the elbow as high as possible while maintaining the palm-to-shoulder contact. This clearing exam is necessary because shoulder impingement will sometimes go undetected by shoulder mobility testing alone.

## SHOULDER MOBILITY

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*proper sequence*

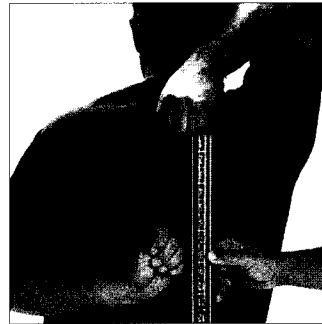
*one smooth motion*

3



Fists are within one hand length

2



Fists are within one-and-a-half hand lengths

1



Fists are not within one and half hand lengths

The athlete will receive 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 does receive 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.

## ACTIVE STRAIGHT-LEG RAISE MOVEMENT PATTERN

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### PURPOSE

The *active straight-leg raise* may appear to be the least functional screen, but don't be fooled by its simplicity. This pattern not only identifies the active mobility of the flexed hip, but includes the initial and continuous core stability within the pattern, as well as the available hip extension of the alternate hip. This is not so much a test of hip flexion on one side, as it is an appraisal of the ability to separate the lower extremities in an unloaded position. This movement is often lost when flexibility of multi-articular muscles is compromised.

The glute maximus/iliotibial band complex and the hamstrings are the structures most likely to result in flexion limitations. Extension limitations are often seen in the iliopsoas and other muscles of the anterior pelvis. This pattern challenges the ability to dissociate the lower extremities while maintaining stability in the pelvis and core. The movement also challenges active hamstring and gastroc-soleus flexibility, while maintaining a stable pelvis and active extension of the opposite leg.

### DESCRIPTION

The client lies supine with the arms by the sides, palms up and the head flat on the floor. A board is placed under the knees; this can be either the FMS kit board, or a board of similar dimensions as described earlier. Both feet should be in a neutral position, the soles of the feet perpendicular to the floor.

Find the point between the anterior superior iliac spine (ASIS) and the joint line of the knee, and places a dowel at this position, perpendicular to the ground. Next, the client lifts the test limb while maintaining the original start position of the ankle and knee.

During the test, the opposite knee should remain in contact with the board; the toes should remain pointed upward in the neutral limb position, and the head remains flat on the floor.

Once reaching the end-range, note the position of the upward ankle relative to the non-moving limb. If the malleolus passes the dowel, record a score of three. If the malleolus does not pass the

dowel, move the dowel, much like a plumb line from the malleolus of the test leg, and again score per the criteria.

Perform the *active straight-leg mobility test* a maximum of three times bilaterally. If any of the criteria for a score of three are not achieved, the client receives a score of two. If any of the criteria for the score of two are not achieved, score this a one.

### TIPS FOR TESTING

1. The moving limb identifies the side being scored.
2. If there is difficulty finding the joint line, identify the line by flexing and extending the knee.
3. Make sure the non-moving limb maintains a neutral position.
4. Do not judge the pattern or interpret the cause of the score while testing.
5. Do not coach; this is not exercise. This means if there's fault in the execution, simply repeat the instructions, not offering corrections.
6. Was there pain?
7. When in doubt, score low.

### IMPLICATIONS OF THE ACTIVE STRAIGHT-LEG RAISE MOVEMENT PATTERN

- Pelvic control may not be sufficient for the execution of the pattern.
- The client may have inadequate mobility of the opposite hip, stemming from inflexibility associated with limited hip extension.
- The client may have poor functional hamstring flexibility in the moving limb.
- A combination of these factors will be exhibited if an client has relative bilateral, asymmetric hip mobility. The non-moving limb is at work during the optimal pattern; when the pattern is correct, the non-moving limb demonstrates stability, an automatic task, while the moving limb demonstrates mobility, a conscious task.

## ACTIVE STRAIGHT-LEG RAISE

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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 joint line  
The non-moving limb remains in neutral position

The athlete will receive 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.

## TRUNK STABILITY PUSHUP MOVEMENT PATTERN

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### PURPOSE

The *trunk stability pushup* is a unique, single-repetition version of the common floor-based pushing exercise. It is used as a basic observation of reflex core stabilization, and is not a test or measure of upper-body strength. The goal is to initiate movement with the upper extremities in a pushup pattern without allowing movement in the spine or hips.

Extension and rotation are the two most common compensatory movements. These compensations indicate the prime movers within the pushup pattern incorrectly engage before the stabilizers.

The push-up movement pattern tests the ability to stabilize the spine in the sagittal plane during the closed kinetic chain, upper body symmetrical pushing movement.

### DESCRIPTION

The client assumes a prone position with the arms extended overhead. During this test, men and women have different start positions. Men begin with their thumbs at the top of the forehead, while women begin with their thumbs at chin level. The thumbs are then lowered to the chin or shoulder level per the scoring criteria. The knees are fully extended, the ankles are neutral and the soles of feet are perpendicular to floor.

Ask the client to perform one pushup in this position. The body should be lifted as a unit; there should be no sway in the spine during this test. If the client cannot perform a pushup in the initial position, the hands are lowered to an easier position. Give a score of three if all criteria are met with the hands at the forehead, a score of two if done with the hands at the chin, and a one if the client can't complete the move.

Perform the *trunk stability pushup test* a maximum of three times. If any of the criteria for a score of three are not achieved, the client receives a score of two. If any of the criteria for the score of two are not achieved, score this a one.

### TIPS FOR TESTING

1. The client should lift the body as a unit.
2. On each attempt, make sure the client maintains the hand position and the hands do not slide down as the client prepares to push.

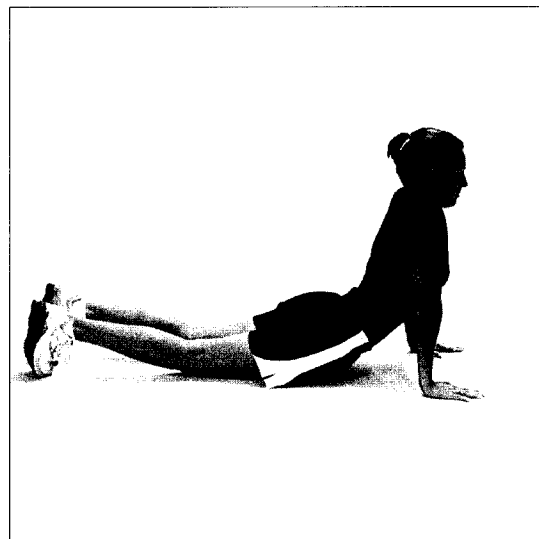
3. Make sure the chest and stomach come off the floor simultaneously.
4. If pain is present in the clearing test, the client receives a zero.
5. Do not judge the pattern or interpret the cause of the score while testing.
6. Do not coach; this is not exercise.
7. Was there pain?
8. When in doubt, score low.

### IMPLICATIONS OF THE TRUNK STABILITY PUSHUP MOVEMENT PATTERN

- Limited performance during this test can be attributed to poor reflex stabilization of the core.
- Compromised upper-body strength or scapular stability—or both—can also be a cause of poor performance during this test.
- Limited hip and thoracic spine mobility can affect a client's ability to achieve the optimal start position, also leading to poor performance during the test.

### CLEARING EXAM

We use a clearing exam at the end of the *trunk stability press-up test*. This movement is not scored; it is performed to observe a pain response. If pain is produced, a positive (+) is recorded and a score of zero is given to the entire press-up test. Clear spinal extension with a press up from the pushup position. If the client receives a positive score, document both scores for future reference.



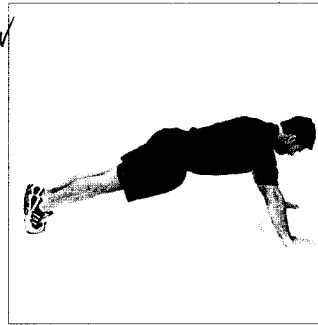
*Trunk Stability Press-up Extension Test*

# TRUNK STABILITY PUSHUP

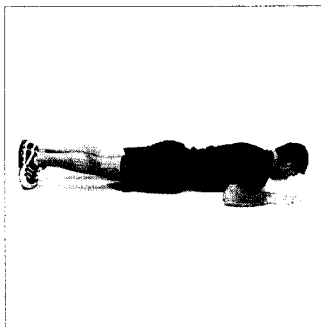
thumbs on line with shoulder

3

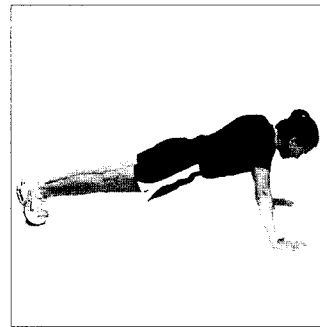
The body lifts as a unit with no lag in the spine



Men perform a repetition with thumbs aligned with the top of the head  
Women perform a repetition with thumbs aligned with the chin



2



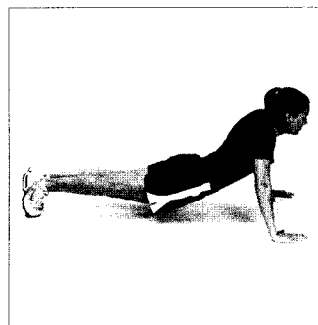
The body lifts as a unit with no lag in the spine

Men perform a repetition with thumbs aligned with the chin | Women with thumbs aligned with the clavicle

1

Men are unable to perform a repetition with hands aligned with the chin

Women unable with thumbs aligned with the clavicle



The athlete 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.



## SPINAL EXTENSION CLEARING TEST

Spinal extension is cleared by performing a press-up in the pushup position. If there is pain associated with this motion, give a zero and perform a more thorough evaluation or refer out. If the individual does receive a positive score, document both scores for future reference.

## ROTARY STABILITY MOVEMENT PATTERN

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### PURPOSE

The *rotary stability pattern* observes multi-plane pelvis, core and shoulder girdle stability during a combined upper- and lower-extremity movement. This pattern is complex, requiring proper neuromuscular coordination and energy transfer through the torso. It has as its roots the creeping pattern that follows basic crawling in our developmental sequence.

The test has two important implications. It demonstrates reflex stabilization and weight shifting in the transverse plane, and it represents the coordinated efforts of mobility and stability observed in fundamental climbing patterns.

### DESCRIPTION

The client gets into the quadruped position with a board, either the FMS kit board or one of similar size, on the floor between the hand and knees. The board should be parallel to the spine, and the shoulders and hips should be 90 degrees relative to the torso, with the ankles neutral and the soles of the feet perpendicular to the floor.

Before the movement begins, the hands should be open, with the thumbs, knees and feet all touching the board. The client should flex the shoulder while extending the same-side hip and knee, and then bring elbow to knee while remaining in line over the board. Spine flexion is allowed as the client brings the knee and elbow together.

This is performed bilaterally for a maximum of three attempts if needed. If one repetition is completed successfully, there is no reason to perform the test again.

If a score of three is not attained, have the person perform a diagonal pattern using the opposite shoulder and hip in the same manner described above. During this diagonal variation, the arm and leg need not be aligned over the board; however, the elbow and knee do need to touch over it.

### TIPS FOR TESTING

1. The upper moving limb indicates the side being tested.
2. Make sure the unilateral limbs remain over the board to achieve a score of three.
3. The diagonal knee and elbow must meet over the board to achieve a score of two.

4. Make sure the spine is flat and the hips and shoulders are at right angles at the start.
5. Do not judge the pattern or interpret the cause of the score while testing.
6. Do not coach; this is not exercise.
7. Was there pain?
8. When in doubt, score low.

### IMPLICATIONS OF THE ROTARY STABILITY MOVEMENT PATTERN

- Limited performance during this test can be attributed to poor reflex stabilization of the trunk and core.
- Compromised scapular and hip stability can also cause poor performance.
- Limited knee, hip, spine and shoulder mobility can reduce the ability to perform the complete pattern, leading to a poor test score.

### CLEARING EXAM

A clearing exam is performed at the end of the rotary stability test. This movement is not scored; it is performed to observe a pain response. If pain is produced, a positive (+) is recorded on the sheet and a score of zero is given to the entire rotary stability test. We clear spinal flexion from the quadruped position, then rocking back and touching the buttocks to the heels and the chest to the thighs. The hands remain in front of the body, reaching out as far as possible. If there is pain associated with this motion, give a zero score. If the client receives a positive score, document both scores for future reference.



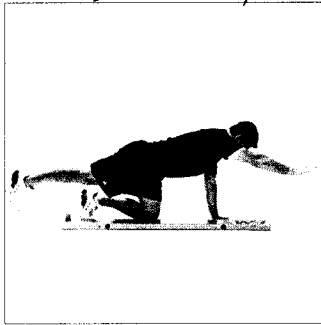
*Rotary Stability Posterior Rocking Clearing Test*



## ROTARY STABILITY

---

Score by the arm.



3



Performs a correct unilateral repetition



2



Performs a correct diagonal repetition



1



Inability to perform a diagonal repetition

The athlete 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.



### SPINAL FLEXION CLEARING TEST

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

Lower scores are bad  
 but high scores are not necessarily good  
 inconsistent

## Interpretation of Sample Scores

### Sample Score Sheet: Athlete/Client 1

TEST	RAW SC	FINAL	COMMENTS
DEEP SQUAT	2	2	
HURDLE ST. L	2	2	
HURDLE ST. R	2		
IN-LINE LUN. L	2		
IN-LINE LUN. R	3		
SHO. MOB. L	1	1	
SHO. MOB. R	3		
ACTIVE IMP. L	-		
ACTIVE IMP. R	-		
ASLR L	2	2	
ASLR R	3		
TSPU	2	2	
EXT	-		
ROT. STAB. L	2	2	
ROT. STAB. R	2		
FLX	-		
TOTAL		13	

1st . they don't get worse,

## Interpretation of the Functional Movement Screen Score of Athlete/Client 1

This athlete/client has an obvious imbalance in the shoulder, with a score of a 1 on the left side and a 3 on the right side. Typically what you will see is a person who has limited internal rotation on the involved side when you have an imbalance of this sort. In this scenario, the limited internal rotation would be on the right side. In this case it would be best to perform a more detailed shoulder examination to see where the limitations lie. Goniometric measurements can be taken to quantify the imbalance and flexibility and mobility therapeutic activity should be undertaken to improve range of motion and decrease the imbalance.

The In-line Lunge and Active Straight Leg Raise also have imbalances; however, these imbalances occur with a 2 and 3 which demonstrates that the limitations are not as severe as the shoulder. Once the shoulder mobility has improved, the screen should be performed again in order to see any improvements. An improvement in shoulder mobility will certainly affect the In-line Lunge score which may eliminate that imbalance. However, these imbalances can also be addressed initially with certain therapeutic activity focused on improving the lunging and leg raising movements.

over 350 High school kids  
Duke University,

basketball program  
stop core program  
start dead lift

① ask ~~what~~ what is creating the problem.

## Interpretation of Sample Scores

Sample Score Sheet: Athlete/Client 2

TEST	RAW SC	FINAL	COMMENTS
DEEP SQUAT	2	2	
HURDLE ST. <u>L</u>	2	2	
HURDLE ST. <u>R</u>	3		
IN-LINE LUN. <u>L</u>	2	2	
IN-LINE LUN. <u>R</u>	2		
SHO. MOB. <u>L</u>	3	3	
SHO. MOB. <u>R</u>	3		
ACTIVE IMP. <u>L</u>	-		
ACTIVE IMP. <u>R</u>	-		
ASLR <u>L</u>	2	2	
ASLR <u>R</u>	2		
TSPU	3	3	
EXT	-		
ROT. STAB. <u>L</u>	2	2	
ROT. STAB. <u>R</u>	2		
FLX	-		
TOTAL		16	

## **Interpretation of the Functional Movement Screen Score of Athlete/Client 2**

This athlete/client scores a 17, which is a fairly high score; however, there is still an imbalance with this individual that may lead to future problems. This imbalance is where you should focus first when further evaluating the individual. The imbalance is obvious, but as you review the scores, you will see that the individual scores well on the Deep Squat and Trunk Stability Push-up but demonstrates problems with the Hurdle Step, In-line Lunge and Active Straight Leg Raise. This indicates a problem during asymmetric movements when the legs are in a scissored position. This type of position combines dynamic mobility and stability during activities. An inability to perform this movement may indicate a problem due to more dynamic mobility and stability problems which may be secondary to poor dynamic stability and proprioceptive ability in the trunk and/or poor dynamic mobility in the extremities. The evaluation should focus on this area in a dynamic scenario, looking for an imbalance which may become apparent. Single-leg stance, abdominal stability and lower extremity mobility should be addressed during the evaluation. This person, because of the high score, may be ready for higher-level therapeutic activities focusing on the asymmetrical dynamic problems.

## Interpretation of Sample Scores

Sample Score Sheet: Athlete/Client 3

TEST	RAW SC	FINAL	COMMENTS
DEEP SQUAT	2	2	
HURDLE ST. L	2	2	
HURDLE ST. R	2		
IN-LINE LUN. L	2	2	
IN-LINE LUN. R	2		
SHO. MOB. L	2	2	
SHO. MOB. R	3		
ACTIVE IMP. L	-		
ACTIVE IMP. R	-		
ASLR L	3	2	
ASLR R	2		
TSPU	3	0	
EXT	+		
ROT. STAB. L	2	2	
ROT. STAB. R	3		
FLX	-		
TOTAL		12	

## **Interpretation of the Functional Movement Screen Score of Athlete/Client 3**

The interpretation for athlete 3 is obvious, a thorough evaluation of the painful area must be determined. When a score of 0 is given on the Trunk Stability Push-up due to a painful prone press-up, it is typical for the lumbar spine to be the area of pathology. The sports medicine professional must rule out pathology in this region before proceeding with therapeutic activity. The other scores in the screen should not be overlooked; these scores may aid the sports medicine professional in the evaluation.

There are imbalances in the shoulder and active straight leg raise that must be addressed. An evaluation should be performed in these areas in order to prescribe therapeutic exercise to overcome the imbalances.

## THE FMS AND CORRECTIVE EXERCISE

---

For all practical purposes, the FMS is refined or even broken down by the corrective exercise progressions. This means exercises associated with each movement pattern in the FMS are actually a continued part of the screen. There's no need to score these, but we still pay close attention. The corrective exercises are not simply performed with blind confidence—they should be used as a gauge to identify proficiency or deficiency for each exercise task.

FMS corrective exercises are grouped two different ways. First, we group the exercises by the seven movement pattern tests within the screen. Second, the exercises follow a linear path from basic mobility to basic stability to movement-pattern retraining.

Specifically, each of the seven movement patterns is linked to—

### **1. Mobility exercises**—focus on joint range of motion, tissue length and muscle flexibility

These demonstrate the basic mobility required within each moving segment of a specific movement pattern. The mobility category includes any form of stretching or joint mobility work within the movement pattern. Exercises in this category need to explore and eventually demonstrate all the available mobility required for that pattern.

### **2. Stability exercises**—focus on basic sequencing of movement

These exercises target postural control of starting and ending positions within each movement pattern. The stability category includes any form of postural control work, with a particular focus on starting and end-range postural control. Don't think strength, think timing. Timing is a quick tap of the brakes, whereas strength is a force that locks the wheels. Stability is about fine-tuned control, not force. These exercises need to demonstrate appropriate postural control without verbal coaching or visual cues.

### **3. Movement pattern retraining**—incorporates the use of fundamental mobility and stability into specific movement patterns to reinforce coordination and timing

These exercises reinforce confidence through repetition and reactive drills and should explore the entire movement pattern in order for improved mobility and stability to interact and become coordinated.

The corrective exercise progression always starts with mobility exercises. These exercises are performed bilaterally to confirm mobility limitation and asymmetry. Never assume you know the mobility restriction location or side of the mobility restriction. Always check both sides and always clear mobility by performing all the mobility exercises.

If these exercises reveal limitation or asymmetry, you have confirmed a mobility problem within the pattern and it should be the primary focus of the corrective exercise session. If no change in mobility is appreciated, do not proceed to stability work. Use the exercises to prove mobility is present or continue working on all mobility problems until you note an appreciable, measurable change. Mobility does not need to become full or normal, but an improvement must be noted. You can proceed to a stability corrective exercise only if the increased mobility allows the person to successfully get into the appropriate exercise posture and position.

If there is any question about compromised mobility, always return to mobility exercises at the beginning of each exercise session before moving to stability exercises. This will assure that proper tissue length and joint alignment are available for stabilization exercises. The mobility exercise will remove stiffness or muscle tone that is performing the role of stability. If optimal mobility is achieved, it is appropriate to move directly to stability, but periodically reconfirm mobility just to be sure.

The stability exercises demand posture, alignment, balance and control of forces within the newly available range and without the support of compensatory stiffness or muscle tone. Consider stability exercises as challenges to posture and position rather than being conventional strength exercises.



When no limitation or asymmetry is present in the mobility corrective exercises, move directly to stability corrective exercises. Seeing no limitation or asymmetry indicates the mobility required for the movement pattern is present, but is not responding to efficient motor control.

Using the idea of motor control will help you think beyond weakness as the only explanation for poor stabilization. Motor control is a broad category that includes mobility, alignment, balance, timing, sub-maximal muscle quickness, coordination and efficient co-activation. The absence of efficient motor control looks like weakness, but strength training the stabilizers is not the solution.

Stability can be separated from strength by improved motor control demonstrated by rigidity and firmness at end ranges. This is why many of the stability exercises use a light load, good posture and a hold or a movement into the end ranges. Quick firmness and adjustments to changes in load are more important than force generation.

Stability in the middle ranges is also important, but particular interest must be taken to assure end-range function. If end-range function is present, mid-range function is usually acceptable, but the reverse is not necessarily true. Look at good mid-range tension as strength, and good end-range tension as stability, timing and integrity. This is the main reason why mobility is important. You must make sure you are testing end-range motor control.

When improved stability is noted, it is possible to progress to movement pattern retraining. Movement pattern retraining should always follow proper attainment and demonstrations of mobility and stability within corrective exercises. Perfection is not necessary and is rarely possible, but do not attempt to retrain a movement pattern if the mobility and stability to support the pattern is not available.

Many forms of assistance facilitation can be provided to reduce compensation and allow quality practice within movement patterns. The general rule is to only use techniques that improve form and quality of the movement. Overload is not an effective corrective tool at this level of training.

Quick progressions with load and intensity will usually cause a default to a more limited or dysfunctional movement pattern.

mobility → stabilize → then move.

follow developmental sequence.

11/2/10

### Scoring Analysis: Overview

- A ZERO must be evaluated and treated first
- Asymmetries must take priority
- Second: Mobility First-Shoulder Mobility and ASLR
- Third: Address Primitive Patterns: Rot. Stab and TSPU
- Fourth: Functional Re-Patterning

re-set

### Corrective Exercise Considerations: Mobility Work

- Stick Work or Foam Roll
- Hands-on Techniques
- Static and/or PNF Stretching
- Create symmetry
- Break Tone



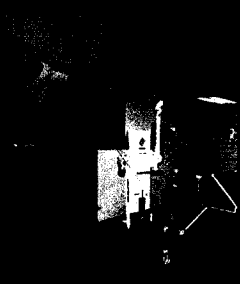
### Corrective Exercise Considerations: Functional Re-Patterning

- Sequencing and Motor Programming
- Static Stability
- Reactive Neuromuscular Training



### Corrective Exercise Considerations: Functional Progressions

- Dynamic Stability
- Resistance Activities
- Complete Patterning
- Maintenance: Re-Test

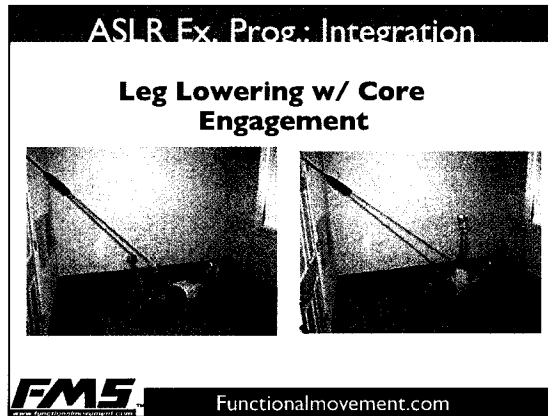


↓ ID corrective pattern  
 ↓ mobility competency  
 ↓ static motor control

11/2/10

if scores are consistent then it is a mobility issue, otherwise is a motor control issue.

FMS SCORING SHEET		
SCREEN	RAW SCORE	
	R/L	
Deep Squat	2	2
Hurdle Step	2/3	2
In-Line Lunge	2/2	2
Shoulder Mobility	3/2	2
Active Straight Leg Raise	1/2	1
Trunk Stability Push-Up	3	3
Rotary Stability	2/2	2
<b>TOTAL</b>		<b>14</b>

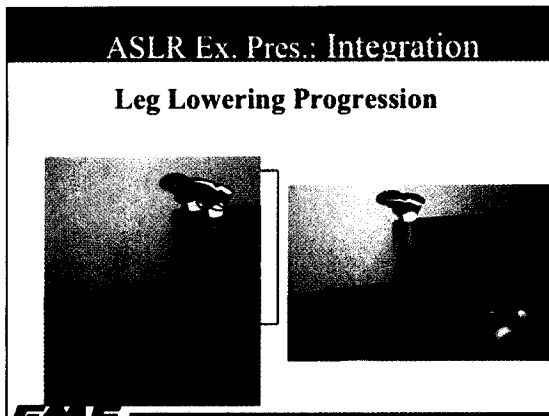


5 tests  
 involve  
 hip  
 mobility

this is more of a neuromuscular restriction, can be fix easily.

what we need to avoid?  
 and what we need to do?  
 what other area that need strengthen.  
 squat & push up more symmetrical pattern strengthening  
 avoid, split stand.  
 hip flexor dominant, weak glutes.

look up at a pattern not a single muscle  
 it is a proprioceptive dysfunction  
 stabilize abdominal core then lift the leg.



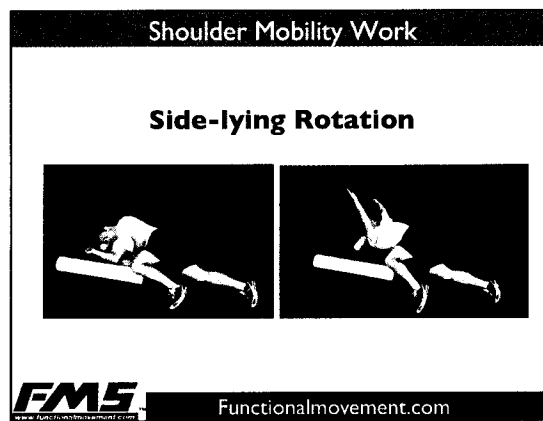
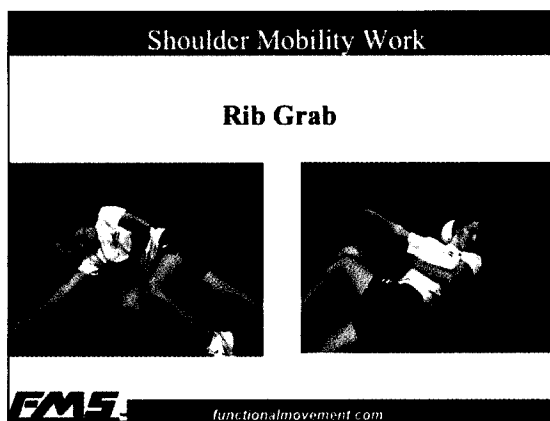
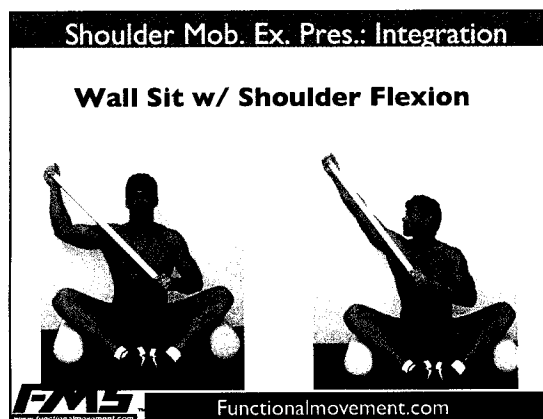
could have ankle injury = stretch on hip flexor.

*needs more conditioning  
Less corrective ex*

*Always work proximal to distal*

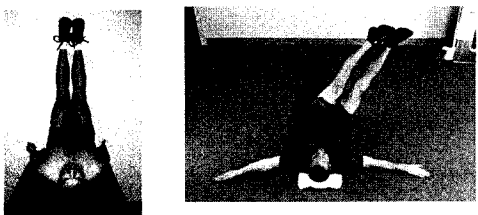
FMS SCORING SHEET		
SCREEN	RAW SCORE	FINALSORE
	R/L	
Deep Squat	2	2
Hurdle Step	2 / 3	2
In-Line Lunge	3 / 2	2
Shoulder Mobility	3 / 2	2
Active Straight Leg Raise	2 / 2	2
Trunk Stability Push-Up	3	3
Rotary Stability	2 / 2	2
	<b>TOTAL</b>	<b>15</b>

**FMS** functionalmovement.com



**Shoulder Mobility Work**

**Trunk Stability Rotation**



**FMS** functionalmovement.com

**FMS SCORING SHEET**


SCREEN	RAW SCORE R/L	FINALSORE
Deep Squat	2	2
Hurdle Step	2 / 3	2
In-Line Lunge	2 / 2	2
Shoulder Mobility	2 / 2	2
Active Straight Leg Raise	2 / 2	2
Trunk Stability Push-Up	3	3
Rotary Stability	1 / 2	1
<b>TOTAL</b>		<b>14</b>

**FMS** functionalmovement.com

*motor control problem.*

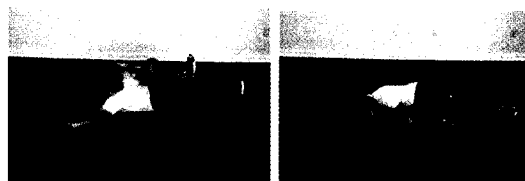
*The more squat open the lower pubic & lower core muscles ✓*

**Quadruped Rocking**



**FMS** functionalmovement.com


**Rolling Patterning**



**FMS** functionalmovement.com

Rotary Stability Work

**Resisted Quad. Diag.**



**FMS** functionalmovement.com

**FMS SCORING SHEET**

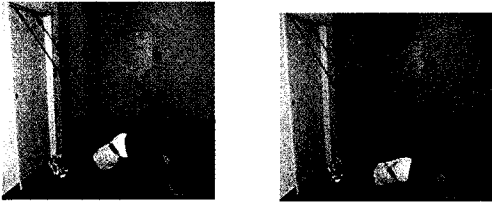
SCREEN	RAW SCORE	FINALS CORE
Deep Squat	<u>1/1</u>	<u>1</u>
Hurdle Step	<u>2 / 2</u>	<u>2</u>
In-Line Lunge	<u>2 / 2</u>	<u>2</u>
Shoulder Mobility	<u>3 / 3</u>	<u>3</u>
Active Straight Leg Raise	<u>2 / 2</u>	<u>2</u>
Trunk Stability Push-Up	<u>1</u>	<u>1</u>
Rotary Stability	<u>2 / 2</u>	<u>2</u>
<b>TOTAL</b>		<b>13</b>

**FMS** functionalmovement.com

*dis-function*

TSPU Ex. Progression


**Core Engagement Push-up**



**FMS** functionalmovement.com

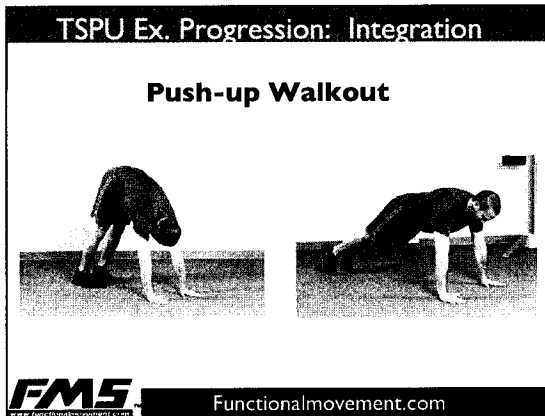
TSPU Ex. Progression

**Incline Push-up**



**FMS** functionalmovement.com

score 2 on lunge.  
 → good dors

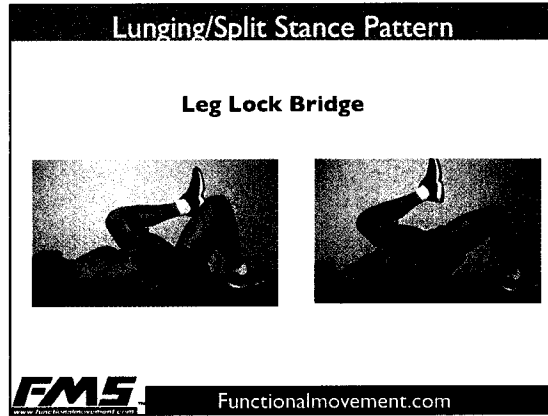
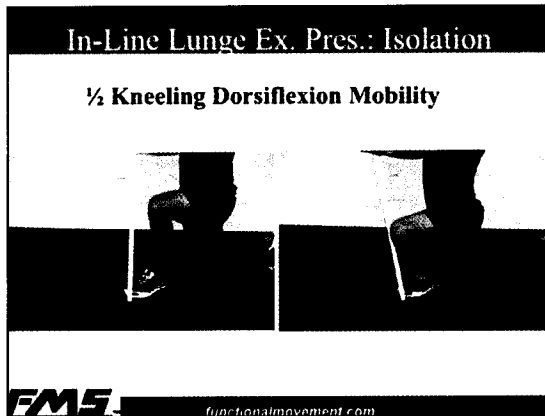


**FMS SCORING SHEET**

SCREEN	RAW SCORE R/L	FINALSORE
Deep Squat	1	1
Hurdle Step	2/2	2
In-Line Lunge	1/2	1
Shoulder Mobility	2/2	2
Active Straight Leg Raise	2/2	2
Trunk Stability Push-Up	3	3
Rotary Stability	2/2	2
<b>TOTAL</b>		<b>13</b>

No running  
 split  
 standing

more motor control due to the facts the




squat restriction  
 dorsiflexion deficient

neuromuscular control

**Lunging/Split Stance Pattern**

**Half-Kneeling Hip Flexor w/ Core Engagement**



**FMS** Functionalmovement.com

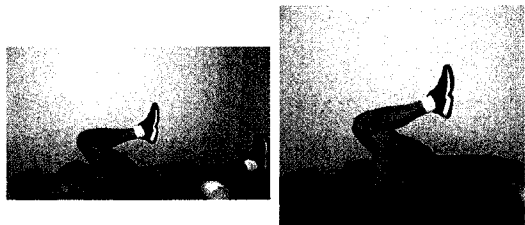
**FMS SCORING SHEET**

SCREEN	RAW SCORE	FINAL SCORE
Deep Squat	<u>2</u>	<u>2</u>
Hurdle Step	<u>2 / 3</u>	<u>2</u>
In-Line Lunge	<u>2 / 2</u>	<u>2</u>
Shoulder Mobility	<u>3 / 3</u>	<u>3</u>
Active Straight Leg Raise	<u>2 / 2</u>	<u>2</u>
Trunk Stability Push-Up	<u>3</u>	<u>3</u>
Rotary Stability	<u>2 / 2</u>	<u>2</u>
<b>TOTAL</b>		<u>16</u>

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**Hurdle Step Pattern**

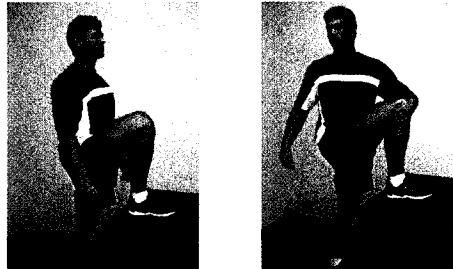
**Straight Leg Bridge**



**FMS** Functionalmovement.com

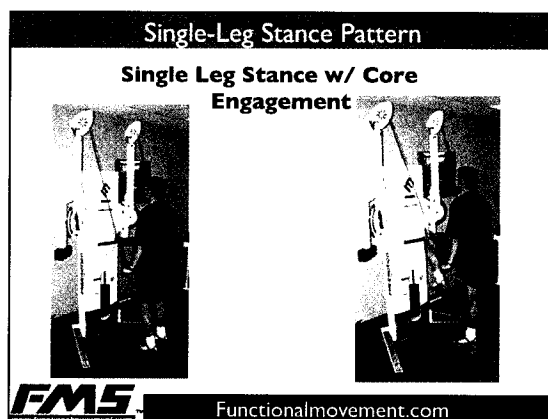
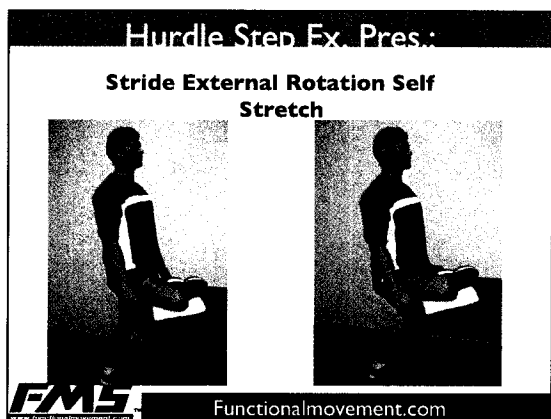
**Hurdle Step Ex. Pres:**

**Stride Self-Stretch**



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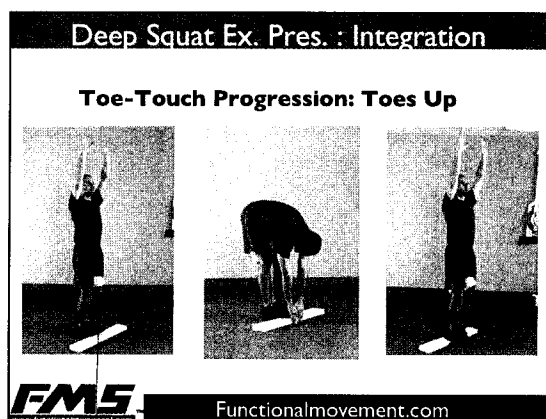
**FMS SCORING SHEET**

SCREEN	RAW SCORE	FINALSORE
Deep Squat	1	1
Hurdle Step	2 / 2	2
In-Line Lunge	2 / 2	2
Shoulder Mobility	2 / 2	2
Active Straight Leg Raise	2 / 2	2
Trunk Stability Push-Up	3	3
Rotary Stability	2 / 2	2
<b>TOTAL</b>		<b>14</b>

FMS functionalmovement.com

2nd ←

1st



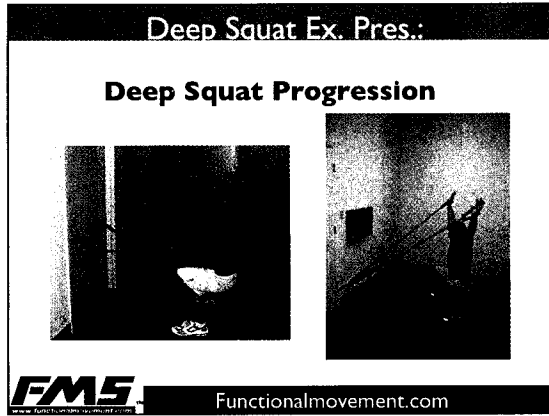
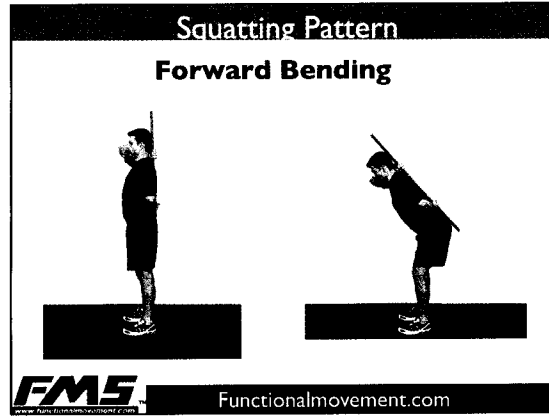
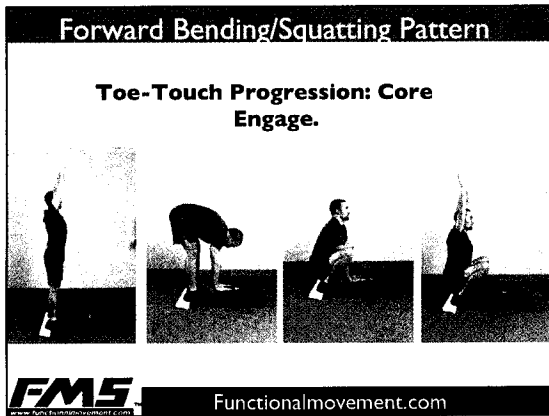
We should rule out significant shoulder and hip restriction

Towel squeeze  
relax flexor  
hip.

improve hip  
hinge movement.

reinforce the mistake.  
the brain will automatically correct the motor

11/2/10



## Functional Progressions: "The Flow"

1. **Assist** – For limited range.
2. **Stabilize** – For sloppy full range movement.
3. **RNT** – To create symmetry and improve quality.
4. **Resist** – To improve volume.
5. **Explode** – To motor learn



**FMS**  
www.functionalmovement.com

functionalmovement.com

## Functional Progressions

"The Patterns (movement that counts)"

**Squat**  
(symmetrical stance)



**Hurdle Step**  
(single leg stance)



**Lunge**  
(split stance)

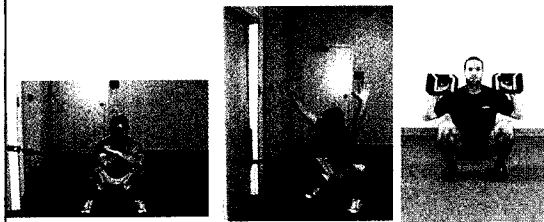


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## Squat Progression: Higher Level Activities

### Deep Squat Progressions



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## Squat Progression: Higher Level Activities

### Chop Progressions



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**In-Line Lunge Prog.: Higher Level Activities**

**Scissor Stance Chop and Lift**

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**Shoulder Mob. Prog.: Higher Level Activities**

**Kneeling Alternate Shoulder Flex/Ext**

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**Shoulder Mob. Prog.: Higher Level Activities**

**Kneeling Alternate Shoulder Flex/Ext**

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**ASLR Exercise Prog: Higher Level Activities**

**Bridge Progressions**

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ASLR Exercise Prog: Higher Level Activities

**Bridge w/ Hip Flexion**

**FMS**  
www.functionalmovement.com functionalmovement.com

ASLR Exercise Prog: Higher Level Activities

**Dead Lift Progressions**

**FMS**  
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ASLR Exercise Prog: Higher Level Activities

**Dead Lift Progressions**

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TSPU Ex. Prog. Higher Level Activities

**Shoulder Tap Push-up**

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# VERBAL INSTRUCTIONS FOR THE FUNCTIONAL MOVEMENT SCREEN

---

The following is a script to use while administering the FMS. For consistency throughout all screens, this script should be used during each screen. The bold words represent what you should say to the client.

**Please let me know if there is any pain while performing any of the following movements.**

## DEEP SQUAT

---

EQUIPMENT NEEDED: DOWEL

### INSTRUCTIONS

- **Stand tall with your feet approximately shoulder width apart and toes pointing forward.**
- **Grasp the dowel in both hands and place it horizontally on top of your head so your shoulders and elbows are at 90 degrees.**
- **Press the dowel so that it is directly above your head.**
- **While maintaining an upright torso, and keeping your heels and the dowel in position, descend as deep as possible.**
- **Hold the descended position for a count of one, then return to the starting position.**
- **Do you understand the instructions?**

Score the movement.

The client can perform the move up to three times total if necessary.

If a score of three is not achieved, repeat above instructions using the 2 x 6 under the client's heels.

## HURDLE STEP

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EQUIPMENT NEEDED: DOWEL, HURDLE

### INSTRUCTIONS

- Stand tall with your feet together and toes touching the test kit.
- Grasp the dowel with both hands and place it behind your neck and across the shoulders.
- While maintaining an upright posture, raise the right leg and step over the hurdle, making sure to raise the foot towards the shin and maintaining foot alignment with the ankle, knee and hip.
- Touch the floor with the heel and return to the starting position while maintaining foot alignment with the ankle, knee and hip.
- Do you understand these instructions?

Score the moving leg.

Repeat the test on the other side.

Repeat two times per side if necessary.

## INLINE LUNGE

---

EQUIPMENT NEEDED: DOWEL, 2X6

### INSTRUCTIONS

- Place the dowel along the spine so it touches the back of your head, your upper back and the middle of the buttocks.
- While grasping the dowel, your right hand should be against the back of your neck, and the left hand should be against your lower back.
- Step onto the 2x6 with a flat right foot and your toe on the zero mark.
- The left heel should be placed at \_\_\_\_\_ mark. *This is the tibial measurement marker.*
- Both toes must be pointing forward, with feet flat.
- Maintaining an upright posture so the dowel stays in contact with your head, upper back and top of the buttocks, descend into a lunge position so the right knee touches the 2x6 behind your left heel.
- Return to the starting position.
- Do you understand these instructions?

Score the movement.

Repeat the test on the other side.

Repeat two times per side if necessary.

## ROTARY STABILITY

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EQUIPMENT NEEDED: 2 X 6

### INSTRUCTIONS

- **Get on your hands and knees over the 2x6 so your hands are under your shoulders and your knees are under your hips.**
- **The thumbs, knees and toes must contact the sides of the 2x6, and the toes must be pulled toward the shins.**
- **At the same time, reach your right hand forward and right leg backward, like you are flying.**
- **Then without touching down, touch your right elbow to your right knee directly over the 2x6.**
- **Return to the extended position.**
- **Return to the start position.**
- **Do you understand these instructions?**

Score the movement.

Repeat the test on the other side.

If necessary, instruct the client to use a diagonal pattern of right arm and left leg.

Repeat the diagonal pattern with left arm and right leg.

Score the movement.

## SPINAL FLEXION CLEARING

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### INSTRUCTIONS

- **Get on all fours, and rock your hips toward your heels.**
- **Lower your chest to your knees, and reach your hands in front of your body as far as possible.**
- **Do you understand these instructions?**
- **Do you feel any pain?**



TEST	RAW SC	FINAL	TEST	RAW SC	FINAL	TEST	RAW SC	FINAL
DEEP SQUAT	3	3	DEEP SQUAT	3	3	DEEP SQUAT	2	2
HURDLE ST. <u>L</u>	2	2	HURDLE ST. <u>L</u>	2	2	HURDLE ST. <u>L</u>	2	2
HURDLE ST. <u>R</u>	2	2	HURDLE ST. <u>R</u>	2	2	HURDLE ST. <u>R</u>	2	2
IN-LINE LUN. <u>L</u>	2		IN-LINE LUN. <u>L</u>			IN-LINE LUN. <u>L</u>		
IN-LINE LUN. <u>R</u>	2		IN-LINE LUN. <u>R</u>			IN-LINE LUN. <u>R</u>		
SHO. MOB. <u>L</u>	2	2	SHO. MOB. <u>L</u>			SHO. MOB. <u>L</u>		
SHO. MOB. <u>R</u>	3	3	SHO. MOB. <u>R</u>			SHO. MOB. <u>R</u>		
ACTIVE IMP. <u>L</u>			ACTIVE IMP. <u>L</u>			ACTIVE IMP. <u>L</u>		
ACTIVE IMP. <u>R</u>			ACTIVE IMP. <u>R</u>			ACTIVE IMP. <u>R</u>		
ASLR <u>L</u>			ASLR <u>L</u>			ASLR <u>L</u>		
ASLR <u>R</u>			ASLR <u>R</u>			ASLR <u>R</u>		
TSPU			TSPU			TSPU		
EXT			EXT			EXT		
ROT. STAB. <u>L</u>			ROT. STAB. <u>L</u>			ROT. STAB. <u>L</u>		
ROT. STAB. <u>R</u>			ROT. STAB. <u>R</u>			ROT. STAB. <u>R</u>		
FLX			FLX			FLX		
TOTAL			TOTAL			TOTAL		

TEST	RAW SC	FINAL	TEST	RAW SC	FINAL	TEST	RAW SC	FINAL
DEEP SQUAT			DEEP SQUAT			DEEP SQUAT		
HURDLE ST. <u>L</u>			HURDLE ST. <u>L</u>			HURDLE ST. <u>L</u>		
HURDLE ST. <u>R</u>			HURDLE ST. <u>R</u>			HURDLE ST. <u>R</u>		
IN-LINE LUN. <u>L</u>			IN-LINE LUN. <u>L</u>			IN-LINE LUN. <u>L</u>		
IN-LINE LUN. <u>R</u>			IN-LINE LUN. <u>R</u>			IN-LINE LUN. <u>R</u>		
SHO. MOB. <u>L</u>			SHO. MOB. <u>L</u>			SHO. MOB. <u>L</u>		
SHO. MOB. <u>R</u>			SHO. MOB. <u>R</u>			SHO. MOB. <u>R</u>		
ACTIVE IMP. <u>L</u>			ACTIVE IMP. <u>L</u>			ACTIVE IMP. <u>L</u>		
ACTIVE IMP. <u>R</u>			ACTIVE IMP. <u>R</u>			ACTIVE IMP. <u>R</u>		
ASLR <u>L</u>			ASLR <u>L</u>			ASLR <u>L</u>		
ASLR <u>R</u>			ASLR <u>R</u>			ASLR <u>R</u>		
TSPU			TSPU			TSPU		
EXT			EXT			EXT		
ROT. STAB. <u>L</u>			ROT. STAB. <u>L</u>			ROT. STAB. <u>L</u>		
ROT. STAB. <u>R</u>			ROT. STAB. <u>R</u>			ROT. STAB. <u>R</u>		
FLX			FLX			FLX		
TOTAL			TOTAL			TOTAL		

TEST	RAW SC	FINAL	TEST	RAW SC	FINAL	TEST	RAW SC	FINAL
DEEP SQUAT			DEEP SQUAT			DEEP SQUAT		
HURDLE ST. <u>L</u>			HURDLE ST. <u>L</u>			HURDLE ST. <u>L</u>		
HURDLE ST. <u>R</u>			HURDLE ST. <u>R</u>			HURDLE ST. <u>R</u>		
IN-LINE LUN. <u>L</u>			IN-LINE LUN. <u>L</u>			IN-LINE LUN. <u>L</u>		
IN-LINE LUN. <u>R</u>			IN-LINE LUN. <u>R</u>			IN-LINE LUN. <u>R</u>		
SHO. MOB. <u>L</u>			SHO. MOB. <u>L</u>			SHO. MOB. <u>L</u>		
SHO. MOB. <u>R</u>			SHO. MOB. <u>R</u>			SHO. MOB. <u>R</u>		
ACTIVE IMP. <u>L</u>			ACTIVE IMP. <u>L</u>			ACTIVE IMP. <u>L</u>		
ACTIVE IMP. <u>R</u>			ACTIVE IMP. <u>R</u>			ACTIVE IMP. <u>R</u>		
ASLR <u>L</u>			ASLR <u>L</u>			ASLR <u>L</u>		
ASLR <u>R</u>			ASLR <u>R</u>			ASLR <u>R</u>		
TSPU			TSPU			TSPU		
EXT			EXT			EXT		
ROT. STAB. <u>L</u>			ROT. STAB. <u>L</u>			ROT. STAB. <u>L</u>		
ROT. STAB. <u>R</u>			ROT. STAB. <u>R</u>			ROT. STAB. <u>R</u>		
FLX			FLX			FLX		
TOTAL			TOTAL			TOTAL		

1, 2, 3 are functional food stance.

4, 5, 6, 7 = of what's right or wrong on first 3.  
make it difficult by compensation, reliability  
goal is to pass, which is at 2. not 3.