



Biomechanics of Sports

FMS Practice Test #1

April 10, 2020



Lesson: April 10, 2020

Objective/Learning Target:

The student will be able to explain the importance of the sequence of learning movement, and then apply it to a real world application when teaching new movement concepts.



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Instructions

Review the following passage and then take the quiz over section 1 of the FMS.

Understanding Movement

1. Story of Lee Burton with Gray Cook in the clinic discovering the difference between parts and patterns:
 - A. As a clinician, Lee learned through his experience to look at the cause, not the source of the pain.
 - B. Learning to focus on the movement patterns rather than the site of injury and investigating the possible cause of the injury was a new concept for Lee. This approach helped develop a different process for treating patients.
 - C. This was also a new approach to chronic injury, beyond traditional treatment that had been failing.
 - D. The standards shouldn't be based on generic information or answers.
 - E. Instead, the screen provides a feedback loop to create the standards.
 - » The Functional Movement Screen is based on the individual's movement patterns.
 - » It identifies movement dysfunction that may be contributing or causing the injury.
 - » The traditional approach treats the injury but doesn't look for potential dysfunction in movement, therefore injury reoccurs.
 - » A tighter feedback loop allows us a better approach to more skillful training and coaching.



Understanding Why

1. "Why", Principles and Truths behind the FMS
 - A. Human Movement:
 - » Initially shaped by DNA
 - » Environment participates in the continuous shaping and expression of movement.
 - » Allows adaptation to need of environment for survival
 - » DNA gives you best movement learning platform.
 - » Brain loves data and movement patterns.
 - » Our goal with human movement is to take what nature gave us and optimize it.
 - B. Our role
 - » We can't develop human movement better than nature.
 - » Robust human movement, since beginning of time, was and is shaped by the environment.
 - » Human adaptation potential exists, so what can we do to facilitate the process?



- . Our controlled environments:
 - a. Rehabilitation
 - b. Physical Education
 - c. Fitness
 - d. Performance
 - e. Specialization
2. We strive to do it safer and maybe faster
3. Manage risk
4. Seek the richest environment that is appropriate for the individual
5. Manage resources (time, money and energy) with tighter feedback loop
6. Protect you from yourself and your environment while letting the necessary stress get to you that allows you to adapt



1. Principle #1: First Move Well. Then Move Often.
 - A. Minimum level of acceptable movement to produce feedback so that you can adapt with exposure to your environment.
 - » Move Well = minimum level of acceptable movement
 - » Move Often = adapt so you can move more with greater ability
2. Principle #2: Protect. Correct. Develop.
 - A. Professional responsibility
 - B. First job is to protect them from themselves, you (training program) and their environments
 - C. Then, correct what is necessary
 - D. Then change the environment so they develop
3. Principle #3: Create systems to protect your principles
 - A. Allows you to have a feedback loop, documentation, communication, accountability and standard operating procedures



Principle #1: First Move Well, Then Move Often

1. Principle #1: First Move Well, Then Move Often
 - A. FMS company logo shows us the emphasis of “we must move well period (.) before we move often”
 - B. Moving well means you are movement literate
 - C. We have developed tools (FMS) to allow us to see where movement is acceptable, and movement is unacceptable
 - D. When you are movement literate then you benefit from exposure to different environments and different volumes throughout your lifetime
 - E. “First move well enough to respond to signals from the environment.”
 - » Movement literate
 - » Fundamental movement
 - F. “Secondly, move enough in that environment to cause adaptation”
 - » Strength and Conditioning
 - » Agility and Coordination
 - » Stamina and Sustainability



- A. Study that looked at kids in the U.S. and in Europe by running a battery of physical tests and then comparing groups.
- B. If we look at movement today, what do we see? The current outlook is a decline of fundamental movement patterns. We see a population that lacks quality in movements that should be a birthright.
- C. The Kraus-Weber tests of 1954 in which 57.9% of American children failed a postural fitness test that only 8.7% of European children failed
 - » Tested 4458 American Children and 3156 European Children
- D. Findings implied that U.S. kids are not as fit.
- E. U.S. response has been to lower standards. For the last half-century, the United States continually reduced standards for military service.



Principle #2: First Protect, Then Correct, Then Develop

1. First Protect, Then Correct, Then Develop
 - A. Professional Responsibility
 - B. Natural environment exposes you to stress randomly
 - C. If you only work with Principle #1: “Move Well. Move Often”, then you only have hindsight to benefit from
2. First Protect
 - A. Protect means “Do no Harm” (Hippocrates)
 - B. As professionals, we must recognize that the random stress in someone’s natural environment can be much more than they need or can handle therefore they are challenged or put at risk
3. Then Correct
 - A. Corrective exercise is a supplementation for a pattern in the developmental sequence that is not working as well as it should
 - B. People move well at an early age through all seven patterns, but later in life they may not move as well.
 - C. We identify a movement related risk and apply exercise or strategies to improve the movement pattern ONLY when needed.
4. Then Develop
 - A. Once someone is movement literate in all 7 patterns, we can develop them by changing their environmental exposure
 - B. We are no longer engineering them. We are engineering their environmental exposure to produce certain physical attributes,



Quiz and Key

1. The Functional Movement Screen was created to
 - a. assess musculoskeletal problems and diagnose injury.
 - b. predict individuals that will sustain specific types of injuries.
 - c. provide an objective and reliable tool for looking at fundamental movement.
2. FMS used the Neurodevelopmental Sequence to choose the movement patterns that are tested because it
 - a. is related to medical benchmarks that doctors use to judge movement in infants.
 - b. is based on the developmental path as we first learned how to move and interact with our environment.
 - c. is the best predictor of someone's ability to learn new skills and identify potential athletic talent and performance.
3. What does fundamental movement mean?
 - a. You are looking at movement from the ground up.
 - b. You are looking at movement capacity and expression.
 - c. You are looking at movement patterns, not body parts.



4. If someone scores poorly showing a limitation in one of the Big 3 Functional Tests, what should this lead you to think?
 - a. Looking at the test they scored poorly in on a deeper level and assess each joint segment will give me more information as to the movement problem.
 - b. Looking at the next 4 Fundamental Tests is not necessary until we apply corrective strategies for the movement pattern in the Big 3 Functional Patterns.
 - c. Looking at the next Little 4 Fundamental Tests will give me more information on the movement requirements of mobility and stability needed in the functional movement.

5. What does it mean if you are “movement literate”?
 - a. That you are more susceptible to possible injury.
 - b. That you should seek out higher level skills with a coach.
 - c. That you can benefit from exposure to different environments.



6. FMS uses the phrase “Move Well. Move Often”. What does “Move Well” mean?
 - a. First move with the minimum level of acceptable movement.
 - b. First adapt to minimum required movements for sport and activity.
 - c. First expose yourself to the environment to develop physical capacity.

7. FMS uses the phrase “Move Well. Move Often”. What does “Move Often” mean?
 - a. Train your fundamental movements more.
 - b. Adapt so that you can move with greater ability.
 - c. Limit your environment to specialize in your ability.

8. Movement Principle #2 is associated with
 - a. our professional responsibility.
 - b. standard operating procedures.
 - c. Identifying the body’s natural process.



9. The goal of Movement Principle #3 is
 - a. to create your systems to protect the first two principles.
 - b. to validate your findings for your screens and procedures.
 - c. to adapt your systems to Functional Movement Systems training philosophy.

10. The FMS aims to answer the question
 - a. “Does someone show high level ability to perform in sports?”
 - b. “Does someone move so poorly that they are unfit for training?”
 - c. “Does someone have that ability to appropriately adapt to training?”



Section 1 Answer Key

1. c
2. b
3. C
4. a
5. c
6. a
7. b
8. a
9. a
10. c