Keeping Our Athletes Safe: Functional Assessments

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Objectives

• Define why functional assessments are useful in conjunction with traditional methods

• Identify “red flags” that may call for a referral to an orthopedist or physical therapist

• Describe three functional assessments that can be used by healthcare professionals, athletic trainers, and coaches to determine functional limitations.
What is it?

• Looking at how the athlete moves
• Quality not quantity

When would I use these?

School Nurse
• Pre-participation screens
• In nurse’s office

Coach
• Meeting your athletes
• During practice

Athletic Trainer & Physical Therapist
• Pre-participation screens
• Return to sport
All the puzzle pieces...

Subjective Reports

- Subjective Reports
  - Open to interpretation
All the puzzle pieces...

Subjective Reports

ROM, Strength, Flexibility

- Isolated to body segment
- Important to know any major limitations
- However, do not have strong correlation to functional ability\(^1\)

ROM, Strength, Flexibility
All the puzzle pieces...

- Subjective Reports
- ROM, Strength, Flexibility
- Performance Tests

Performance Tests

- Performance Tests
  - Do not evaluate efficiency
All the puzzle pieces...

Subjective Reports

ROM, Strength, Flexibility

Performance Tests

Functional Assessment

Full body movement

Quality is assessed

Linked to injury risk 3,4,5,10

Create strength and conditioning programs 2,8,13,14

All the puzzle pieces...

Functional Assessment
Red Flags

• When to refer?
  – Injury or pain
  – Movement abnormalities

Functional Assessments

• Lateral Plank
• Broad Jump
• Functional Movement Screen
  – 7 tests
  – Indicative of injury risk\textsuperscript{3,8}
    • Deep squat
    • Active SLR
Lateral Plank

• Core strength and endurance\textsuperscript{9,14}
• Looking at:
  – Straight body
  – Neutral spine
  – Scapular positioning

Broad Jump\textsuperscript{10}

• Ability to produce power, absorb force
• Looking at:
  – Take off position
  – Landing position
  – Control in air
Deep Squat

- Symmetrical mobility of hips, knees, ankles, thoracic spine, and shoulders
- Looking for:
  - Upright trunk
  - Past parallel
  - Knees over feet
  - Heels on ground

Active SLR

- Ability to maintain trunk stability during leg movement, as well as hamstring and gastroc-soleus flexibility
- Looking for:
  - Both legs straight
  - Head down
More resources?

- Other FMS tests\textsuperscript{4,5}
  - http://www.functionalmovement.com/
- Modified NFL Combine Tests\textsuperscript{10}
- Tuck Jumps
- Many, many others!

Then what?

- Corrective exercise
  - Based on deficits discovered
  - Can use the test position as an exercise
- PEP program
  - Warm up and strength/conditioning injury prevention program
- FIFA 11+
  - Warm up and strength/conditioning injury prevention program
References


References, cont’d


Thank you!