

Return to Play/Duty Testing

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Problem: How to determine
readiness for return to
competition/duty for high speed
athletes

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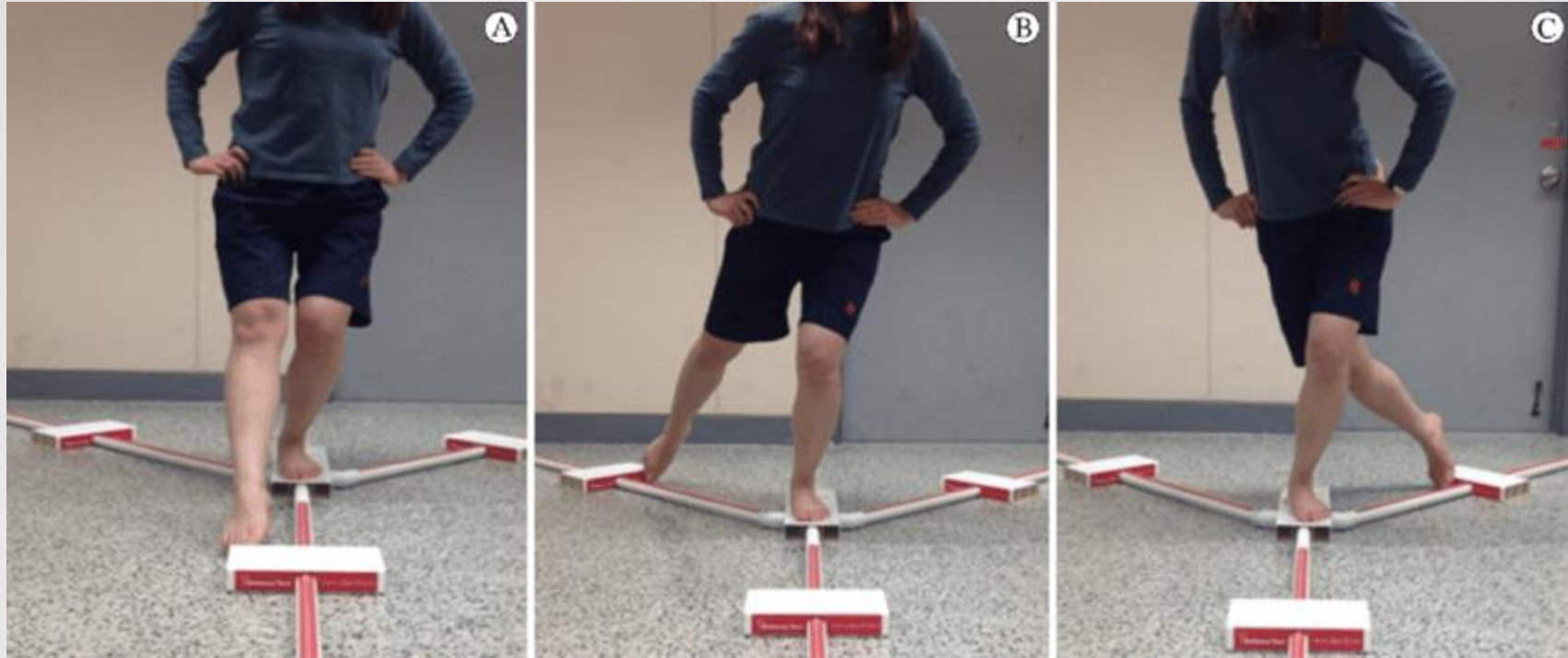
Cybex testing . . . ?



Bar Back Squat . . . ?



Single Leg Testing . . . ?



Y Balance Testing . . . ?

Test What . . . ?

Stability / Balance

Strength

Stopping / Starting / Elastic

Endurance ?

Speed - Force Production / Reduction

Power - Force Production / Reduction
with Additional Load

ROM ?

LE Testing Battery

1. Cleared for practice / Competition based on old model
2. 4 Way hop and stick test
3. Vertical hop
4. Circle test
5. Shuttle test
6. 5 Hop Series
 1. Forward
 2. Lateral
 3. Backward

Recommendations

- Observe Anxiety - if high cancel next event
- Video and score (for the doctor / parents / lawyer)
- Give adequate rest (up to 3-5 minutes) between each test repetition
- Use the tests as rehab and a measure of progress and or as a determination of participation

4 Way hop and stick

1. Tape in a cross / x pattern
2. Hop and land lateral right and hold 3.0 seconds
3. Back to middle and hold 3.0 seconds
4. Hop and land lateral left and hold 3.0 seconds
5. Back to middle and hold 3.0 seconds
6. Hop and land forward and hold 3.0 seconds
7. Back to middle and hold 3.0 seconds
8. Hop and land backward and hold 3.0 seconds
9. Back to middle and hold 3.0 seconds
10. Score + (stuck it w/balance) 0 (landed it and balanced) or – which is had to touch with other foot

Vertical Hop

1. Measure reach right and left handed off of opposite one leg stance
2. Vertical hop off of one foot opposite of reaching hand
3. Three tries allowed on each leg
4. Landing on two feet is permitted
5. Subtract the difference and multiply by 100 for the % difference between jumps

Do the math

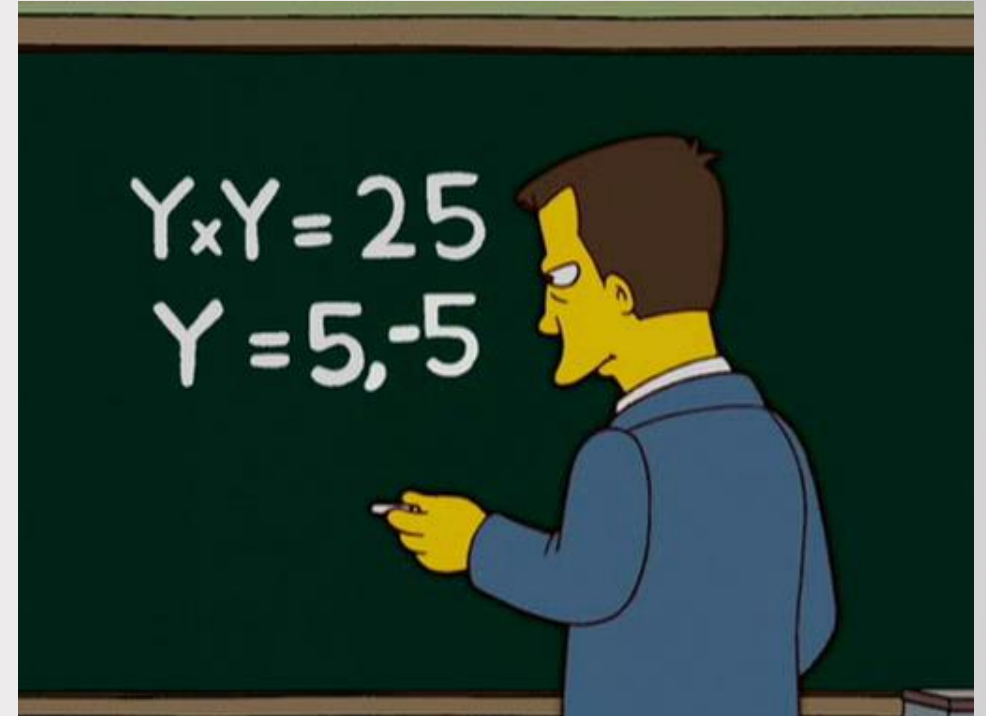
Score one is 22 (Rt)

Score two is 21 (Lft)

Divide 21 by 22 (.9545)

Multiply by 100 (.95)

This is the percentage to compare limbs
95% Lft to Rt



10 yd Circle Test (40 yds total)

Two Cones 10 yards apart

Run 2 laps with one leg outside

Rest

Run two laps with the other leg outside

Do the math!!

10 yd Shuttle Test (40 yds total)

Two Cones 10 yards apart

Run a shuttle test (down-back-down-back)
with one (same) foot touching each line

Rest

Run a shuttle test (down-back-down-back)
with opposite foot touching each line

Do the math!

* This is the first test you may observe apprehension!

5 Hop Linear Test

Place a tape measure (25 foot) on ground

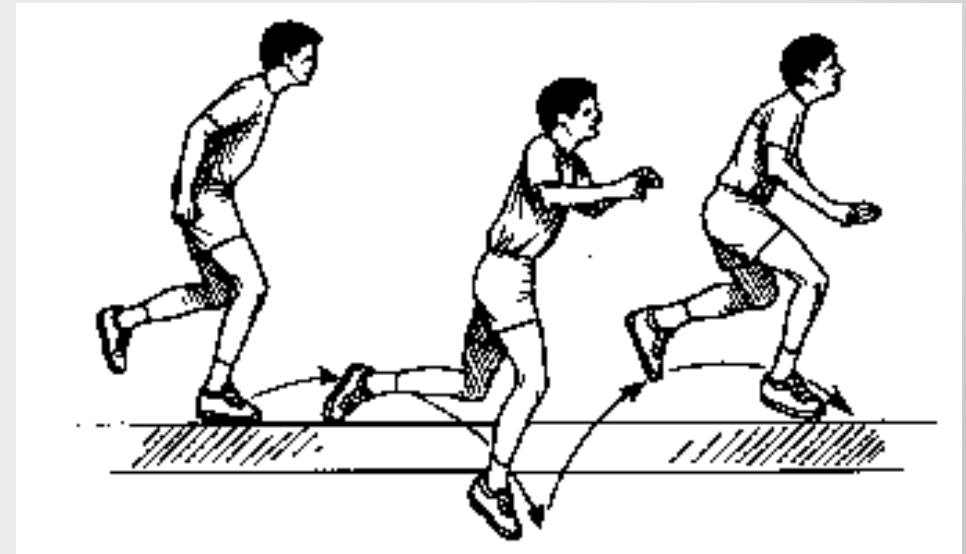
Tape off a start line

The athlete will hop (1 leg) on the same foot for 5 reps. Upon contact with the ground on the 5th rep, the heel is marked. The athlete will continue moving.

Rest

Repeat on the other foot / leg

Do the Math!!



5 Hop Lateral test

Tape measure and same protocol

The athlete will lift the leg NEAREST the direction of the lateral hops. The athlete will do 5 hops and the cumulative distance is measured.

Rest

Repeat the on the other foot / leg

Do The Math!!

** This is very similar to the mechanism of injury. Place close attention to apprehension



5 Hop Backward Test

Tape measure and same protocol

Backward hop (1 leg) 5 reps

Rest

Repeat on other leg

Do the Math!

* This is stopping strength! This usually scores in the low to mid 80% range first time out, even when released by the physician.

Example of Scoring

	Left	Right	Score	Dominant
1 Leg VJ	111 “	111”	0%	N/A
40 Yd Circle	8.371	8.611	97.2%	Left
40 Yd Shuttle	7.545	7.811	96.6%	Left
Ant 5 Hop	39’9”	39’0”	98.1%	Left
Lat 5 Hop	33’5”	32’0”	95.8%	Left
Post. 5 Hop	24’8”	21’7”	87.5%	Left

Core / Upper Extremity Testing

Core Series

Prone

Right

Left

Bridge Series

Prone Plank Series

Prone Plank – 3 reps each – in a row – no compensation / collapse

1 Leg Abduction – foot 1 inch off of the ground

Chicken Wing – to full scapular retraction

1 Arm Reaches – to full extension (most will be unable to achieve)

Score is + 0 –

+ = Great / 0 = average / - = pain or unable to do

Lateral Plank Outside

Top leg to full abduction without hip drop

Top leg swing anterior posterior w/o knee flexion while staying stable thru the core

Apple Pickers – Reach up with top arm and reach under and rotate to reach behind – rotate thru the core as the axis

Score is + 0 –

+ = Great / 0 = average / - = pain or unable to do

Lateral Plank Inside

Hip up and Hip drop full ROM floor to lateral extension +

Bottom leg taps – knee flexion for foot clearance and tap the toe front and back of the top supporting leg

Apple Pickers - Reach up with top arm and reach under and rotate to reach behind – rotate thru the core as the axis

Score is + 0 –

+ = Great / 0 = average / - = pain or unable to do

*Pain at MCL means low medial leg strength overall and compensation should be allowed by using the hand or foot to self spot

Bridge Up Series

2 Leg Bridge Up – ASIS at same height, glutes contracted, abs braced, straight line knee to shoulder at extension

1 leg / opposite leg crossed over the thigh at the mid shin level

1 leg straight – swing the leg from the hip anterior posterior while extending the stable hip for support

1 leg straight – swing the leg from hip in AB and AD duction while extending the stable hip for support

Upper Extremity Testing



Prone Endurance Test

Y's – 10 / 15 / 20

T's – 10 / 15 / 20

A's - 10 / 15 / 20

Wings – 10 / 15 / 20

10 – 15 – 20 reps / Score + 0 - / - = pain, 0 = discomfort, + = good

DB curl to press windmill

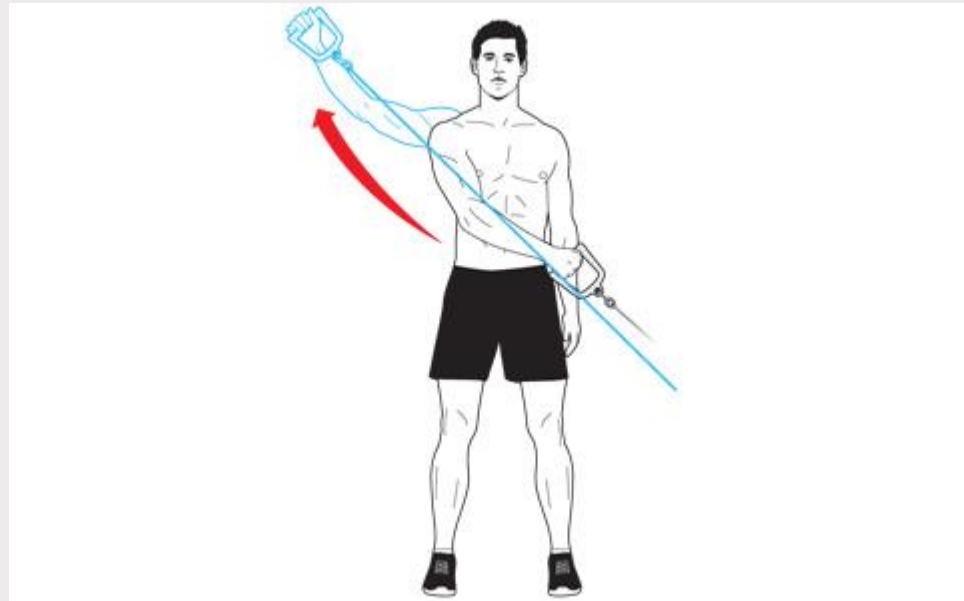
10% of Body Weight – 10 Reps of Each

DB/KB is rotated palm away from the head as the windmill is performed.

Slide hand goes down the inside of the leg.

10 – 15 – 20 reps / Score + 0 - / - = pain, 0 = discomfort, + = good

Draw the Sword



10 – 15 – 20

Score + 0 - / - = pain, 0 = discomfort, + = good

Shoulder Step Ups

Linear right and left arm lead – 10 / 15 / 20

Lateral right and left arm – 10 / 15 / 20

Crossover – right and left arm – 10 / 15 / 20

Use an “aerobics” 6” box max in terms of height

Score + 0 - / - = pain, 0 = discomfort, + = good

Crawling Series

Forward

Backward

Lateral

Cross Over

Carioca

10-15-20 Reps / Score + 0 - / - = pain, 0 = discomfort, + = good

Medicine ball slams

Supine Slam - lay on back & head stays on floor as ball is slammed off wall

Head is farthest from wall and subject is 2 body lengths from wall.

Execute 10 reps with power – no discomfort or pain

Prone Slam - lay on stomach, ball is tapped on mid T-spine and thrown overhead off wall and bounces back.

Head is closest to the wall and subject is 1 body length from wall.

Execute 10 reps in a row with good bounce and no pain or discomfort

10 – 15 – 20 reps / Score + 0 - / - = pain, 0 = discomfort, + = good



Thank you !!!