

○ **Single 1/3 Knee Bends:**



**W. Side to side lateral agility with cord:**

- **3 sets, 20reps, 3 times/week**

Attach the sport cord from the side with the surgical leg facing the cord. Step sideways to create tension on the cord. The athlete will hop laterally with cord resistance from their surgical leg, land momentarily on their non-surgical leg, only to return onto their surgical leg with the cord pulling them back to the starting position for a total test time of 80 seconds. Each repetition of 1 second includes exploding laterally off the surgical side, landing momentarily on the opposite leg, and then returning to the starting position with emphasis on absorbing by bending at the hip and knee with 30 degrees of knee excursion. Excursion is defined as the amount of absorption from knee flexion at landing to max knee flexion.



## **W. Diagonal side to side with cord:**

- **3 sets, 20-30 reps, 3 times/week**

Attach the sport cord from the side with the surgical leg facing the cord. Step sideways to create tension on the cord. The athlete will hop diagonally forward at a 45° angle with cord resistance from their surgical leg, land momentarily on their non-surgical leg, only to return onto their surgical leg with the cord pulling them back to the starting position. The following repetition the athlete will hop diagonally backward at a 45° angle. The goal is 80 seconds total. Each repetition of 1 second includes exploding diagonally forward or backward at 45° angles off the surgical side, landing momentarily on the opposite leg, and then returning to the starting position with emphasis on absorbing by bending at the hip and knee with 30 degrees of knee excursion. Excursion is defined as the amount of absorption from knee flexion at landing to max knee flexion.



## **X. Forward Box Lunges with cord:**

- **3 sets, 20-30 reps, 3 times/week**

The athlete will perform alternating forward lunges onto a box with cord resistance at a cadence of 2 seconds per lunge for a goal of 2.5 minutes. The movement is a forward lunge with maximum hip extension without compensation at the pelvis or spine throughout the 2.5 minutes.





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**HIP SPORT TEST**  
(Functional assessment, return to sport)

Name: \_\_\_\_\_  
M.D.: \_\_\_\_\_  
Dx: \_\_\_\_\_

Date: \_\_\_\_\_  
S/P \_\_\_\_\_ wks / mos

**Single Knee Bends (goal: 3 min)**

1 point for each 30 seconds  
Stopped test due to: *form pain endurance*  
Time: \_\_\_\_\_

Score: \_\_\_\_\_/6

**Lateral Agility (goal: 100 seconds)**

1 point for each 20 seconds  
Stopped test due to: *form pain endurance*  
Time: \_\_\_\_\_

Score: \_\_\_\_\_/5

**Diagonal Agility (goal: 100 seconds)**

1 point for each 20 seconds  
Stopped test due to: *form pain endurance*  
Time: \_\_\_\_\_

Score: \_\_\_\_\_/5

**Forward Box Lunges (goal: 2 min)**

1 point for each 30 seconds  
Stopped test due to: *form pain endurance*  
Time: \_\_\_\_\_

Score: \_\_\_\_\_/4

**Score: \_\_\_\_\_/20**  
(17 pass)

Test Administered By: \_\_\_\_\_

Facility Test Performed: \_\_\_\_\_  
\_\_\_\_\_

Future Program Instructions:

## ***Single Knee Bend***

**Purpose:** To test single leg endurance strength and evaluate patellar tracking.

**Supplies:** Sport Cord (Topper Sports Medicine, black cord)  
Goniometer  
Stopwatch

**Description:** The Athlete will perform single knee bends with cord resistance to 60° at a cadence of 1 second up and 1 second down for a goal of 3 minutes. The movement is between 30°-60° of flexion with the knee never fully straightening past 30° throughout the 3 minutes. To cue the athlete the depth of 60° the buttocks can lightly touch the seat of a chair or object. Two fingers are allowed for balance on a chair back.

**Setup:**

1. With a goniometer, measure a 60° knee bend and place a chair in a position to allow the athlete's buttocks to lightly touch at that depth.
2. The athlete places the heel of the foot on the cord at a position so the D-ring of the handle is aligned with the knee joint line to remove slack from the cord.
3. Tension is set by pulling the cord handle to the waist line and holding. Having the athlete hook their thumb around their pant line is helpful in maintaining tension on the cord.
4. Two fingers of the opposite hand are allowed to lightly touch another chair back for balance

**Technique:** The athlete must perform each repetition of a single knee bend without the following:

- Trendelenburg sign (pelvis must remain level)
- the knee locking in full extension
- the knee "collapsing" into medial rotation / adduction
- the patella extending past the toe

Cuing should be provided when one of the following compensations are noted. **If unable to correct STOP TEST.**

**Scoring:** One point is earned for each 30-second increment completed with proper form for a total of 6 possible points.

**Testing is stopped if and when:**

- Form: once the subject is unable to complete single knee bends without compensation even with cuing.
- Pain: the patient has pain > 3/10 OR reproduces their pain
- Endurance: the athlete fatigues

## *Lateral Agility*

**Purpose:** To test the ability of the leg to accept load (absorb) and push off in a lateral direction.

**Supplies:** Sport Cord (Topper Sports Medicine, black cord)  
Stopwatch and Tape

**Description:** The athlete will hop laterally with cord resistance from their surgical leg, land momentarily on their non-surgical leg, only to return onto their surgical leg with the cord pulling them back to the starting position for a total test time of 100 seconds. Each repetition of 1 second includes exploding laterally off the surgical side, landing momentarily on the opposite leg, and then returning to the starting position with emphasis on absorbing by bending at the hip and knee with 30 degrees of knee excursion. Excursion is defined as the amount of absorption from knee flexion at landing to max knee flexion.

**Setup:**

1. Place the belt through the sport cord handles and then attach around the waist.
2. Attach the other end of the sport cord to the door jam or secure post.
3. Stand sideways with the involved leg toward the cord attachment.
4. Step away laterally until tension is reached where the athlete slightly compensates with leaning and place a line with tape on the lateral aspect of the involved foot.
5. Measure the distance from the greater trochanter to the floor.
6. Use this measured distance to place a second tape line parallel to the first.

**Technique:** The athlete must perform each lateral hop by landing on or inside the first tape line with the involved foot and on or outside the second tape line with the uninvolved foot. Only one foot should be on the ground at the same time and the athlete must absorb onto the involved leg without the following:

- Trendelenburg sign (pelvis must remain level)
- the knee "collapsing" into medial rotation / adduction
- the patella extending past the toe
- losing control or stability

Cuing should be provided when one of the following compensations are noted. **If unable to correct STOP TEST.**

**Scoring:** One point is earned for each 20 second increment completed with proper form for a total of 5 possible points.

**Testing is stopped if and when:**

- Form: once the subject is unable to complete single knee bends without compensation even with cuing.
- Pain: the patient has pain > 3/10 OR reproduces their pain
- Endurance: the athlete fatigues

## ***Diagonal Lateral Agility***

**Purpose:** To test the ability of the leg to accept load (absorb) and push off in a diagonal direction.

**Supplies:** Sport Cord (Topper Sports Medicine, black cord)  
Stopwatch and Tape

**Description:** The athlete will hop diagonally forward at a 45° angle with cord resistance from their surgical leg, land momentarily on their non-surgical leg, only to return onto their surgical leg with the cord pulling them back to the starting position. The following repetition the athlete will hop diagonally backward at a 45° angle. The goal is 100 seconds total. Each repetition of 1 second includes exploding diagonally forward or backward at 45° angles off the surgical side, landing momentarily on the opposite leg, and then returning to the starting position with emphasis on absorbing by bending at the hip and knee with 30 degrees of knee excursion. Excursion is defined as the amount of absorption from knee flexion at landing to max knee flexion.

**Setup:**

1. Place the belt through the sport cord handles and then attach around the waist.
2. Attach the other end of the sport cord to the door jam or secure post.
3. Stand sideways with the involved leg toward the cord attachment.
4. Step away laterally until tension is reached where the athlete slightly compensates with leaning and place a line with tape on the lateral aspect of the involved foot.
5. Measure the distance from the greater trochanter to the floor.
6. Use this measured distance to place a second tape line at a 45° angle forward and a third tape line at a 45° backward to form a "V" if connecting the lines.

**Technique:** The athlete must perform each diagonal lateral hop by landing on or inside the first tape line with the involved foot and on or outside the second or third tape line with the uninvolved foot (Each foot should land parallel with each tape line). Only one foot should be on the ground at the same time and the athlete must absorb onto the involved leg without the following:

- Trendelenburg sign (pelvis must remain level)
- the knee "collapsing" into medial rotation / adduction
- the patella extending past the toe
- losing control or stability

Cuing should be provided when one of the following compensations are noted. **If unable to correct STOP TEST.**

**Scoring:** One point is earned for each 20-second increment completed with proper form for a total of 5 possible points.

**Testing is stopped if and when:**

- Form: once the subject is unable to complete single knee bends without compensation even with cuing.
- Pain: the patient has pain > 3/10 OR reproduces their pain
- Endurance: the athlete fatigues

## ***Forward Box Lunges***

**Purpose:** To test the lower extremity strength and endurance into extension.

**Supplies:** Sport Cord (Topper Sports Medicine, black cord)  
Stopwatch and Tape

**Description:** The athlete will perform alternating forward lunges onto a box with cord resistance at a cadence of 2 seconds per lunge for a goal of 2 minutes. The movement is a forward lunge with maximum hip extension without compensation at the pelvis or spine throughout the 2 minutes.

**Setup:**

1. Place the belt through the sport cord handles and then attach around the waist.
2. Attach the other end of the sport cord to the door jam or secure post.
3. Stand facing away from the cord attachment.
4. Step forward until tension is reached where the athlete slightly compensates by leaning and tape a line in front of the feet.
5. Measure the distance from the greater trochanter to the floor.
6. Place a stable box or chair the height of the athlete's knees in front of them at a distance equal to the measure of the greater trochanter to the floor.

**Technique:** The athlete must perform *alternating* forward lunges onto the box keeping their planted leg behind the line and extending the hip without the following:

- Trendelenburg sign (pelvis must remain level)
- Excessive lumbar hyperextension
- Pelvic rotation

Correct performance of this activity is through proper extension of the hip.

**Scoring:** One point is earned for each 30-second increment completed with proper form for a total of 4 possible points.

**Testing is stopped if and when:**

- Form: once the subject is unable to complete single knee bends without compensation even with cuing.
- Pain: the patient has pain > 3/10 OR reproduces their pain
- Endurance: the athlete fatigues