Functional Lower Extremity Exercises

Please use this prescribed program instead of your traditional weight room exercises. Please avoid back squats, power cleans, and other exercises that place the low back into a hyperextended position. This program is a functionally based and is a great way to build single leg strength, core stability, and hip activation. It can be used by healthy or previously injured athletes.

<u>Wall Squat:</u> Total Reps: 15-25 (3-5 sets x 3-5 reps)

- Set feet at hip/shoulder width apart, with feet at 11 & 1 (Clock)
- Sit back up against a wall, so the knees and hips are bent to 90° and the top of the thighs are parallel to the ground
- Make sure heels stay in contact with the ground
  - Add longer pause at base of squat (up to 15secs)
  - Add Weights in the hands (5lbs per hand) or on the legs (25lbs)

<u>Isometric Squat:</u> Total Reps: 15-25 (3-5 sets x 3-5 reps)

- Set feet at hip/shoulder width apart, with feet at 11 & 1 (Clock)
- Cross arms and put hands on shoulders while pulling the shoulder blades back
- Bending at the knees, sit the hips back (like sitting in a chair), until the top of the thighs are parallel with the ground
- Make sure the heels remain in contact with the ground
- Torso should stay at the same angle or greater than the Tibia
  - Add longer pause at the base of the squat (up to 15secs)
  - Add weight vest for additional resistance
  - NOTE: Adding weight in hands or arms changes exercise into 'Goblet Squat'

<u>Goblet Squat:</u> Total Reps: 20-30 (3-5sets x 4-10reps)

- Set feet at hip/shoulder width apart, with feet at 11 & 1 (Clock)
- Hold one end of a dumbbell or a kettlebell in the hands with the palms facing up
- Squat down (See above: Isometric Squat)
- While at the base of the squat the elbows should hover over or in between the knees
  - Adjust down phase and base phase to increase in time (up to 10secs)
  - Increase weight (Max for Post-Spondy Athlete 25lbs)

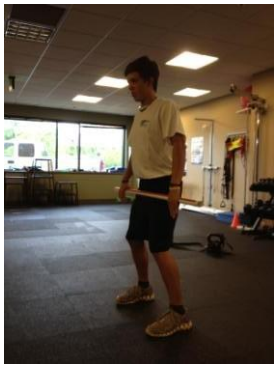
<u>Single Leg Squat:</u> Total Reps 10-15 each (3-5sets x 3-5 reps)

- Stand upright on one leg with the arms in front of the body to assist balance
- Take non working leg behind the body and squat down on single leg while maintaining a tall posture
- Squat as deep as possible while stabilizing movement at the knee, and return to standing
  - Stand on a box and squat deeper
  - Stand on a foam pad to add instability

Single Leg RDL (3 Points): Total Reps 15-20 each (3-5sets x 4-8 reps)

- Hold PVC Pipe or Wooden Dowel behind back with both hand, making 3 points of contact with the stick at: Head, Thoracic Spine, and Hips. Top Hand is behind the cervical curve, and bottom hand is behind the lumbar curve

- Stand on the same leg as the hand behind the lumbar curve
- While maintaining a soft bend in the knee, hinge at the hips and lean forward, maintaining all points of contact with the stick, raise the other leg behind the body making sure the foot points down
- When a point of contact on the stick is lost, or the stabilizing knee bends too much, hold that position then return to standing



Romanian Deadlift: Total Reps 20-30 (3-5sets x 4-10reps)

- Hold PVC Pipe or Wooden Dowel with overhand grip
- Softly bend the knees, and retract the shoulder blades down and back keeping the bar pressed against the legs
- Maintaining a neutral spine bend at the hips (keeping the bar against the legs) and lower the bar down
- Stop either when the bar reaches the bottom of the knee cap or when a neutral spine is lost, and return to standing
    - Adjust timing of down phase and base phase

Dumbbell Sumo Deadlift: Total Reps 20-30 (3-5 x 4-10)

- Set dumbbell upright on the floor between the heels
- Set feet a little wider than the shoulders and turned out at 45°, sit down into the base potion of a squat and grip the top of the dumbbell
- Retract the shoulders back and down, and maintain a neutral spine
- Stand tall, holding the dumbbell between the legs, return to base position
    - Add weight (Max for Post-Spondy Athlete 25lbs)
    - Adjust timing of down phase

For further evaluation and accurate exercise prescription of individuals, please contact Champion Sports Medicine– Athletic Performance department to schedule an appointment.