

Exercises will be performed 3 times a week. Experimental group will be divided into 3 groups and start at different exercises and work them in a circuit until complete. Exercises can be done in any order.

Floor:

Plank Hip Extension:

Participants will start facing down on elbows in plank position with trunk, hips, and knees in alignment (see near illustration). Participants will lift the right leg off of the ground, flex the knee of the right leg, and extend the hip backwards by bringing the heel toward the ceiling (see far illustration) for one second and then return to parallel for one second. This will be repeated for the left leg.



Week 1-2: Participants will perform two sets of 10 repetitions. Repeat for both legs.

Week 3-4: Participants will perform two sets of 15 repetitions. Repeat for both legs.

Week 5-6: Participants will perform two sets of 20 repetitions. Repeat for both legs.

Sidelying abduction:

Start with participant sidelying on non-dominant side. Participant flexes the hip and knee of the support side and then raises the dominant leg to approximately 30 degrees while maintaining neutral or slight hip extension and knee extension with the toes pointed forward for a count of two beats up and two beats down.

Week 1-2: Participants will perform two sets of 20 repetitions. Repeat for both legs.

Week 3-4: Participants will perform two sets of 20 repetitions. Repeat for both legs.

Week 5-6: Participants will not perform this exercise.



Side Plank Hip Abduction:

Participants will start in side plank position with dominant leg up. Participants will be reminded to keep their shoulders, hips, knees, and ankles in line vertically from left to right, while rising into the plank position with hips lifted off ground. The participants will be allowed upper extremity support as seen in the far illustration.

While balancing on an elbow and feet, the

participants will raise the top leg away from the midline of the body and back down in a controlled manner.

Participants will be reminded to not let the raised leg slip in front of the bottom leg because this will not target the appropriate muscle. Participants will maintain plank position throughout all repetitions. Exercises will be repeated on both sides.

Week 1-2: Participants will perform one set of 5 repetitions. Repeat for both legs.

Week 3-4: Participants will perform one set of 10 repetitions. Repeat for both legs.

Week 5-6: Participants will perform two sets of 10 repetitions. Repeat for both legs.



Bridges:

Side Bridge:

The participant will lie down sideways and support themselves with one arm. The other arm will rest on the hip. It is very important that the participant keeps their entire body straight. The participant's legs will be extended and aligned with the spine and head. The forearm of the supporting arm will be flat on the ground and the hand closed. The angle between the trunk and supporting upper arm will be 90°. (See picture right). Participant will push up on arm and feet to achieve neutral spine alignment.



Week 1-2: Participants will hold the side bridge position for 10 seconds for 3 repetitions. Repeat for both sides.
Week 3-4: Participants will hold the side bridge position for 20 seconds for 3 repetitions. Repeat for both sides.
Week 5-6: Participants will hold the side bridge position for 30 seconds for 3 repetitions. Repeat for both sides.

Supine Bridge and Single Leg Bridge

Start with participant in hook-lying position (left picture). The participant is instructed to bridge on both legs by keeping the feet on the floor and raising hips off the ground to achieve neutral trunk, hip, and knee alignment for one beat.



Week 1-2: Participant will perform two sets of 10 repetitions for 10 second holds.

Week 3-4: Participant will perform two sets of 15 repetitions for 10 second holds.

Week 5-6: From the position above, the participant extends the knee of the non-dominant leg to full knee extension while keeping the thigh parallel (see right picture) for one beat, return the non-dominant leg to the bridge position for one beat, and then lowers the body back to the ground for one beat. Participants will perform one set of 10 on each leg.



Ball:

Knee up:

The participants' body will face the ground in a push-up position: tight abdominals, straight back aligned with pelvis (hips, knees, elbows, and neck flexed approximately 0°, shoulders flexed approximately 90°, feet together, and hands shoulder width apart), with the center of the exercise ball positioned under the legs.



The participants will flex both the hips and knees 90° to 100°, with the knees moving towards the chest (see picture below).



Week 1-2: Participants will perform one set of 10 repetitions.

Week 3-4: Participants will perform two sets of 10 repetitions.

Week 5-6: Participants will perform one set of 15 repetitions.

Pike:

The participants' body will face the ground in a push-up position: tight abdominals, straight back aligned with pelvis (hips, knees, elbows, and neck flexed approximately 0°, shoulders flexed approximately 90°, feet together, and hands shoulder width apart), with the center of the exercise ball positioned under the legs (see near illustration).



The participants will flex the hips approximately 90° to 100°, while keeping the knees fully extended. (See far illustration)

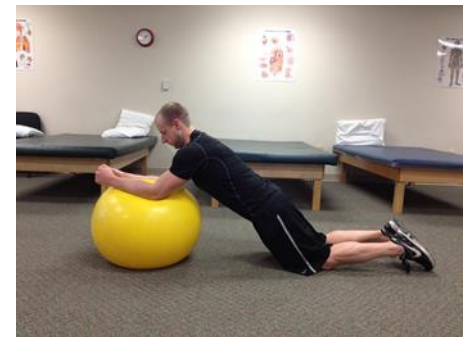
Week 1-2: Participants will perform one set of 5 repetitions.

Week 3-4: Participants will perform two sets of 5 repetitions.

Week 5-6: Participants will perform one set of 10 repetitions.

Roll Outs:

The participants will be in a starting position of kneeling with knees bent approximately 90°, trunk tall and straight, elbows fully extended, shoulders bent approximately 30°, and both hands positioned approximately in the center of the exercise ball (see near illustration). From this position, the participants will roll out on the exercise ball (tightened abdominals to keep the pelvis and trunk



straight and long) onto the forearms until the proximal forearms are approximately centered on the exercise ball with shoulders flexed approximately 90°. (see far illustration)

Week 1-2: Participants will perform two sets of 10 repetitions.

Week 3-4: Participants will perform two sets of 10 repetitions.

Week 5-6: Participants will perform two sets of 10 repetitions.

Adductor Ball Squeezes

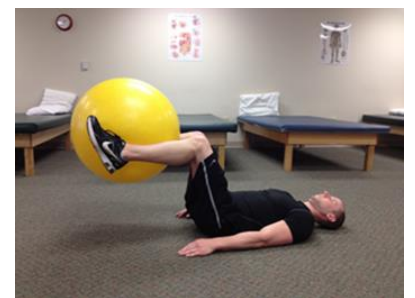
With Large Ball:

Participants will place an exercise ball between their feet and knees while lying on back, facing up. Their hips and knees will be flexed to 90°.

Week 1-2: Participants will perform ball squeeze for 30 seconds for 10 repetitions.

Week 3-4: Participants will perform ball squeeze for 30 seconds for 15 repetitions.

Week 5-6: Participants will perform ball squeeze for 30 seconds for 20 repetitions.



With Small Ball:

Participants will place an exercise ball between their knees while lying on back, facing up. Their hips and knees will be flexed to 90°.

Week 1-2: Participants will perform ball squeeze for 30 seconds for 10 repetitions.

Week 3-4: Participants will perform ball squeeze for 30 seconds for 15 repetitions.

Week 5-6: Participants will perform ball squeeze for 30 seconds for 20 repetitions.

