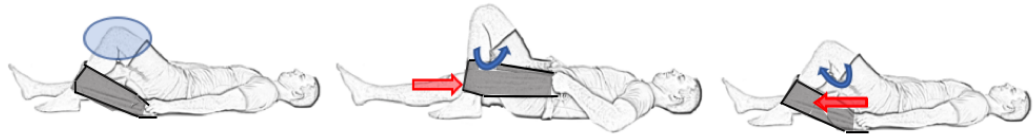


## Appendix B: TKA Prehab Home Exercise Program

### Prepared by Ellie Rubin, SPT

#### 1) Heel Slides

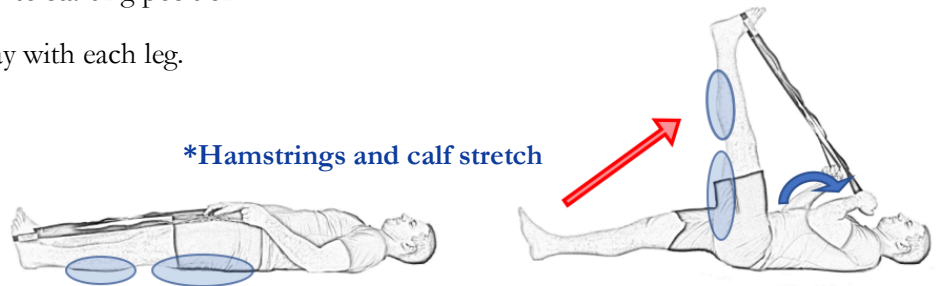


**\*Knee Range of Motion**

1. Set-up: Lie on your back with the knee slightly bent and towel around your ankle.
2. Bend the knee as far as you. Pull on the towel to increase the knee flexion.
3. Hold for 3-5 seconds and then return to starting position.

➤ Complete 2-3 sets of 8-12 reps per day with each leg.

#### 2) Hamstrings and Calf Stretch

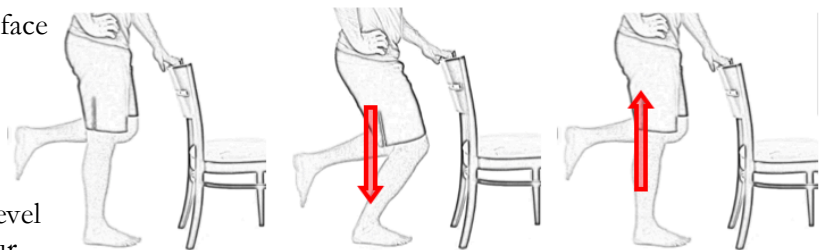


1. Set-up: Lie on your back with a long strap around your forefoot. Hold the ends of the strap in your hands.
2. Lift your leg straight up without bending the knee. Gently pull strap until you feel a stretch behind the thigh and calf.
3. Continue to pull gently on the strap as the **\*Hamstrings and calf muscles** begin to relax.

- For patients 64-years and younger, hold for 30 seconds; 3 sets on each leg with 30-second rest in between.
- For patients 65-years and older, hold for 60 seconds; 4 sets on each leg with 10-second rest in between.

#### 3) Single-leg Squat

1. Set-up: Stand on one leg using a stable surface like the back of a chair or countertop for support. Kneecap and toes are pointed straight ahead and the pelvis is level.
2. Bend your knee slowly to lower into a "semi-squat" position, keeping the pelvis level and knee facing forward. Do not allow your knee to pass over the front of the toes. Heel should be in contact with the ground at all times.



**\*Lower body functional strengthening**

3. Slowly straighten the knee while maintaining knee alignment and level pelvis.

➤ 2-3 sets of 8-12 reps with each leg; complete every other day.

#### 4) Seated Knee Extension



**\*Quad strengthening**

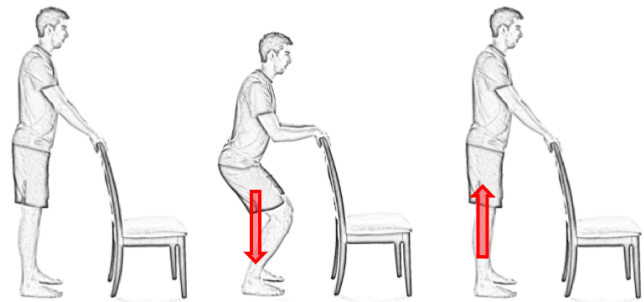
1. Set-up: Fasten one end of the band around the leg of a chair and the other end around your ankle so that there is no (or minor) slack.
2. Contract the **\*Quadriceps** to straighten the knee against the resistance of the band.
3. Maintain control of the band as you slowly bend the knee back to starting position.

➤ 2-3 sets of 8-12 reps with each leg; complete every other day.

## Additional Exercises (Optional)

### 5) Mini-Squats

1. Set-up: Stand with feet shoulder-width apart. Knees and toes are pointed straight ahead. Rest hands on a stable surface like the back of a chair or countertop.
2. While maintaining your back straight, push the hips slightly backwards and slowly bend your knees like you are going to sit in a chair. Keep both knees facing forwards and do not allow them to pass over the front of the toes. Heels should be in contact with the ground at all times.
3. Slowly stand up while maintaining hip and knee alignment.

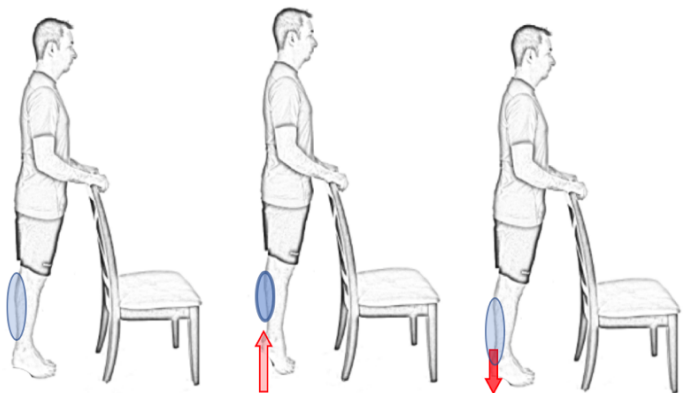


**\*Lower body functional strengthening**

➤ 2-3 sets of 8-12 reps; complete every other day.

### 6) Calf Raises

1. Set-up: Stand with feet hip-width apart and with knees and toes facing straight ahead. Rest hands on a stable surface, such as the back of a chair or countertop.
2. Contract the **\*Calf muscles** in both legs and raise up on your toes so that you are standing as tall as possible.
3. Slowly lower your heels while keeping the knees straight.



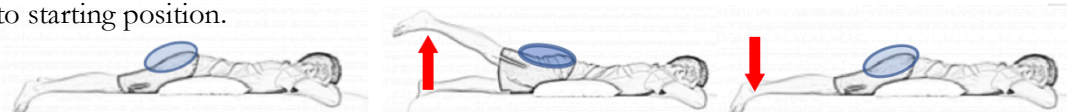
**\*Calf strengthening**

➤ 2-3 sets of 8-12 reps; complete every other day.

### 7) Prone Hip Extension

1. Set-up: Lie on your stomach. You can place a pillow under the abdomen for added comfort.
2. Contract the **\*Glutes** of one leg to raise it straight up. Keep the knee straight and do not arch your lower back.
3. Release slowly and return to starting position.

➤ 2-3 sets of 8-12 reps with each leg; complete every other day.



**\*Hip strengthening (targeting gluteal muscles)**

### 8) Side Leg Raise

1. Set-up: Lie on your side with your bottom leg bent.
2. Contract the **\*Hip abductors** of the top leg to lift it straight up.
3. Release slowly and return to start position. Do not allow the leg to move forwards when lifting/lowering. Keep the knee straight and toes forward the entire time.

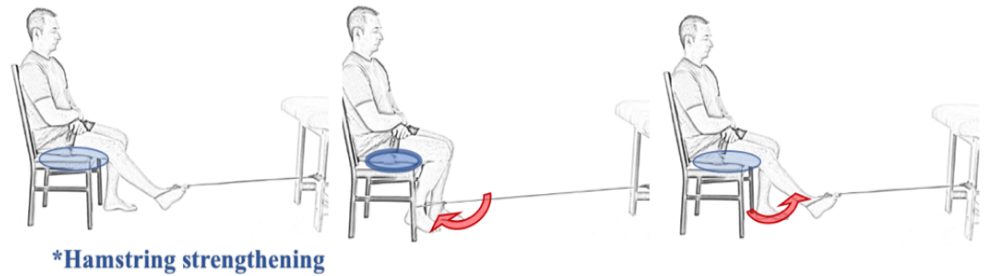


**\*Hip strengthening (targeting hip abductor muscles)**

➤ 2-3 sets of 8-12 reps with each leg; complete every other day.

## 9) Seated Knee Flexion

1. Set-up: Anchor one end of the band to a solid object, such as a table leg. Sit upright in a chair and secure the other end of the band around your ankle so that your leg is held out straight with firm tension.



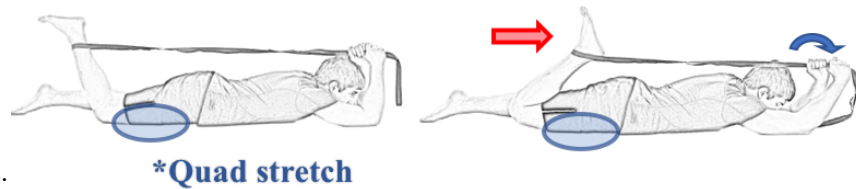
2. Contract the **\*Hamstrings** to bend your knee and draw your foot back towards the bottom of chair.

3. Maintain control of the band as you slowly relax the leg back to the starting position.

➤ 2-3 sets of 8-12 reps with each leg; complete every other day.

## 10) Quads Stretch

1. Set-up: Lie face down with a long strap around the ankle. Maintain an over-the-shoulder hold of strap ends.



2. Bend your knee and gently pull strap until you feel a stretch in the front of your thigh.

3. Continue to pull gently on the strap as the **\*Quadriceps muscles** begin to relax.

➤ For patients 64-years and younger, hold for 30 seconds; 3 sets on each leg with 30-second rest in between.

➤ For patients 65-years and older, hold for 60 seconds; 4 sets on each leg with 10-second rest in between.