

# Home Therapy Exercises for Iliotibial Band Syndrome (ITBS)



## What is ITBS?

The Iliotibial (IT) band is a thick “band” of tissue that runs along the outside of the thigh from the pelvis to the outside top of the shinbone. This band is important to help stabilize the knee during activities. The IT band can become irritated during motion of the knee as it rubs back and forth over the end of the thigh bone or top part of your knee replacement. Continued irritation can lead to inflammation causing pain, tenderness, and swelling over the outside portion of your knee. Sometimes a popping or snapping sensation along the outside of the knee may be reported. Pain in this area has come to be known as **Iliotibial Band Syndrome (ITBS)**.

## Signs and Symptoms

ITBS is a common condition that can result from weak or tight muscles leading to an imbalance of the muscles around the knee. Some chronic conditions such as obesity, arthritis, or repetitive activities also contribute to ITBS. It is more common in runners, rowers, and cyclists. Repetitive squatting or excessive activity on uneven surfaces or hilly terrain can irritate the IT Band.

Some patients who have knee arthritis or who have undergone a total knee replacement may develop ITBS. Patients with “**knock knees**” are at increased chance of developing IT Band syndrome because of the process needed to re-align the knee during surgery. You may feel pain on the outside of your knee along this band at any point in the recovery process. It can often hurt more at night and with the start of physical activity and exercise. If you are experiencing this type of pain, please discuss these symptoms with your orthopedic surgeon and seek a

diagnosis. Oftentimes an x-ray of your knee will be needed in order to rule out other problems such as fracture, knee implant loosening, or other possible conditions.

## Treatment

The good news is that conservative/nonsurgical treatment is usually all that is needed for ITBS. Surgery is very rarely needed for this problem. Since this condition is caused by swelling and inflammation, rest, ice, anti-inflammatory medications, and physical therapy exercises are effective treatment options:

- **REST** – Avoid heavy impact activities and long walks (**especially on uneven terrain**)
- **ICE** – Apply ice for 15-20 minutes to the affected area every 6-8 hours.
- **ANTI-INFLAMMATORY MEDICATIONS** – Nonsteroidal anti-inflammatory drugs (NSAIDs) (ibuprofen, naproxen, and meloxicam) and acetaminophen may help decrease the pain and swelling. You can also try topical creams/gels, such as diclofenac, aspercreme or capsaicin.
- **INJECTIONS** – You may be a candidate for a steroid injection around the inflamed area to help provide temporary relief.
- **EXERCISES** – An exercise program is highly recommended. We have provided a general exercise routine outlined below. Additionally a foam roller, electric massage gun, or scraping device to “massage” out deep tight areas along the IT band.

The American Association of Hip and Knee Surgeons (**AAHKS**) have outlined a home exercise program for you to treat your ITBS. Exercises will focus on stretching, strengthening, and endurance. Remember it may take 6 weeks or more to see improvement in the pain and discomfort. If you do not experience relief after 3 months of following this routine, we encourage you to contact your physician. It is ultimately up to you and your surgeon to find a routine that is most appropriate for your recovery. Your surgeon may recommend alterations to this routine. If you experience any abnormal discomfort or begin to feel ill during any exercise, we advise you to stop exercising and contact your surgeon as soon as possible.

### GENERAL TIPS FOR EXERCISING

- Talk to your healthcare provider first
- Stretch **SLOWLY** and in a controlled manner, avoid sudden or rapid motions
- Hold the stretch to the point you feel mild discomfort and relax as tolerated
- **MODIFY STRETCHES TO ACCOMMODATE FOR A PRIOR HIP OR KNEE REPLACEMENT**

You can expect some soreness when you first start a stretching program

#### DISCLAIMER

**PLEASE USE THESE EXERCISES AS A GUIDE AS IT IS ULTIMATELY BETWEEN YOUR AND YOUR SURGEON TO DECIDE WHICH THERAPY SETTING IS RIGHT FOR YOU. YOUR SURGEON MAY RECOMMEND ALTERATIONS TO THIS ROUTINE. IF YOU EXPERIENCE ANY ABNORMAL DISCOMFORT, DIZZINESS, OR FEELINGS OF PASSING OUT, STOP EXERCISING AND CONTACT YOUR PHYSICIAN AS SOON AS POSSIBLE.**



A tight IT band and surrounding muscles play a role in ITBS. Therefore, a dedicated stretching routine is important in recovering from this syndrome. Stretching helps to prevent injury by getting the muscles ready for a workout. Typically, patients are advised to spend **5-10 minutes** stretching before exercising. A heating pad or warm towel can be used to help relax the muscles in preparation for stretching. Massaging in a topical cream prior starting may also help in the process of getting warmed up. The following stretches can also be performed in-between exercises to keep the muscles from getting tight. It is recommended that your exercise program begin and finish with stretches. Ice can be applied to the knee or sore muscles after exercising.

## GENERAL TIPS FOR STRETCHING EXERCISES:

- Warm-up by walking 5-10 minutes to get your muscles ready for exercising
- Remember to stretch in a slow and controlled manner, avoid rapid motions
- Perform each stretch until you experience a “TOLERABLE DISCOMFORT” in the muscle – adjust the stretch to your comfort
- Try to hold the position for 10-30 seconds
- Slowly return back to the original starting position
- Take a deep breath and RELAX FOR 5 SECONDS between repetitions
- Cool-down—5-10 minutes of icing or slow walking to finish workout

**Note: You can expect some muscle soreness when you first start a stretching program**

# HAMSTRING STRETCH (SEATED)



Tight hamstring muscles can contribute to ITBS. We present three different ways to perform a hamstring stretch. Please select an option that both you and your surgeon are comfortable with. The hamstring muscles can be stretched differently depending on which position you choose. Therefore, we recommend alternating the hamstring stretch from time to time. **This exercise should be performed on both legs.**



1. Begin by sitting in a hardback chair, prop your leg on a stool or chair directly in front of you.

2. While keeping your back straight, slowly reach for your toes while at the same time keeping your knee straight. (You will feel a stretch along the muscles in the back of your thigh)

3. Try to hold for **30 seconds**

4. Slowly return to the starting position



**EXERCISE MODIFICATION**  
**HIP REPLACEMENT:** Please check with your surgeon before performing this particular exercise – You may need to limit your motion based on your surgeon's guidelines

REPS PER SET	HOLD STRETCH	# OF SETS
5-10	5-30 SECONDS	3

# HAMSTRING STRETCH (ADDITIONAL OPTIONS)



Lying on your back or standing are two other ways to stretch the hamstring muscles. You can use any position that is most comfortable for you. **This exercise should be performed on both legs.**



1. While lying on your back, place a towel or cord around the bottom of your foot.
2. While keeping your knee straight, slowly pull your leg in an upward direction using the towel to pull higher. (You will feel a stretch along the muscles in the back of your thigh)
3. Try to hold for **30 seconds**
4. Slowly return to the starting position

**OR**



1. While standing, place your foot on a stool or chair.
2. While keeping your knee straight, slowly bend forward to touch your toe. (You will feel a stretch along the muscles in the back of your thigh)
3. Try to hold for **30 seconds**
4. Slowly return to the starting position

REPS PER SET	HOLD STRETCH	# OF SETS
5-10	5-30 SECONDS	3

#### EXERCISE MODIFICATIONS

**HIP REPLACEMENT:** Please check with your surgeon before performing this particular exercise – You may need to limit your motion based on your surgeon’s guidelines

**KNEE REPLACEMENT:** You should bend the knee to a comfortable position that does not place additional stress on your knee replacement(s)



In addition to stretching the calf muscles, this stretch can also be used to focus on the IT band. These stretches are typically used during warm-ups to get your muscles ready for other exercises. You will need to **lean next to a wall or door** to complete this stretch. We recommend performing the stretches in two different ways. **This exercise should be performed on both legs.**



1. Start by placing your toes on the bottom of the wall/door with your heel on the ground. Be sure to keep your toes pointed forward at all times.
2. Remember to keep your knee straight and then lean forward until you feel stretch in the back of your calf
3. Try to hold for **30 seconds**.
4. Slowly return to the starting position

**AND**



1. Stagger your stance with one foot in front of the other
2. Keep the toes of both feet pointed forward while your hands are on the wall/door - Be sure to keep your **back knee** straight with the heel on the ground at all times
3. Now slowly lean forward until you feel a stretch in the back of your calf
4. Try to hold for **30 seconds**
5. Slowly return to the starting position

REPS PER SET	HOLD STRETCH	# OF SETS
5-10	5-30 SECONDS	3

# QUADRICEPS STRETCH



The quadriceps are a group of muscles on the front of your thigh. This stretch should be performed several times a day to help keep the muscles flexible. This stretch is also used during warm-ups to get your muscles ready for other exercises. For this exercise you will need a chair or countertop for balance. **This exercise should be performed on both legs.**



1. Begin by grabbing our knee with your hand as you balance on the opposite foot
2. Slowly pull your foot toward your buttocks until you experience a tolerable stretch along the front of your thigh
3. Try to hold for **30 seconds**
4. Slowly return to the starting position

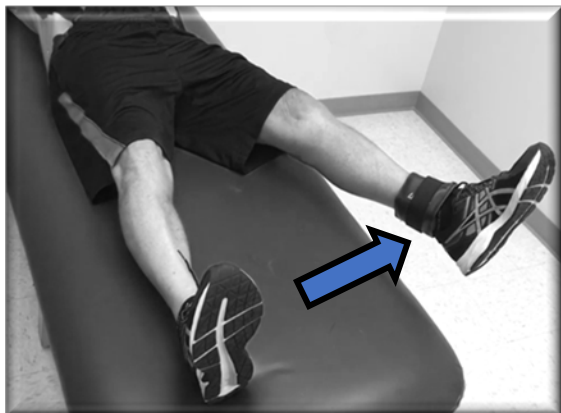
REPS PER SET	HOLD STRETCH	# OF SETS
5-10	5-30 SECONDS	3

#### EXERCISE MODIFICATION

**HIP REPLACEMENT:** Please check with your surgeon before performing this particular exercise – You may need to limit your motion based on your surgeon’s guidelines



When working to stretch the IT band on the outside of your leg it is important to not forget about the inner leg muscles. The leg will help ensure balanced muscles. This stretch can be performed in two different ways, lying on your back or sitting on the floor. Be sure to check with your surgeon before attempting the **ADVANCED STRETCH**. This exercise should be performed on both legs.



## SIMPLE STRETCH

1. We recommend lying on your back
2. Remember to keep your toes pointed toward the ceiling and your knee straight
3. Slowly move your leg out to the side until a comfortable stretch is felt in your groin
4. Try to hold for **30 seconds** before returning to the starting position

REPS PER SET	HOLD STRETCH	# OF SETS
5-10	5-30 SECONDS	3

### EXERCISE MODIFICATIONS

**HIP REPLACEMENT:** Please check with your surgeon before performing this particular exercise – You may need to limit your motion based on your surgeon’s guidelines

**KNEE REPLACEMENT:** You should bend the knee to a comfortable position that does not place additional stress on your knee replacement(s)

## ADVANCED STRETCH



1. We recommend sitting on the floor or a firm surface
2. Next try to put soles of your feet together out in front of you the best you can (Remember to sit with your back straight and place your hands on your knees)
3. Slowly press your knees down towards the floor until a comfortable stretch is felt in your groin
4. Try to hold for **30 seconds** before returning to the starting position





This stretch helps focus on the top portion of the IT band. It is important to stretch the entire length of the band in order to help get rid of ITB. This stretch can be performed several times a day to help keep the hip muscles from getting tight. **This exercise should be performed on both legs.**

1. Begin by sitting upright on a chair or other firm surface
2. Slowly bring the affected leg across the other
3. Using your hands, slowly pull the knee towards your opposite shoulder (You should feel a stretch along the back of you hip and buttock)
4. Try to hold for **30 seconds**
5. Slowly return to the starting position



#### EXERCISE MODIFICATIONS

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**KNEE REPLACEMENT:** You should bend the knee to a comfortable position that does not place additional stress on you knee replacement(s)

REPS PER SET	HOLD STRETCH	# OF SETS
5-10	5-30 SECONDS	3

# ILIOTIBIAL (IT) BAND STRETCH (SIMPLE)



This stretch directly focuses on the IT Band. We recommend this stretch after warming up with the other stretches first. Be sure to check with your surgeon before attempting either stretch. **It is important to perform this exercise on both legs.**



## SIMPLE IT BAND STRETCH

1. Begin by crossing your affected leg over the other
2. Remember to keep your opposite knee straight as you lean forward trying to touch your toes until a tolerable stretch is felt along the outside of your hip
3. Try to hold for **30 seconds**.
4. Slowly return to the starting position

**This exercise should be performed on both legs**

REPS PER SET	HOLD STRETCH	# OF SETS
5-10	5-30 SECONDS	3

### EXERCISE MODIFICATION

**HIP REPLACEMENT:** Please check with your surgeon before performing this particular exercise – You may need to limit your motion based on your surgeon’s guidelines

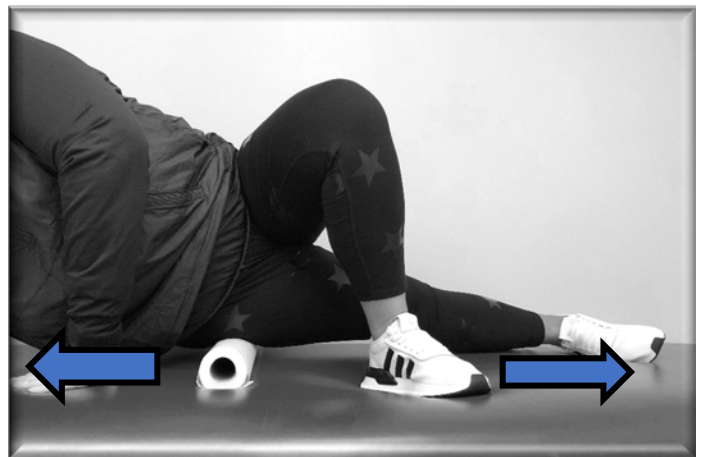
# ILIOTIBIAL (IT) BAND STRETCH (ADVANCED)



First start with the standing stretch (**SIMPLE**) and then move to the side lying stretch (**ADVANCED**). Be sure to check with your surgeon before attempting either stretch. It is important to perform this exercise on both legs. In addition to the foam roll, you can use an electric massage gun or scraping device to “massage” out deep tight areas along the IT band.

## ADVANCED IT BAND STRETCH

1. Begin by lying on your affected side with your hip region over a firm foam roll
2. Remember to keep your bottom leg straight. You can use your opposite leg and arms for support
3. Slowly move your hip over the foam roll so that the roll slides along your IT band toward your knee and then back towards your hip
4. Slowly perform for **30 seconds** before returning to the starting position



### EXERCISE MODIFICATIONS

**HIP REPLACEMENT:** Please check with your surgeon before performing this particular exercise – You may need to limit your motion based on your surgeon’s guidelines

**KNEE REPLACEMENT:** You should bend the knee to a comfortable position that does not place additional stress on your knee replacement(s)

REPS PER SET	HOLD STRETCH	# OF SETS
5-10	5-30 SECONDS	3



Strengthening exercises are important to help address the weak muscles associated with ITBS. Remember to complete the stretching exercises before starting the strengthening exercises. It is important to exercise the leg muscles in different ways to improve overall strength and function. Slight muscle discomfort can be expected. These exercises should **NOT** cause pain. If you do experience pain, back off and modify your technique. If pain is still present, we recommend avoiding the particularly painful exercise. Exercise bands or ankle weights can be added to most of these exercises to increase the degree of difficulty. We begin by presenting simple exercises and then progress to more **ADVANCED EXERCISES**.

## GENERAL TIPS FOR STRENGTHENING EXERCISES

- Warm-up: Complete the prior stretching exercises first
- Perform slow steady motions until you feel a TOLERABLE STRETCH and adjust tension to your comfort
- Hold the position for up to 5 seconds before slowly returning to the starting position
- Take a deep breath and relax for 1-2 seconds
- Repeat for 3 sets of 5-10 repetitions as tolerated
- Cool-Down: Apply ice to the outer portion of the knee for 5-10 minutes after your exercise routine

# STRAIGHT LEG RAISE



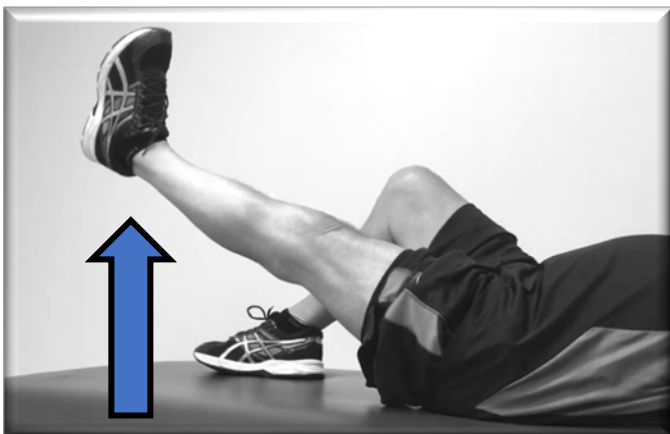
This exercise works the thigh and hip muscles. To perform this exercise, we recommend lying on your back on a soft surface or mat. To take pressure off your back, your opposite leg should be comfortably resting in a bent position with the foot on the ground. Remember to slowly control the leg against gravity and do not let the leg drop back to the ground. **This exercise should be performed on both legs.**



1. Begin by tightening your thigh muscles with your toes pointed toward the ceiling

2. Slowly lift your entire leg off the ground while keeping your knee straight

3. Try to bring your leg up until your thighs are at the same level



4. Try to hold your leg up for **5 seconds** and then **SLOWLY** return your leg to the starting position

## EXERCISE MODIFICATIONS

**HIP REPLACEMENT:** Please check with your surgeon before performing this particular exercise – You may need to limit your motion based on your surgeon's guidelines

**KNEE REPLACEMENT:** You should bend the knee to a comfortable position that does not place additional stress on your knee replacement(s)

REPS  
PER SET  
**10**

HOLD  
STRETCH  
**3-5**  
SECONDS

# OF  
SETS  
**3**



These exercises work to strengthen the muscles that attach to the IT Band. When performing this exercise, we recommend using a chair, counter, or railing for balance. Remember to keep your back straight for this exercise. Please be sure to feel comfortable with the **SIMPLE (STANDING) EXERCISE** before progressing to the **ADVANCED (SIDELYING) EXERCISE**. These exercises are meant to be performed slowly to help build strength in the leg muscles. **Ankle weights or exercise bands can be used to make these exercises more difficult. This exercise should be performed on both legs.**



## SIMPLE (STANDING)

1. Begin by slightly rotating your toes toward the side
2. While keeping your knee straight, slowly move your leg out toward the side (You will feel the muscles on the side of your hip tighten)
3. Try to hold the end position for **5 seconds** before slowly returning your leg to the starting position

REPS PER SET	HOLD STRETCH SECONDS	# OF SETS
10	3-5	3

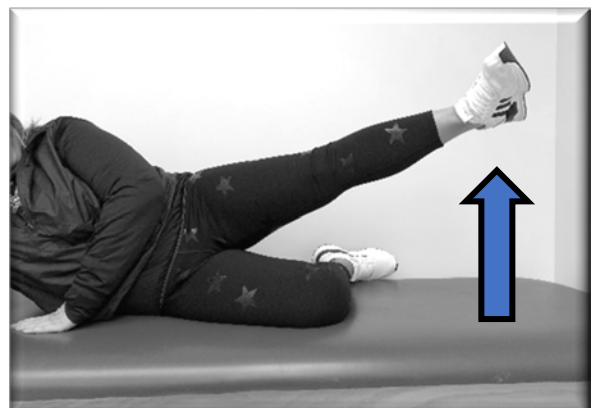
### EXERCISE MODIFICATIONS

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## ADVANCED (SIDELYING)

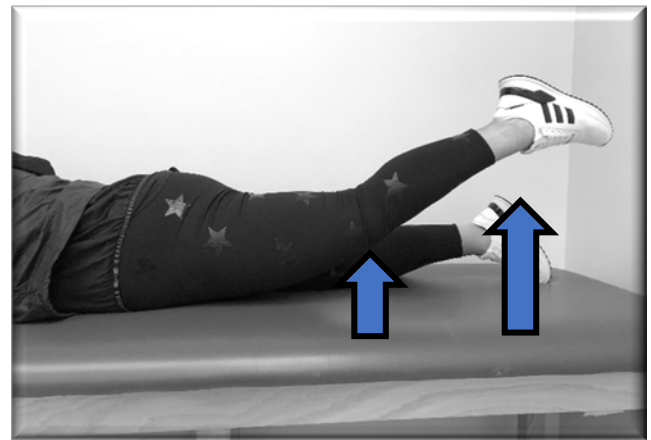
1. Start by rotating your toes so they are pointing towards the ceiling
2. While keeping your knee straight, slowly raise your leg toward the ceiling until a comfortable stretch is felt in your groin. (You will feel your outer hip muscles tighten)
3. Try to hold the end position for **5 seconds** before slowly returning your leg to the starting position



# PRONE KNEE EXTENSION



This **ADVANCED EXERCISE** works the hip, buttock, and hamstring muscles. We usually recommend this exercise **after straight leg raises and abduction/adduction exercises become easier**. To perform this exercise, we recommend lying on your stomach on a comfortable surface. Remember ankle weights can be added to increase the degree of difficulty of this exercise. **This exercise should be performed on both legs.**



1. Point your toes away as if you were pushing on a gas pedal
2. Slowly lift your **entire leg** off the table while trying to **keep your knee straight** (Try to keep your hip in contact with the ground)
3. Hold for **5 seconds** before slowly returning your leg to the starting position

REPS PER SET	HOLD STRETCH	# OF SETS
10	3-5 SECONDS	3

## EXERCISE MODIFICATIONS

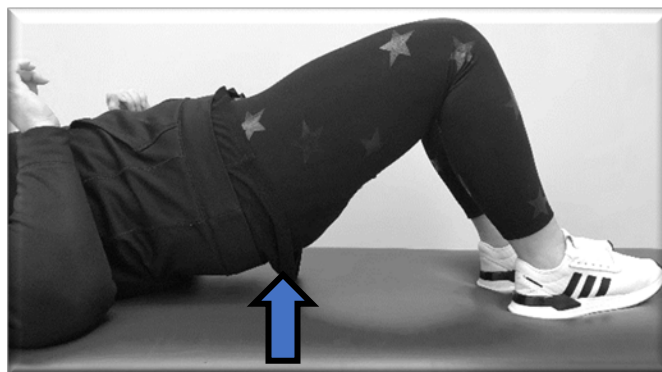
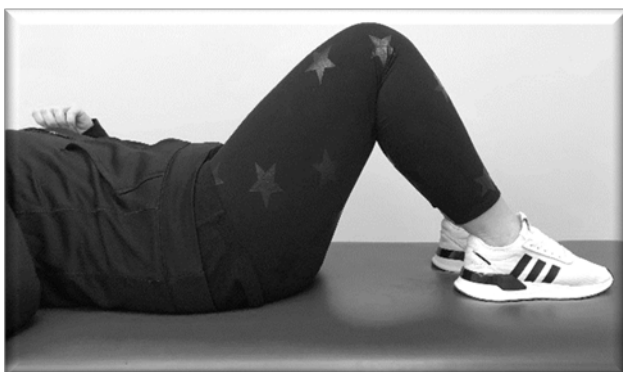
**HIP REPLACEMENT:** Please check with your surgeon before performing this particular exercise – You may need to limit your motion based on your surgeon’s guidelines

**KNEE REPLACEMENT:** You should bend the knee to a comfortable position that does not place additional stress on your knee replacement(s)



Bridge exercises work all the leg muscles at once. The goal is to slowly contract all the muscles around the hip to slowly raise and lower your buttocks from the ground. To perform this exercise, we recommend lying on your back on a firm comfortable surface. **ADVANCED BRIDGES can be attempted while squeezing a small ball or pillow between your knees during this exercise.**

1. Both knees should be comfortably bent with your feet on the floor and about shoulder-width apart
2. With your hands at your sides, slowly lift your bottom off the floor by tightening your leg and stomach muscles
3. Keep lifting as high as you can until your **stomach is in line with your knees**
4. Try to hold for **5 seconds** before slowly returning to the starting position



REPS  
PER SET  
**10**

HOLD  
STRETCH  
**3-5**  
SECONDS

# OF  
SETS  
**3**

#### EXERCISE MODIFICATIONS

**HIP REPLACEMENT:** Please check with your surgeon before performing this particular exercise – You may need to limit your motion based on your surgeon’s guidelines

**KNEE REPLACEMENT:** You should bend the knee to a comfortable position that does not place additional stress on your knee replacement(s)





Wall squats are a great exercise to build strength and endurance in all the leg muscles. Keeping your low back and shoulders against the wall helps to maintain good alignment during this exercise. Be sure to have a chair, counter, or railing for balance when attempting this exercise. It is important to keep your knees directly in line with your toes at all times during this exercise. **An exercise ball can be added for an**

## ADVANCED EXERCISE



**SIMPLE**



**ADVANCED**

1. Start with your feet about shoulder-width apart and approximately **18 inches** from the wall.
2. Slowly bend your knees and slide your back down the wall until your knees are at a comfortable bend
3. Be sure to keep your back and shoulders against the wall
4. Try to hold the end position for **5 seconds** before slowly returning to the starting position (slide back up the wall) - **During the last repetition, you can time yourself to see how long you can hold the “seated” position before having to return to the starting position**

REPS PER SET	HOLD STRETCH	# OF SETS
10	3-5 SECONDS	3

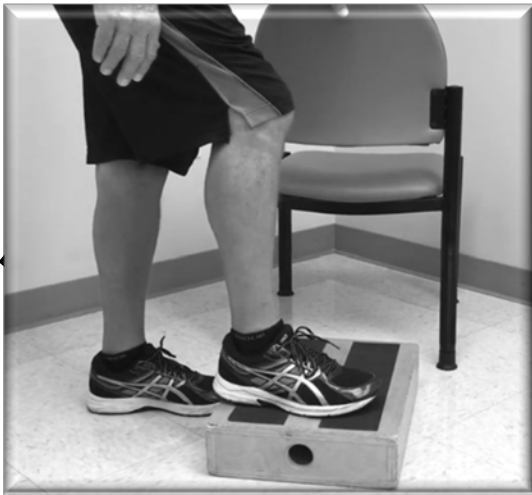
### EXERCISE MODIFICATIONS

**HIP REPLACEMENT:** Please check with your surgeon before performing this particular exercise – You may need to limit your motion based on your surgeon’s guidelines

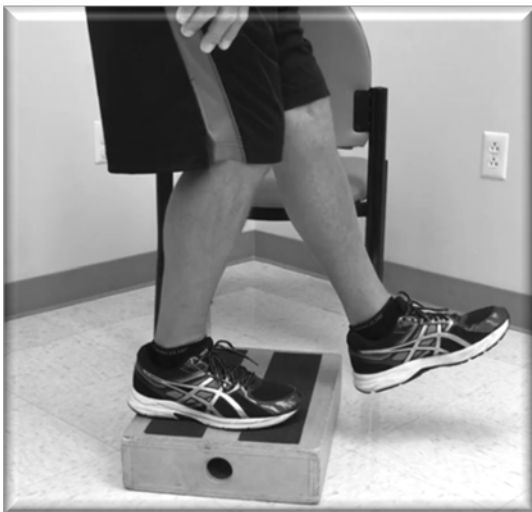
**KNEE REPLACEMENT:** You should bend the knee to a comfortable position that does not place additional stress on your knee replacement(s)



This **ADVANCED EXERCISE** requires you to be very comfortable with the previous exercises. Be sure to have a chair, countertop, or railing close by for balance if needed. It is important for you to focus on slowly stepping up and down to exercise your leg muscles properly for this exercise. In the beginning, you can start with a **4-inch step** and then progress to a **6-inch**, then **8-inch**, then **10-inch**, and finally a **12-inch** step.



1. Begin by shifting your weight to the leg on the step as if you were to climb the stairs. The goal is to bring your opposite leg up to match your other leg but **DO NOT** place weight on the opposite leg.
2. Try to Hold for **5 Seconds**
3. Now slowly lower your opposite leg back to the floor by controlling the muscles of your step leg (You will feel the hip and thigh muscles contract during this exercise)



***\*This exercise can be attempted in different directions. Try stepping forward, backward, and to the side to work different muscles***

REPS PER SET	HOLD STRETCH	# OF SETS
10	3-5 SECONDS	3



**ADVANCED**



Planks are more of an endurance exercise that focuses on key core abdominal and hip muscles that help strengthen the muscles associated with ITBS. We recommend ending your exercise routine with this exercise. Begin by lying on your stomach on a firm surface of mat for **SIMPLE** planks. Begin by placing your forearms on the floor shoulder-width apart from one another. There are several modifications of a standard plank that can be attempted. An **ADVANCED** plank exercise by lying on your side.



1. Begin by using your abdominal and buttock muscles to lift your hips in the air. As your knees come off the mat, your body forms a **STRAIGHT LINE** supported by only your forearms and toes.
2. Avoid pushing with your feet and concentrate tension on the abdominal muscles
3. Try to hold for at least **20 Seconds** to start. If this is too difficult you can let your knees relax on the mat and hold the same position
4. Slowly return to the starting position

REPS PER SET	HOLD STRETCH	# OF SETS
5-10	5-30 SECONDS	3

#### EXERCISE MODIFICATIONS

**HIP REPLACEMENT:** Please check with your surgeon before performing this particular exercise – You may need to limit your motion based on your surgeon's guidelines

# ENDURANCE TRAINING

As you recover from ITBS, it is important to work towards getting back to your normal exercise routine (Walking, Elliptical, Cycling, Rowing, Swimming, etc.). These exercises are great for your mental and cardiovascular health when performed several days a week. When starting these exercises, we suggest beginning at a lower resistance for at a comfortable pace before increasing the duration or difficulty of the exercise. **PLEASE STOP EXERCISING AND CONTACT YOUR PHYSICIAN AS SOON AS POSSIBLE IF YOU EXPERIENCE ANY ABNORMAL DISCOMFORT, DIZZINESS, OR FEELINGS OF PASSING OUT.**

## GENERAL TIPS FOR ENDURANCE EXERCISES:

- Endurance exercises are performed after a warm-up and stretching period.
- It important to take 5-10 minutes to cool-down after exercising. This should include stretches and applying ice to sore muscles.

## Cool Down

Remember to take some time to cool down and drink plenty of water. Ice and elevation are good habits for any sore muscles. This guide can be completed in its entirety or you can pick and choose exercises that are relative to you. Remember to modify the exercises to work around your respective joint replacement(s).

**This guide serves as a self-directed set of exercises. If there is ever any worsening pain, new onset numbness/tingling, or no improvements in your symptoms within 3-4 weeks, we encourage you to seek the guidance of your physician.**

AAHKS  
Patient  
Education  
Committee