

# Your Guide to Managing Low Back Pain



## Low Back Pain: The Basics



Low back pain is a common condition in people who have hip and/or knee arthritis. Due to a change in the way you walk and potentially limited motion of an arthritic joint, a bad hip or knee can lead to or aggravate back pain. Similarly, if you have had a hip or knee replacement, the increased activity and demands during recovery can exacerbate low back pain. It is important to remember not all back pain is the same. Low back pain can come from tight muscles (muscle spasms), arthritis or a disc problem. It is important to protect your back throughout your life to keep you functional. Prevention maybe the most important aspect to dealing with back pain. Regular stretching, good posture and proper lifting mechanics can help decrease the risk of developing back pain.

Range-of-motion, stretching and strengthening are the goals of this exercise program. We recommend performing these exercises **2-3 days a week**. Remember it can often take 6 or more weeks to see results from any exercise program.

**It is important to warm up and cool down before starting any exercise program. Warm-up can include riding a stationary bicycle or walking for 5-10 minutes before starting exercising.** A heating pad or hot water bottle placed on the low back for 10-15 minutes can help to relax the muscles before exercising. The program starts with some general stretching exercises before moving to more specific exercises for the low back. **A cool down period is also recommended at the end of the exercise session followed by applying ice on any areas of discomfort for 10-15 minutes.** Over-the-counter anti-inflammatory medications may be used for back pain, but we suggest talking with your physician before taking them. Occasionally a back brace can help with the pain.

Below you will find a general low back conditioning program covering several exercises to keep your muscles working properly. These exercises are not intended to treat all back conditions. As with any exercise program, **please be sure to check with your surgeon first before exercising to avoid placing your implant at risk.** If a particular exercise(s) increases your pain or discomfort you are advised to stop and contact your physician.

### 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



## Stretching Exercises

The goal of stretching is to improve your flexibility by stretching the muscle groups associated with your lower back and core muscles that contribute to strength and stability. Make sure that you plan for time to warm up and cool down after this exercise program.

### GENERAL TIPS FOR STRETCHING EXERCISES

- ✓ Warm-up—5-10 minutes of walking, stationary bicycle or elliptical machine
- ✓ Perform slow steady motions until you feel mild muscle tension—adjust tension to your comfort
- ✓ Hold the position for up to 30 seconds as tolerated, and at least for a minimum of 5 seconds
- ✓ Slowly return back to the original starting position
- ✓ Take a deep breath and relax for a second or two
- ✓ Repeat for 3 sets of 5-10 repetitions as tolerated
- ✓ Cool-down—5-10 minutes of icing or slow walking to finish workout

If you cannot hold for at least 5 seconds then decrease the tension of the stretch so you can

**Hamstring Stretch:** This stretch focuses on the muscles on the back of your thigh. Hamstring stretching while lying down will help protect the low back. Sometimes placing a pillow under your lower back or bending the opposite knee can take stress off of your lower back. Similarly, a pillow under your neck can be used for comfort. Begin by lying on your back on a firm surface of mat.

1. While keeping your knee straight, lift your leg straight up until you feel a slight discomfort in the back of your thigh (**can use a towel, stretch bands, or your hands to adjust the amount of stretch**).
2. Hold for a minimum of 5 seconds and up to 30 seconds.
3. Slowly lower the leg to the floor.
4. Take a deep breath, relax for 1-2 seconds.
5. Repeat 5 times to complete one set.
6. Switch to the opposite leg and repeat.



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 hip flexion due to precautions.
- ✓ **Knee Replacement:** You should bend the knee to a comfortable position that does not place additional stress on your knee replacement(s)



**Calf Stretch:** This exercise stretches the calf and hamstring muscles. You will need to be on firm ground and lean on a wall to complete this stretch. Be sure to keep your back straight during this exercise. Begin by staggering your stance with one foot in front of the other.

1. Keep your toes of both feet pointed forward while your hands are on a wall or door – be sure to keep your **back knee straight** with your **heel on the ground at all times**.
2. Now slowly lean forward until you feel a stretch in the back of your leg and calf.
3. Hold for a minimum of 5 seconds and up to 30 seconds for a good stretch.
4. Relax and take a deep breath for 1-2 seconds.
5. Repeat 5 times to complete one set.
6. Switch to the opposite leg and repeat.



REPS  
PER SET  
**5-10**

HOLD  
STRETCH  
**5-30**  
SECONDS

# OF  
SETS  
**3**

#### EXERCISE MODIFICATIONS

- ✓ **Hip Replacement:** You may need to limit how far your hips are staggered due to precautions
- ✓ **Knee Replacement:** You should allow bend the knee to a comfortable position that does not place additional stress on your knee replacement(s)



**Shoulder Squeezes:** This is a great stretch for you to become more aware of your overall posture. It focuses on the mid-back and shoulder blade muscles. Try to maintain proper posture during this stretch by lifting your chest, looking forward and keeping your back straight.

1. Begin by bending your elbows to a comfortable position.
2. Next, squeeze your shoulder blades together the same time.
3. Hold for 3-5 seconds.
4. Relax and take a deep breath for 1-2 seconds.
5. Repeat 3 times to complete one set.



### NOTE

No exercise modifications necessary for hip and knee replacement patients with this stretch

REPS  
PER SET  
**5-10**

HOLD  
STRETCH  
**5-30**  
SECONDS

# OF  
SETS  
**3**



**Piriformis stretch:** The piriformis is an important muscle that runs from your tailbone across your buttock to the back of your hip. This stretch can help alleviate sciatica symptoms arising from tight buttock muscles. Begin by sitting upright in a comfortable chair.

1. Start by bringing one leg across the other.
2. Using your hands, slowly pull the knee towards your **opposite** shoulder.
3. You should feel a stretch along the back your hip and buttock.
4. Hold for a minimum of 5 seconds and up to 30 seconds for a good stretch.
5. Relax and take a deep breath for 1-2 seconds.
6. Repeat 5 times to complete one set.
7. Switch to the opposite leg and repeat.



#### EXERCISE MODIFICATIONS

- ✓ **Hip Replacement:** Please check with your surgeon before performing this particular exercise – You may need to limit hip flexion due to precautions
- ✓ **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



**Knees-to-Chest:** This stretch is key for spinal stenosis patients and will likely need modification for patients with a total hip or knee replacement. This stretch will complement the piriformis stretch. This exercise can be performed with one leg at a time or simultaneously on both legs. Begin by lying on your back (a soft surface or mat is preferred).

1. The leg that is not being stretched can be bent in a comfortable position or rest on a pillow.
2. Using your arms, pull the bent knee to your chest in a slow continuous motion until you feel a tolerable stretch across your buttock.
3. Hold for a minimum of 5 seconds and up to 30 seconds.
4. Lower leg slowly to the floor.
5. Take a deep breath, relax for 1-2 seconds.
6. Repeat 5 times to complete one set.
7. Switch to the opposite leg and repeat.



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

**For more advanced stretching you can move from single leg to double knee to chest stretch.**

#### EXERCISE MODIFICATIONS

- ✓ **Hip Replacement:** Please check with your surgeon before performing this particular exercise – You may need to limit hip flexion due to precautions
- ✓ **Knee Replacement:** You should bend the knee to a comfortable position that does not place additional stress on your knee replacement(s)



**Back Arch:** This exercise will stretch out the lower back muscles. This can be added to the above list of stretches for the lower back. It typically does not require modification for hip or knee replacement surgery and should be performed to your comfort level.

1. Stand up straight with feet positioned about a shoulder-width apart (**toes should be pointing straight ahead**).
2. Place your hands on your hips or lower back.
3. Take a few deep breaths to relax.
4. Gently stretch your upper body backwards.
5. Support yourself with your hands.
6. Hold for 5 seconds.
7. Return to the starting pose.
8. Relax and take a deep breath for 1-2 seconds.
9. Repeat 5-10 times to complete one set.



#### NOTE

No exercise modifications necessary  
for hip and knee replacement  
patients with this stretch

REPS  
PER SET

5-10

HOLD  
STRETCH

5-30  
SECONDS

# OF  
SETS

3



**Side Stretch:** The side stretch will help your mid- and lower back regions. You should gently stretch but not to the point that it becomes uncomfortable. This stretch does not require modification and can be an integral part of a good lower back program.

1. Stand up straight with feet positioned about a shoulder-width apart (**toes should be pointing straight ahead**).
2. Begin by slowly stretching one arm over your head.
3. Slowly, in a controlled manner stretch your upper body to the opposite side (**try not to twist your body**).
4. Hold for 5 seconds.
5. Return to the starting pose.
6. Relax and take a deep breath for 1-2 seconds.
7. Repeat 5-10 times to complete one set.
8. Switch to the opposite arm and repeat.



#### NOTE

No exercise modifications necessary for hip and knee replacement patients with this stretch

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





## Strengthening Exercises

Once warmed up, it is time to work on strengthening for long-term results. The goal of this series of exercises is to improve your core strength and endurance. Make sure that you plan for a cool down session after this exercise program.

### GENERAL TIPS FOR STRENGTHENING EXERCISES

- ✓ Warm-up—Complete the prior stretching series first.
- ✓ Perform slow steady motions until you feel mild muscle tension; adjust tension to your comfort.
- ✓ Hold the position for up to 30 seconds as tolerated, and at least for a minimum of 5 seconds.
- ✓ Slowly return to the original starting position.
- ✓ Take a deep breath and relax of a second or two.
- ✓ Repeat for 3 sets of 5-10 repetitions as tolerated.
- ✓ Cool-down—5-10 minutes of icing or slow walking to finish workout.

**Crunches:** This exercise focuses on core strengthening include the abdominal and low back muscles. The key is proper technique, by holding the pose and tightening your stomach muscles. Make sure you are relaxed during this exercise and you can use your hands to support, but not to pull on your neck. Start by lying on your back (a firm surface or mat is preferred).

1. Begin by bending your knees to a comfortable position and placing your feet shoulder-width apart.
2. Place your hands behind your head or on your chest.
3. Tighten your abdominal muscles to lift your head and shoulders off of the ground.
4. Try to keep your low back flat on the ground while you tighten the abdominal muscles.
5. Attempt to hold for 3-5 seconds (as you get stronger try to hold longer).
6. Return to the starting pose.
7. Relax and take a deep breath for 1-2 seconds.
8. Repeat 5-10 times to complete one set.



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

### EXERCISE MODIFICATIONS

- ✓ **Hip Replacement:** You may need to limit the knee flexion due to hip tightness and precautions
- ✓ **Knee Replacement:** You should bend the knee to a comfortable position that does not place additional stress on your knee replacement(s)



**Press-ups:** This exercise may help with back pain from “bulging” discs. Overall the exercise strengthens postural muscles from lower, mid and upper back regions. It is good to relax face down on a firm surface or mat for a few minutes prior to starting this exercise.

1. Begin with your hands should be in front of you about shoulder-width apart.
2. Gently push up and support your upper body with your forearms.
3. Keep the pelvis and legs relaxed in contact with the ground as you extend your back.
4. Hold for 3-5 seconds as a gentle stretch, if there is discomfort, ease the tension on your back.
5. Slowly return to the starting pose.
6. Relax and take a deep breath for 1-2 seconds.
7. Repeat 5-10 times to complete one set.



#### EXERCISE MODIFICATIONS

- ✓ **Hip Replacement:** Please check with your surgeon before performing this particular exercise – You may need to limit hip extension due to precautions
- ✓ **Knee Replacement:** Consider placing a pillow or towel may under the lower legs if it is difficult to lift the legs off the ground.

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



**Seated-Flexion:** This exercise is often helpful with pain from spinal stenosis. It should be performed in a seated position to prevent excess stress on the low back. For hip replacement patients, this exercise may need modification to prevent placing your hip replacement at risk. **Please check with your surgeon before attempting this exercise.**

1. Start by positioning your on the ground about shoulder-width apart.
2. Slowly lean forward as if you were going to touch your toes with your hands. **Adjust how far forward you lean based on back and hip comfort.**
3. Hold for a minimum of 3-5 seconds.
4. Slowly return to the starting pose.
5. Relax and take a deep breath for 1-2 seconds.
6. Repeat 5-10 times to complete one set.



#### EXERCISE MODIFICATIONS

- ✓ **Hip Replacement:** Please check with your surgeon before performing this particular exercise – You may need to limit how far you lean forward based on 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	3-5 SECONDS	3



**Wall Squats/Sits/Slides:** A common exercise meant to strengthen your back, hips and legs muscles. Keeping the low back and shoulders against the wall will enable you to maintain good postural alignment. Holding an abdominal muscle contraction during the exercise helps build endurance. **Be sure to perform this exercise close to a countertop or railing to help with balance.** An exercise ball can be used between your back and the wall for a more challenging workout.

1. Begin with your feet about shoulder-width apart and about 18 inches from the wall.
2. Start by slowly bending your knees and sliding 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 for a minimum of 5 seconds.
5. Slowly return to the starting pose (slide back up the wall).
6. Relax and take a deep breath for 1-2 seconds.
7. Repeat 5-10 times to complete one set.



#### EXERCISE MODIFICATIONS

- ✓ **Hip Replacement:** You may need to limit the depth of the squat to the comfort of your hip.
- ✓ **Knee Replacement:** You may need to limit the depth of the squat that is comfortable for your knee replacement(s).

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



**Superman Exercises:** There are several variations of this exercise that you can do based on experience and goals you are trying to reach. This exercise will emphasize key postural muscles from the neck, mid-back and low back. Begin by lying on your stomach on a firm surface or mat.

1. Relax for a couple of minutes with deep breaths.
2. Your arms should be straight out in front of you while your legs straight.
3. Begin by tightening your shoulder blades and raise both arms and legs, while keeping your chin tucked in and head level. At the same time try to lift the legs off the surface.
4. Be careful to not over arch your back. Try to raise the arms and legs **4-6 inches from the floor**.
5. Hold for at least 5 seconds making sure the pelvis stays pressed against the surface.
6. Slowly return to the starting position.
7. Relax and take a deep breath for 1-2 seconds.
8. Repeat 5 times to complete one set.



REPS  
PER SET  
5

HOLD  
STRETCH  
3-5  
SECONDS

# OF  
SETS  
3

You can perform this exercise with both arms and legs, arms only, legs only or alternating by exercising with the opposite arm and leg.

#### EXERCISE MODIFICATIONS

- ✓ **Hip Replacement:** You may need to limit hip extension due to tightness and precautions
- ✓ **Knee Replacement:** Consider placing a pillow or towel may under the lower legs if it is difficult to lift the legs off the ground.



**Pelvic Tilts:** This is a key movement for low back pain – once you demonstrate good muscle control, you can then “tilt” the pelvis into the position of comfort and hold that position by contracting the core muscles. When performing these exercises, **focus on taking the curve in/out of your low back.** This exercise can be progressed from lying down to standing. Begin by lying on your back (a firm surface or mat is preferred). Your arms can be placed on your stomach or on the surface in a comfortable position. **Your pelvis should remain in contact with the ground at all times during this exercise.**



### POSTERIOR TILT

- Bend your knees to a comfortable position.
- Without letting your pelvis come off the ground, start by gently rocking your hips toward your head by tightening your stomach and buttock muscles. By doing so you should **feel your low back press into the ground.**
- Avoid pushing with your feet and concentrate tension on the abdominal and core muscles.
- Hold for at least 3-5 seconds, making sure not to lift your pelvis off the ground.
- Slowly return to the starting position.



### ANTERIOR TILT

- Again without letting your pelvis come off the ground, roll your pelvis forward toward your feet by **allowing a small arch in your lower back.** Concentrate tension on the abdominal and core muscles without moving your feet.
- Hold for at least 3-5 seconds, making sure not to lift your pelvis off the ground.
- Slowly return to the starting position.
- Relax and take a deep breath for 1-2 seconds.
- Repeat 10 times to complete one set.



### EXERCISE MODIFICATIONS

- ✓ **Hip Replacement:** You may need to limit the knee flexion due to hip tightness and precautions
- ✓ **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**

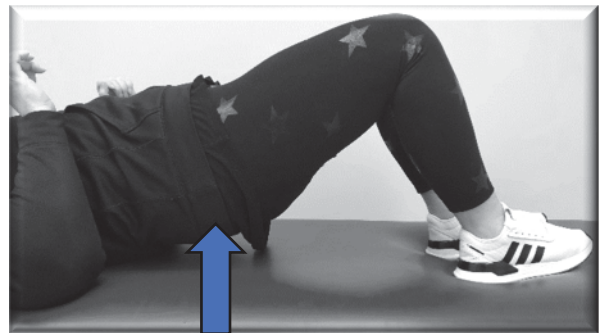
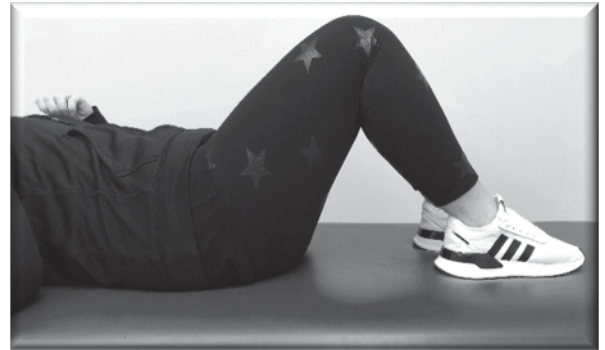
HOLD  
STRETCH  
**3-5**  
SECONDS

# OF  
SETS  
**3**



**Bridges:** Also called a pelvic lift—focuses on contracting the abdominal muscles, core, back extensors, and hamstrings. The goal should be to use these muscles to lift your body instead of your arms. To perform this exercise, we recommend lying on your back on a firm comfortable surface.

1. Both knees should be comfortably bent with your feet flat on the surface about shoulder-width apart at all times during this exercise.
2. Next, without using your arms, 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. Hold for at least 5 seconds while focusing on core muscle contraction.
5. Slowly return to the starting position.
6. Relax and take a deep breath for 1-2 seconds.



#### EXERCISE MODIFICATIONS

- ✓ **Hip Replacement:** You may need to limit how high you lift your bottom off the surface to avoid hip hyperextension.
- ✓ **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



**Planks:** This is a postural muscle exercise that focuses on the core and abdominal muscles. We recommend **ending your workout routine with this exercise**. Begin by lying on your stomach on a firm surface or mat.

1. Begin by placing your forearms on the surface, about shoulder-width apart from one another.
2. Use your abdominal and core muscles to lift your hips off the surface. At the same time, your buttock muscles should tighten as your knees come up and your body forms a straight line supported by only your forearms and toes.
3. Avoid pushing with your feet and concentrate tension on the abdominal and core muscles.
4. Hold for at least 20 seconds. If too difficult, you can let the knees relax on the surface and hold the same position.
5. Slowly return to the starting position.
6. Relax and take a deep breath for 1-2 seconds.
7. There are several modifications that can be performed. **You can try lying on your side to isolate different abdominal muscles and low back if you have time.**



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

#### EXERCISE MODIFICATIONS

- ✓ **Hip Replacement:** this exercise should be safe but modify for tension around the hip if discomfort occurs
- ✓ **Knee Replacement:** this exercise should be safe; however, the knees resting on the ground may cause some discomfort

## Cool Down

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

***This guide serves as a self-directed set of exercises to manage low back pain after your hip or knee replacement. 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.***