

Total Knee Arthroplasty (Replacement):

The information below is to be used as an education tool following your knee replacement surgery. Expectations, exercises, concerns, and hints for activities of daily living are included in this packet. Please note, however, that each individual surgery and patient response to surgery is different and only your surgeon or therapist can appropriately progress you.

WHAT TO EXPECT:

You can expect pain and swelling following surgery. This is a normal occurrence and be assured that the pain will gradually decrease over the next few days. Although bandaged and likely out of view initially, your knee will have many stitches or staples along your incision to assist wound closure. Your staples or stitches will be removed by your Doctor 10-14 days after the surgery.

Immediately following your surgery, your Doctor may prescribe a continuous passive motion machine (CPM) to assist in your knee motion. The CPM will be used four to six hours per day (or as your Doctor prescribes) with gradual increases in the arc of motion. The CPM knee extension limit should always be 0 degrees and the knee flexion limit should be increased 10 or more degrees per day until 90 degrees is obtained.

Physical Therapy will begin immediately during your 2-3 day hospital stay. Most hospitals utilize therapy 2x/day to assist your walking, swelling control, range of motion, and strength. After leaving the hospital some patients will begin home therapy, while others may spend 1-2 weeks in a rehabilitation facility. Outpatient Physical Therapy will begin approximately 2-3 weeks after your surgery.

While at home, icing and elevating your knee above the level of your heart (lie on your back with your leg straight) for 15-20 minutes every waking hour will assist in both pain relief and swelling control. If your bandage has been removed and your knee is exposed to the outside environment, be sure to wrap the ice in a towel as application of ice directly to the skin may cause damage.



Icing the knee with full extension

After your surgery, do not rest with a pillow under your knee. While this flexed position is more comfortable than having your knee straight, it can result in limited knee range of motion and cause kneecap pain. You may apply a small 2-5 pound weight on top of your knee to assist in the straightening of your leg (with or without ice).



WOUND CARE:

A soft dressing will be applied to your knee. This compression dressing should be comfortable and absorb any leakage of fluid and/or blood. Your knee will most likely be covered in a wound dressing with an elastic wrap. It should be left on for 48 hours unless...

- 1) The dressing becomes loose and is sliding
- 2) The dressing is too tight and causes discomfort
- 3) The dressing becomes dirty or blood soaked

If you need to re-wrap your knee, change the wound dressing with sterile gauze and re-wrap the knee starting below the knee and working your way up above the knee. Attempt to perform wrapping in figure 8 pattern and not circular as this may cause a tourniquet effect. Also, avoid wrapping the bandage too tightly above the knee as this will cause an increase in swelling below the knee and in the lower leg.



Bathing & Showering

When you can stand comfortably for 10 to 15 minutes, you may shower with a plastic bag over your dressing. Use a sturdy garbage bag and tape to prevent leakage. If you are not able to use this method, perform a sponge bath until dressings are removed. Do Not submerge your knee into a bath or pool.

Once your bandage has been removed, it is appropriate to wash the knee lightly with soap and water, but do not soak the leg or scrub the incision as it may open.

You may shower with your knee exposed after the staples or stitches have been removed. Removal of the staples or stitches will be performed by your Doctor 10-14 days after surgery.

If the incision remains open and continues to drain, change the sterile dressing and keep it covered. Leave the small white adhesive tape in place until it falls off on its own. Re-assess the incision in 1-2 days.

Medicine:

You may be prescribed medication for pain or swelling following you knee surgery. **Take only what your Doctor prescribes**, as even over the counter pain medication may have an adverse effect on your health. It is imperative that you contact your Doctor if you plan on taking any non-prescribed medication.

AS PRESCRIBED BY YOUR DOCTOR...

Pain medication is often prescribed for the first few days after your surgery. Most often, pain medication will contain codeine or a codeine-type drug. Do not operate a motor vehicle or potentially dangerous equipment while taking this medicine. As tolerated, gradually increase the time between doses and at no time should you take more than the prescribed dosage.

Some pain medications, in conjunction with your inactivity from having surgery, may cause constipation. You can prevent this by drinking several glasses of water per day and eating fresh fruits and vegetables. If necessary, laxatives or stool softeners can be purchased at any convenience store.

Anti-inflammatory medication will assist in the reduction of swelling. Often reduction of swelling will result in less pain and allow greater movement, however, swelling is a part of the healing process and is necessary for full recovery. If prescribed, take only the dosage your Doctor has indicated.

Your surgeon may not prescribe medication for pain or swelling following your surgery. Depending on your individual case, they will prescribe medication as they deem appropriate.

Reasons to contact your Doctor following surgery (prior to scheduled follow up)

1) **Fever above 101.3° Fahrenheit**

It is common to run a low-grade fever for 2-3 days after surgery and this is not a significant concern, however, if your temperature exceeds 101.3° Fahrenheit, notify your Doctor.

2) **Continued bleeding/drainage that has not stopped for 3-5 days**

It is normal for a small amount of blood/fluid to exit your incision; however, it should be dry and stop draining after 3-5 days. If your wound continues to drain, or if the surgical wounds have scabbed over and then begin draining again, contact your surgeon.

3) **If you experience severe redness which extends to the entire knee**

It is common for the incisions to develop a small area of redness or possibly a small amount of pus in the inflamed area of the incision. However, if the redness extends beyond the incision and migrates to the remainder of the knee, contact the surgeon, and you may be required to visit their office for further inspection.

4) **If pain continues to increase over 3-5 days post operatively**

The amount of pain after a surgery varies from person to person; however, the pain should gradually decrease after the first 3-5 days. If you have progressive increases of your pain, contact your Doctor.

5) **Extremity Numbness/Calf Pain**

If you experience numbness in the feet or sharp pain in the calf which is tender to palpation, contact your surgeon.

6) **Follow up Appointment**

Most surgeons require a follow up visit approximately 10 days after your surgery. If you do not have a follow up appointment, it is recommended that you contact your surgeon's office and schedule a follow up visit to determine the appropriate time to begin Physical Therapy/Rehabilitation.

Goals for patients until follow up with Doctor or Physical Therapy Begins:

- 1) Obtain full knee extension
- 2) Flex knee to 90 degrees
- 3) Keep wound clean & dry to ensure healing
- 4) Minimize swelling
- 5) Regain quadriceps control & prevent atrophy

Assistive Device Use:

Unless instructed otherwise by your surgeon, gradually transition from 2 crutches or a walker, to a single cane (used in opposite arm of your surgery – example: L knee surgery, use cane in R arm), to no assistive device as you feel comfortable. You may experience pain and swelling after activity the first few weeks following surgery. As a general rule, put as much weight through the operative leg as is comfortable.

The listings of exercises, hints, and progression/expectations below are generally accepted in the medical community, however, each individual surgery is different and you may be slightly ahead or behind. Your surgeon or therapist will progress you accordingly to your functional status, and these guidelines are included only to help you understand what is to come.

Early Exercises to perform at home:

Exercises should begin the same day of your surgery. For a successful outcome, it is very important to perform these exercises several times per day to ensure the return of good muscle control and your knee flexibility.

The following pages include pictures of recommended exercises and stretches that will optimize your recovery. It is very important to continue these exercises until you begin physical therapy at which time, your therapist will progress you appropriately.



Ankle Pumps: Elevate your leg on a pillow and pump your ankle up and down for 30 repetitions. This can be performed several times per day to help avoid blood clots.



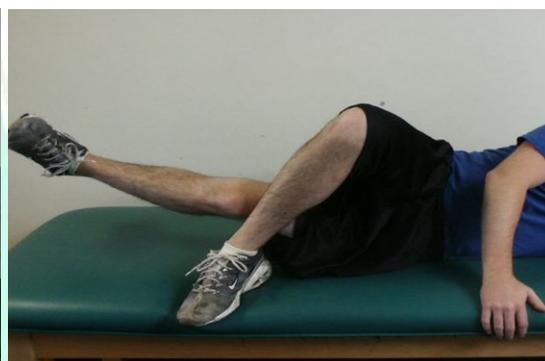
Quad Sets: Using a small pillow or towel under your knee, tighten your quad muscle by squeezing into the pillow. Hold the squeeze 5 seconds: 30x, 3-5x/day.



Straight Leg Raise: If able, actively elevate your leg as shown above: 30x, 1-2x/day. If you are unable to keep the knee straight while lifting, wait for your therapist to evaluate your technique.



Sidelying Abduction: Lying on your side, actively elevate your surgical leg as shown above: 30x, 1-2x/day.



Sidelying Adduction: Lie on your surgical side with the opposite leg crossed in front. Raise your leg up as shown above: 30x, 1-2x/day.



Toe Raise: Stand and rise up on your toes: 30x, 1-2x/day.

Techniques for Icing



Icing With a Focus on Decreasing Swelling – Lying on your back with a bolster or pillows under your ankle and ice pack over your knee. Be sure to elevate the leg so that the knee is at or above the level of your chest. Relax for 10 minutes and repeat 3-5 times per day.



Anterior/Posterior Weight Shift – Standing with your feet staggered, with your affected foot forward. Gently shift your weight onto the affected leg and back off. Complete 30 repetitions and repeat 2-3x/day.



Hamstring stretch: Using a rope, belt, or towel wrapped around the top of your foot, (on a bed, table, or couch) attempt to pull your knee straight. Hold for 30 seconds, Perform stretch 3-5x, 2-3x/day.

Heel Slides: Lying on your back with a rope or towel wrapped around your foot, attempt to slide your heel toward you and bend the knee. Hold for 10 seconds, 10x. Perform 2-3x/day.

Helpful Hints

If you have difficulty sleeping due to pain, it is recommended that you take any pain medication you have been prescribed approximately one hour before you go to sleep. Keep your medication and a glass of water nearby, in case you need additional medication during the night.

It is not uncommon to experience pain while lying still at night and stiffness in the morning. This is a normal occurrence and will likely decrease over the next few weeks.

For your safety

- Remove all throw rugs and keep all walkways clear.

To assist in bed mobility and transfers on/off of furniture.

- Hook your uninvolved foot under the ankle of your surgical leg. Use your healthy leg to assist and swing your involved knee into/out of bed.

To reduce the strain on your knee when sitting

- Place a pillow or two on your chair/car seat. This will elevate your trunk, reducing the amount of flexion needed from your knee.

Ambulation on level surfaces

- When using crutches the sequence is: both crutches, surgical leg, non-surgical leg.
- When using a cane, hold the cane on the side of the non-surgical leg. The sequence is: cane, surgical leg, non-surgical leg.

Stair negotiation

- Going upstairs: Non-Surgical leg first, then surgical leg, then crutch or cane.
- Going downstairs: Crutches (both held in opposite hand of banister) or cane, surgical leg, then non-surgical leg.
- If a railing exists on your staircase, always hold the railing and put your crutches or cane in your free hand.

What to expect from (OUTPATIENT) Physical Therapy:

The first few days of physical therapy will focus on reducing pain and swelling. Therapeutic exercises will be given to strengthen your knee muscles and improve flexibility. The exercises and stretches will gradually increase in intensity with the goal of restoring full mobility, strength, and function.

Physical therapy may include aquatic rehabilitation. The buoyancy of a body in water results in decreased knee pressures, which allows for an accelerated progression of exercises with less pain.



Aquatic Therapy

PERFORMANCE

General Expectations / Guidelines for Rehabilitation:

Post Operative Week #

0 1 2 3 4 5 6 7 8 9 10 11 12

Inflammation & Pain.

Knee motion. Less pain & inflammation.

Knee Motion & Strengthening.

Strength & Function.

Expected Function Outcomes:

WEEKS 0-2:

- Walk independently with walker
- Perform independent transfers from bed, chair, & standing.
- Attempt to control swelling and pain with ice and elevation
- Improve quad control
- Deep Vein Thrombosis Prophylaxis (per physician)
- Motion: Full Extension 0° (knee straight), 90° flexion (bending).

WEEKS 2-4:

- Weight bear as tolerated with decreased dependence on assistive device.
- Bicycle for stretching of knee flexion
- Approximately 3 weeks post operative (1 week after incision is fully closed) –
 - Begin aquatic therapy program if available.
 - Pool program to consist of walking, stretching, stair training, balance work, squatting, & strengthening.
- Continue use of ice and elevation to decrease pain and swelling.
- Discontinue use of TED hose at 2-3 weeks (per physician)
- Motion: 0-105°
 - If you have not reached 0° extension (fully straight) & 90° flexion (bending) by 4 weeks – contact your surgeon.

WEEKS 4-6:

Begin stair training (ascending stairs on affected leg only)
Discontinue use of assistive device as appropriate
Continue pool program
Continue ice and elevation for swelling
Improve voluntary quad control
Minimal pain and inflammation
Continue to build strength and endurance
Begin cardiovascular exercises
Progression of functional activity
Motion: 0-115°

WEEKS 6-12:

Initiate walking program
Begin endurance program in pool (discontinue aquatic therapy at 8 –10 weeks)
Return to functional activities
Descend stairs with good control
Continue to develop muscle strength and endurance
Motion: 0-115° actively and without pain

WEEKS 12 on:

Full, non-painful motion 0-115°
Strength 85% of non-involved leg
Minimal pain & swelling
Return to previous level of function

RECOMMENDED LONG TERM ACTIVITIES AFTER KNEE REPLACEMENT:

Good:

Walking, Stationary bike, Ballroom dancing, Golf, Nordic Track, Swimming, Bowling, Rowing, Cross country skiing, Light weight lifting.

If prior Expertise/Experience, you may return to:

Street bike, Elliptical Machine, Canoeing, Horseback riding, Ice skating, Skiing.

Avoid:

Basketball, Baseball, Football, Handball, Jogging, Lacrosse, Soccer, Tennis, Volleyball.

Peak Performance Physical Therapy/Aquatic Rehabilitation would like to remind you that the above information serves only as general guidelines for a standard total knee replacement and that multiple factors may influence your actual progress. Please direct unanswered questions to your Surgeon or feel free to contact one of our Physical Therapists in any one of our offices – peakptfit.com COPYRIGHT :12/2006