Rehabilitation after Total Knee Arthroplasty

The goal of rehabilitation is to increase your strength and endurance so you can achieve your activity goals. These are general guidelines and may not completely apply to your situation. When in doubt, please clarify any questions with your therapist and/or physician.

**Timeline**

- **Surgery**
  - 2-3 days in the hospital
- **First 7-10 days after hospital stay**
  - Home exercise program
  - Walking program
  - Initiate outpatient physical therapy
- **After 7-10 days – 12 weeks**
  - Continue outpatient physical therapy
  - New home exercise program from outpatient physical therapist—see attached protocol

**Before surgery**

Think about:

- The family/friends who will be available to help you once you leave the hospital
- How far you need to walk to get to your house and around your house
- How many stairs you need to climb
- Any obstacles you are worried about navigating at home

*Your responses will help us with working with you to prepare for your return home

**In the hospital –beginning the day of surgery**

To regain your strength and energy, it is important to get up to the chair for your meals and to take 1-2 walks in the hall every day you are in the hospital.

A physical therapist will work with you to gain independence with getting out of bed and chairs, walking, and climbing stairs.

An occupational therapist will work with you to gain independence in dressing, showering and toileting. They will help you determine what additional equipment you may need at home. See next page.

Initially you will need an assistive device (walker, crutches) to walk. If you have one already, bring it to the hospital to use, otherwise you will be provided one.
Activities of Daily Living

Following surgery, you may find everyday things such as dressing, toileting, and bathing, are a lot more difficult. There are several devices that may help you with independence in these areas:

- Tub Transfer Bench
- Shower chair (adjustable height)
- Raised toilet seat
- Reacher

You may consider borrowing these items from a friend or family member.

However, if you need to purchase the equipment, you may choose to wait until after surgery to decide what you specifically will need.

Therapy Program and Education

Primary focus after surgery

- Get the knee straight—the most important within the 1st 2 weeks
  - No pillow under knee in bed
  - Heel prop—see home exercise program
- Control swelling
  - Ice
    - Important for reducing swelling and can also assist with pain management.
    - 15-20 minutes, 3-5 times a day
  - Elevation
    - Ankle above knee and knee above hip, make sure the knee is straight
- Bend the knee
- Quad muscle activation
Progressive Walking Program

It is important to walk! Walking helps to increase blood flow, flexibility, muscle strength, balance and endurance. Below is a general walking program progression, which may be adapted based on your specific needs.

<table>
<thead>
<tr>
<th>Week</th>
<th>Time</th>
<th>Pace</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>5 minutes 3 times a day</td>
<td>Easy</td>
</tr>
<tr>
<td>2</td>
<td>5 - 10 minutes 3 times a day</td>
<td>Easy</td>
</tr>
<tr>
<td>3</td>
<td>10 - 15 minutes 3 times a day</td>
<td>Easy</td>
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</tbody>
</table>

Initially, make sure your walking path is safe and manageable. It is important as your recover to challenge yourself, but please progress safely and with input from your outpatient physical therapist.

Home Exercise Program

Ankle Pumps: AS OFTEN AS YOU CAN

In a seated or lying position, move your ankles up and down.

Glute Sets: 5 - 6 time a day; 10 - 20 repetitions each

In a seated or lying position, tighten your buttocok muscles and hold for 2-5 seconds.

Quad Sets: 5 - 6 time a day, 10 - 20 repetitions each

In a lying position, tighten your thigh muscles to straighten the knees to press the back of the knee down into the bed/couch and hold for 2-5 seconds.

Short Arc Quad: 5 - 6 time a day, 10 - 20 repetitions each

In a lying position, place a bolster/folded pillow/large ball/rolled large towel under the knee. Once this is placed, kick the leg and lift the heel from the bed/couch with the goal of fully straightening the leg.
Heel Prop: 5 - 6 time a day, with a goal for 10 minutes each

In a lying position, place a bolster/folded pillow/large ball/rolled large towel/end of the couch under the heel. This will “float” your knee and allow gravity to pull the knee straight. Relax into the stretch and allow gravity to do the work, you do not need to assist. THIS IS EXPECTED TO BE UNCOMFORTABLE. This is to stretch the knee into extension, a motion that many patients have not been able to achieve for some time.

Heel Slides: 5 - 6 time a day, 10 - 20 repetitions each

In a lying position, slide the heel towards your buttock while keeping the kneecap and toes pointed straight up.

Hip abduction: 5 - 6 time a day, 10 - 20 repetitions each

In a lying position, keep the knee straight and the leg “dragging,” slide the leg outwards ~10 inches. Make sure the knee cap and toes are pointed towards the ceiling.

Long Arc Quads: 5 - 6 time a day, 10 - 20 repetitions each

In a seated position with thighs supported as much as possible on a hard chair, kick the leg out and up with the goal of fully extending the knee.

Seated Knee Flexion: 5 - 6 time a day, 10 - 20 repetitions each

In seated position, place the foot on the floor in front of you. Slowly pull the heel towards the chair (a paper plate on carpet or a towel on tile helps the foot slide easier). Once the foot can no longer slide, scoot hips toward the front of the chair to get a deeper knee bend if able.