Knee Replacement Exercise Booklet

Weight Bearing As Tolerated

BEFORE

AFTER

Patient Name: ________________________
Surgeon:_____________________________
Date of Surgery:_______________________
Physiotherapist:_______________________

Department of Rehabilitation
(416) 967-8650  ext._______

Sunnybrook
HOLLAND ORTHOPAEDIC & ARTHRITIC CENTRE

PR 99508 (12-2009)
How to Use This Book

1. It is recommended that the exercises be taught by a physiotherapist.
2. Not every exercise is needed.
3. You will need to do only the exercises that your physiotherapist determines are important for you.
4. In the first few weeks at home it is important that you continue to improve your knee bending and straightening. The next few pages are a guide to assist you if your knee is becoming stiff.

Reduce Pain and Swelling

**Ice and Heat**

- Apply ice for **10 –15 minutes** to the operated knee or thigh especially after exercise. Ice on the operated knee while elevating the leg above your heart helps reduce **swelling**.
- Beginning 3-4 days after surgery, you may apply heat under the knee or to the thigh muscle well above the incision for 10-15 minutes before you exercise.

**Pain Medication**

- Pain medication should be taken as prescribed in hospital.
- It is important that your pain is controlled so that you are able to complete 2-3 exercise sessions in a day.
- Take your pain medication 45 minutes before your exercise session.

**Positioning Leg in Bed**

- While lying on your back, rest your operated leg with a straight knee on the bed. Do **not** put a pillow under your operated leg.
Please assess your knee movement using the diagrams on the following two pages to track your progress. On the last page of this booklet a tracking chart is provided for you and your physiotherapist to monitor your progress. If you are experiencing an increase in knee stiffness or find that your knee range of motion is not improving since your hospital discharge are you:

- **Doing enough exercises?** If your knee is becoming stiffer you should increase to 10 repetitions of range of motion exercises every two hours. It is necessary to hold the stretch for 20-30 seconds at the end of your range; it is normal to have pain while doing these exercises.
- **Taking the prescribed pain medication as suggested in hospital?**
- **Icing your knee frequently?** You should ice your knee for 10-15 minutes, especially after the exercises. Allow at least one hour between icing sessions. A bag of frozen peas wrapped in a kitchen towel or pillowcase makes an ideal ice pack.
- **Applying heat to the thigh muscle** well above the incision or behind the knee for 10-15 minutes before exercises? You should feel a pleasant warmth, not a burning sensation.
- **Elevating your leg above the heart level?** You may need to do this for 20 minutes, 2-3 times a day to help decrease the swelling.
- **Doing too much other activity?** Often a sudden increase in activity level is the reason for an increase in knee swelling and stiffness. Decreasing your other activities for a 24-hour period may help. Take more rest breaks.
- **Staying in one position?** For example, if you sit for a prolonged period of time, it can also cause stiffness. Be sure to change position frequently.

If you have tried the above strategies for 3 days with no improvement please call and leave a message at: 416.967-8526
At Home Keep Checking That Your Knee Movement is Improving

Estimate your Knee Bend (flexion):
Sitting in a chair with your body weight evenly distributed on both buttocks and your back against the chair, bend your operated knee by sliding your heel under the seat.
If you are unable to bend past position 2 by two weeks (from surgery) call us and leave a message at 416-967-8526.

**If foot cannot move under the chair** begin to do one of exercises #23, #24, #25 or #26 more often in the day, suggested 10 repetitions every 2 hours.
Estimate your Knee Straightening (extension):
Push down on thigh to straighten the knee towards the bed, making sure that your toes are pointing up to the ceiling. Attempt to straighten the knee as much as possible towards position B. If you are unable to straighten the knee beyond position A by two weeks call us and leave a message at 416-967-8526.

**If you are unable to straighten your knee** flat on the bed, even with hands pushing, begin to do one of exercises #20, #21 or #22 more often in the day, suggested 10 repetitions every 2 hours.
Immediate Postoperative Exercises

1. Deep Breathing and Coughing Exercises
   Take a slow deep breath, in the nose and out of the mouth.

2. Ankle Pumping
   Move your feet up, down and in circles.

3. Buttock Contractions
   Tighten your buttock muscles and hold for a count of 5 seconds.

*Repeat exercises #1-3, ten times every hour you are awake*

Begin the above exercises immediately after your surgery, as they are important to:
- help prevent complications with your breathing
- help prevent blood clots in your legs
- increase your circulation
Postoperative Exercises

These exercises begin during your hospital stay and continue after discharge.

Repeat each exercise 2 to 3 times a day.

4. Static Quadriceps Strengthening

Tighten the muscle on the front of your operated thigh to press your knee into the bed and bring toes towards you.

Hold 5 seconds.
Repeat 10 times.

5. Static Quadriceps with Hip Abduction

Tighten quadriceps muscle (as in exercise #4) and slide your leg out and in, keeping your operated leg on the bed with the toes pointed to the ceiling.

Hold 5 seconds.
Repeat 10 times.
Flexion Exercises

6. Knee Bend With A Pulley Or A Sheet

Lying as shown, put the sling or a sheet under your \textit{operated} knee.

a) Bend your knee and then pull on the pulley or sheet to bend your \textit{operated} knee further.
b) Keeping your knee bent, press your heel into the bed to tighten the muscle at the back of your thigh. Hold 5 seconds then relax and try to bend further, assisting with the pulley or sheet.

Repeat 10 times.

\begin{itemize}
  \item It is important to bend as much as possible now to prevent getting a stiff knee.
  \item It is normal to experience pain with this exercise.
\end{itemize}
7. Roll Stretch

Place the heel of your operated leg on a roll with the toes pointed to the ceiling. Tighten your front thigh muscles to press your operated knee down toward the bed. Place your hands above the knee (as shown) and press down to help maximize the stretch behind your knee. Do not bounce with your hand, hold the stretch instead.

Hold 10-20 seconds.
Repeat 5-10 times.

8. Active-Assisted Quads Over Roll

Place a roll under your operated knee and sheet around your foot.

a) Tighten your front thigh muscle to raise your heel off the bed using the sheet to assist.
b) Keeping your knee pressing down on the roll, loosen the tension of the sheet and maintain the heel off the bed without the help of the sheet.

(*note: the sheet only assists to raise and lower the foot)

Hold 5-10 seconds.
Repeat 10 times.
Flexion & Quadriceps Strengthening Exercises

9. Knee Bend With Leg Press

a) Place a sheet around the foot of your operated leg. Use it to help bend the operated knee. Keep your heel on the bed. Hold 5 seconds.

b) Slowly straighten your operated leg against the resistance of the sheet. (* note: push your foot against the sheet). Keep your heel on the bed. Try to straighten. Repeat 10 times.

10. Sitting Knee Extension

Sitting on a firm surface, chest up with low back arched. Tighten the muscles on the front of your thigh (Quadriceps) to straighten your operated knee. Feel the stretch behind the thigh and knee. Lower your leg slowly.

Hold 5-15 seconds.
Repeat 5 times.
11. Knee Bend Progression

a) Sitting on the bed or chair, bend your operated knee by sliding your heel under the seat. You may use a plastic bag to assist with sliding the heel back.

Hold 10-20 seconds. 
Repeat 10 times.

b) Cross the non-operated ankle over the operated ankle, and use it to help bend the operated knee. Ensure you do not lift your buttock off the bed.

Hold 10-20 seconds. 
Repeat 10 times.

c) Bend operated knee with assistance of a belt (as shown). Loop the belt around the ankle of your operated leg. Bring it up and over your shoulder and pull.

Hold 10-20 seconds. 
Repeat 10 times.

These are 3 different exercises that you can use to improve your knee bend.
12. Chair Rise

Start Position:
Standing with feet shoulder width apart and back of knees near chair.

a) Tighten front thigh muscles to straighten knees.

b) With weight evenly on both feet gradually lower yourself towards the chair keeping knees close to the chair and buttocks over the seat.
Progression: **Hold 5 seconds** in this quarter squat position as shown below.

c) If needed use armrest to gradually lower and rise from the seat.

d) Progress by reducing use of armrests.

Repeat **10 times**.

Progress to using a chair with **no** armrests.
13. Forward/Backward Stepping
Stand up tall with your weight on your *operated* leg. Begin by stepping forward and backward with your *non-operated* leg. Practice transferring your weight from one leg to the other. Keep knee straight as you stand on it. *Use hand support such as the kitchen counter for safety and balance. Progress to using a cane and then with no aid.*

Repeat 20 times.

*Progress to taking 5 to 6 backward steps in a row.*

14. Single Leg Balance
Attempt to balance on your *operated* leg by moving your *non-operated* leg out to the side and/or by bending it up in front of you. Ensure that you are not leaning to one side by using a mirror for feedback. Repeat exercise on *non-operated* leg. Begin by using a support (e.g., walker, canes, kitchen counter).

Repeat 10-20 times.

**Progression:**
1. Increase the amount of time you are balancing while using support (aim to balance for 20-30 seconds).
2. Try to balance without the use of a support.
3. Gradually increase the amount of time on one leg...
How To Manage Stairs One At A Time

To go up the stairs:
1. Put the *non-operated* leg on the step.
2. Use the cane and handrail to help step up.
3. Bring the *operated* leg up to the same step.

To go down the stairs:
1. Lead with the cane and the *operated* leg first.
2. Bring *non-operated* leg down to the same step.

As your knee range of motion and strength improves, you will eventually be able to resume “normal” stair pattern (i.e. up and down with either leg, reciprocal).
Strengthening Exercises

15. Quarter Squat
Place your feet shoulder width apart, about 6-12 inches from the wall. Keep your toes pointing straight ahead, and your back and shoulders against the wall.

With the weight back on your heels, strictly bend your knees. Lower yourself about 1/4 to 1/3 of the way down the wall. (Slide straight down - do NOT lean to one side and do not allow the knees to go ahead of your toes).

Hold 5-10 seconds.
Repeat 10 times.

16. Hamstring Curl
Holding on to a support, bring the heel of the operated leg towards your buttock. Remain standing up tall. Move thigh backward to keep it beside the other leg.

Hold 5 seconds.
Repeat 10 times.

17. Knee Straightening in Standing
Standing against a wall. Straighten your operated knee by tightening your thigh muscle and pushing the knee towards the wall.

Hold 5 seconds.
Repeat 10 times.
18. Step Exercise
Stand at the bottom of the stairs,
  a) Step up with the non-operated leg first and then bring operated leg onto the step. Now step BACKWARDS lowering the non-operated leg down first then bring operated leg down.
  b) Progress by bringing the operated leg up first. Lower with non-operated leg BACKWARDS off the step.
  c) Progress to normal pattern of climbing and descending stairs i.e. only one foot is on a step when going up and down (reciprocal). You may try going down stairs laterally until you are more comfortable going down in normal pattern. (see lateral step exercise #33)
*Use support as needed and keep your body up tall.

**Helpful Tip:** Increase the step height as able. Begin with a 2-4 inch step, progress to a 6 inch step and then a 8 inch step height.

Repeat 10 times.

19. Forward Knee Lunge
Place the foot of your operated leg on a step. Lunge forward to bend the operated knee. Use support as needed and keep your body up tall.

  Hold 10-20 seconds.
  Repeat 5 times.
exercise progression

♦ It is a good idea to add one new exercise a day.

♦ As a guide, soreness related to exercise should diminish within a few hours of completing the exercise program. If you continue to experience exercise-related soreness after more than 4 hours, then you can reduce the intensity of the exercises. This can be done by reducing the number of repetitions. Ensure you take your pain medication 45 minutes to an hour before exercises and ice afterwards for 15 minutes.

♦ If you find that an exercise is no longer challenging, you should progress its “intensity” by gradually increasing the number of repetitions. This is done by completing 10 repetitions of an exercise, resting for 1 to 2 minutes, then complete 10 more repetitions. You should aim for 3 sets of 10 repetitions.

**Remember: This booklet is meant as a general guide for your exercises. If you are unsure of a particular exercise, or how to progress the intensity, it is best to clarify it with a Physiotherapist.**
20. Coach Assisted Knee Extension On A Roll
This is similar to exercise #7. The coach can assist to regain straightening of the operated knee. The coach pushes down with two hands above the knee. **You should guide your coach to hold a stretch that is tolerable for you.

Hold 20 seconds. Repeat 5 times.

21. Weighted Knee Extension In Sitting
Sitting as shown, tie the handles of two bags together with equal weight in each bag and place it around your operated leg above the kneecap (one bag hangs on each side). Ensure the weight is NOT directly on your knee. Allow your knee to relax and “sink” towards the floor. You should feel a stretch behind your knee.

Hold 5-10 minutes. Repeat 2-3 times/day.

22. Gravity Assisted Knee Extension Stretch
Lie on your stomach with your operated foot and ankle off the end of bed. Place a towel under your thigh just above the knee. As tolerated, add a light weight on the ankle to increase the stretch.

Hold 5-10 minutes. Repeat 2-3 times/day.
23. Coach Assisted Knee Bend / Hamstring Strength
This is similar to exercise #11. In this exercise the coach is helping to increase knee bend.
**You should guide your coach to hold a stretch that is tolerable for you.

a) Push the *operated* leg back against the coach’s hand and hold in position for 5 seconds.

b) Relax the *operated* leg, allow the coach to press down on the top of the knee cap and pull the ankle down while you pull on the belt to bend your knee further. Hold 10-15 seconds.

Repeat above sequence of a) and b) 10 times.
24. Prone Knee Bend With Strap

Place a towel under your thigh (as shown). Wrap a belt around the ankle of your operated leg. Hands pull the belt to assist the heel of your operated leg to move toward your buttock. Bend the knee as much as you are able.

Hold 20 seconds. Repeat 5 times.

25. Quad Stretch In Standing

Hold the operated foot using a towel. Pull on the towel to stretch your quadriceps. Keep your knees parallel and keep operated knee pointed to the floor. Do not bend at hip.

Hold 20 seconds.
Repeat 5 times.

26. Quad Stretch in Lying

Lying at the edge of the bed. Hug non-operated leg up towards chest while you bend operated leg under the bed with the help of a sheet.

Hold 20 seconds. Repeat 5 times.
27. Raise Up On Toes / Calf Strengthening

Holding on to support if needed, raise heels off the floor. Progress to standing on the operated leg only.

Hold 5 seconds.
Repeat 10-30 times.

28. Calf Stretch

Holding on to a support, place the operated leg back. Keep your operated knee straight and the heel on the ground. Be sure to keep your chest up tall while bending the non-operated knee till you feel a stretch in the calf muscle of the operated leg.

Hold 20 seconds.
Repeat 5 times.
29.a) Hamstrings Stretch in Standing

Stand with the heel of the \textit{operated} leg resting on a chair and toes pointing to the ceiling. Hold onto support with one hand and put other hand at low back. Keep chest up. Do not twist hips while moving chest forward until stretch is felt behind the thigh and knee. (Standing foot points forward).

Hold 20 seconds.
Repeat 5 times.

b) Hamstrings Stretch in Long Sitting

Sit on the edge of the bed with the operated leg out straight and toes pointing to the ceiling. Keep you chest up while you move your chest forward until a stretch is felt behind the thigh and knee (hands push on bed to help lift chest up).

Hold 20 seconds.
Repeat 5 times.

30. Hamstrings Strengthening with Theraband

Sitting in a chair, place a \underline{coloured} theraband around the ankle of your \textit{operated} leg. Slide your foot under the chair as far back as you can against the resistance of the theraband. Slowly allow the leg to return to the starting position.

Hold 5 seconds.
Repeat 10-30 times.

Hamstrings Stretch

Hamstrings Exercises
31. Quarter Squat With Ball

a) Place ball behind low back as shown in picture, with feet shoulder width apart, about 6-12 inches from the wall. Keep your toes pointing straight ahead, slowly lower yourself about 1/4 to 1/3 of the way down the wall.  
b) Progression to include core strengthening: theraband in hands and pull apart on theraband by squeezing shoulder blades together.

Repeat 10-30 times as a slow controlled movement without holding the squat position.

32. Quarter Squat At the Sink

Stand with feet shoulder width apart. Hands lightly holding onto edge of sink. Bend knees 1/4 to 1/3 of the way down with weight on both feet. Then shift a little more weight on operated leg.

Repeat 10-30 times as a slow controlled movement without holding the squat position.

Progression: Stand on operated leg only and perform quarter squat. Hold on to a support as needed.

Repeat 10-30 times as a slow controlled movement without holding the squat position.
Quadriceps Strengthening Progression Exercises

33. Lateral Step Up
Stand facing sideways with your operated foot on the step.

a) Step up by straightening the operated knee.
b) Slowly lower non-operated leg to the floor by bending operated knee with the buttock back and the knee not ahead of the toes.

Repeat 10-30 times.

Progression: see page 27 for lateral step exercise standing on a pillow.

34. Lateral Step With A Theraband
Operated foot on a step with Theraband looped around your knee, non-operated foot on the floor beside the step.

a) Step up by straightening your knee against the resistance of the Theraband as shown in (ii) picture.
b) Slowly lower non-operated leg to the floor beside the step by bending operated knee with the buttock back and the knee not ahead of the toes.

**Helpful Tip:** Increase the step height as able. Begin with a 2-4 inch step, progress to a 6 inch then 8 inch step height. (A book beside the step allows for step height progression if needed.)
35. Side-lying Hip Abduction

Lie on your *non-operated* side with knee bent. Straighten the knee of the top (*operated*) leg. Lift the *operated* leg straight up to the ceiling as far as you comfortably can. Do NOT roll your hips forward or backward.

Hold 5 seconds. Repeat 10-20 times.

36. Clamshell

Lying on your *non-operated* side with hips and knees slightly bent. Lift the *operated* knee up while keeping your feet together. Do NOT roll your hips forward or back. Progress by adding a Theraband around the knees.

Hold 5 seconds. Repeat 10-20 times.
37. Hip Abduction with Theraband

**Only progress to this exercise, if you are able to do 30 repetitions of exercise #14 with good form. (see picture)**

Stand in front of a mirror, with your feet slightly apart. Put the Theraband around \textit{operated} leg just above the knee. Bring your \textit{operated} leg out against the resistance of the band. Keep your knee straight. Allow your leg to slowly return to the starting position. Repeat with \textit{non-operated} leg pulling on the band.

Hold 5 seconds.
Repeat 10-20 times.

38. Standing Abduction Strength

a) Stand on \textit{operated} leg with knee straight and \textit{non-operated} knee bent against the wall. Push the knee outwards against the wall, keeping body straight.

Progression: complete the same exercise but now only push knee into wall, keeping the foot away from the wall (foot moves toward standing leg).

Hold 5 seconds.
Repeat 10-20 times.
39. a) **Single Leg Balance on Unstable Surface:**
Stand on your *operated* leg on a wobble board. If you do not have access to a wobble board you may attempt this exercise using a pillow. Begin by holding on to a support. Gradually try to discontinue the use of support, and increase the amount of time you are able to balance on your *operated* leg.

b) **Lateral Step Up On Pillow**
Stand facing sideways with your *operated* foot on a thick pillow (or a Bosu if available at your gym). Step up by straightening the *operated* knee. Slowly lower *non-operated leg* to the floor by bending *operated* knee with the buttock back and the knee not ahead of the toes. Use support as needed. Repeat 10 times.

40. **Dynamic Balance**
Place obstacles on the floor in a straight line with equal distances between them. Attempt to clear these obstacles by lifting your feet up and over them - NOT swinging around them. Walk in a slow and controlled manner.
**Exercise To Improve Your Trunk Core Endurance**

41. Single Leg Stance with Theraband Rowing

Place band around doorknob and hold band in each hand with palms facing each other. Stand on operated leg with knee straight. Squeeze shoulder blades together by pulling band backwards bringing arms beside the body.

Repeat 10 times while standing on *operated leg*. Progress to 3 sets of 10 repeats.

**Progression:** Perform the same exercise with another band tied behind the knee. Keep knee straight by pulling back on band.

42. Chair Rise Progression

Sitting on a chair with Theraband tied around knees and another Theraband held in each hand with palms facing each other and thumbs pointing up. Raise off chair and hold quarter squat position while maintaining outward pull on each band to hold the position. Knees remain in line over feet and not ahead of toes.

Hold 5 seconds. Repeat 10 times.
43. Stationary Cycling

*To gain range of motion:*
Without any resistance on the stationary bicycle, start by rocking back and forth trying to bend the knee further each time. Once you can achieve a full revolution you can lower the seat to increase your range of motion further.

*To improve strength:*
Adjust the height of the seat so that it is as high as possible when cycling, your knee should be straight when the pedal is near the ground.

As your knee gets stronger you may gradually increase the resistance up to a moderate level and increase the speed of cycling to make the exercise more challenging (i.e. pedal speed at 90 revolutions per minute (RPM)). Ensure that you are not working too hard by being able to carry on a conversation while cycling.

Increase resistance for up to one minute then decrease the resistance for 2 minutes (similar to going up and down hills), try to maintain your pedal speed at least at 60 RPM’s even with additional resistance.

*Cycling can help you to improve range of motion, strength and overall fitness level. Gradually increase cycling to 15-20 minutes.*
The following exercises can be attempted if you have access to gym equipment. If you are not familiar with the equipment, consult a fitness instructor or a Physiotherapist.

**44. Leg Press**

Begin the exercise with your knee bent at 90 degrees. Push against the weight to straighten the knee in a slow controlled movement and then release back slowly.

**45. Prone Hamstring Curls**

Lie on your stomach with the leg straight and the bar on top of the ankle. Using a slow controlled movement, bend the knee to bring the foot towards the buttock and release back slowly.

For the above exercises, progress to 3 sets of 10 repetitions, your muscles should feel tired after the exercise, if not increase the weight next time.
When you can resume your leisure activities following surgery depends on the physical demands of the activity and your stage of recovery.

**Do not take up new sporting activities as inexperienced people are at a higher risk for injuries and accidents**

**Walking:** This is an excellent activity, and you are strongly encouraged to gradually increase your walking distance after you leave the hospital. Walk outdoors as long as the sidewalks are dry or consider going to a nearby mall to walk indoors when the sidewalks are wet and slippery.

**Stationary Cycling:** can be resumed 1-2 weeks following your surgery, refer to page 21.

**Swimming / Aqua-fit:** can be resumed 2 weeks following surgery only if the incision is well healed and dry. No whip kick but gentle breast stroke and flutter kick is allowed. Avoid side-to-side leg exercise in Aqua-fit.

**ACTIVITIES THAT MAY BE RESUMED AFTER SURGEON/APP FOLLOW-UP (APPROX. 6-8 WEEKS)**

- **Driving** may be started sooner if you are not taking narcotic pain medication and are able to climb stairs reciprocally (normal pattern), **only on the advice of your surgeon.**
- **Golf** - begin at the driving range
- **Gardening**

**Kneeling:** It is NOT harmful to kneel on your new knee, however you may experience pain when kneeling. If kneeling is undertaken, the use of a padded surface or pillow is recommended. For example, when gardening a kneeling platform is recommended.
ACTIVITIES THAT MAY BE RESUMED AT 12 WEEKS

♦ Bowling (Lawn or Indoors)
♦ Golf - you may return to the course (may be started earlier than 12 weeks as long as able to walk without aids, and completed previous balance/core exercises)
♦ Outdoor cycling (NOT Mountain Biking)
♦ Low impact aerobic exercise
♦ Doubles tennis

HIGH RISK ACTIVITIES

All of the following activities are associated with slippery or unstable surfaces and therefore pose high risk of falling. In addition, these activities can result in significantly higher forces on the replaced joint than are considered safe and therefore, it is not recommended to begin to learn one of these activities following your surgery. In the case of a highly experienced or expert athlete, the activity may be further discussed with the surgeon.

♦ Downhill skiing
♦ Cross-country skiing
♦ Ice skating
♦ Inline skating
♦ Mountain biking
♦ Canoeing
♦ Sailing
♦ Kayaking

HIGH RISK ACTIVITIES THAT ARE NEVER PERMITTED

♦ Singles tennis
♦ Jogging / Running
♦ Squash / Racquetball
♦ Basketball
♦ High impact aerobics

♦ Weight Training: Heavy lifting is never recommended.
Generally it is recommended to use lighter to moderate resistance and increase the workload through increasing the number of repetitions performed.
General Aerobic Fitness Suggestions

You can return to activities you used to do before surgery within the following guidelines. However, if you have not been active before your surgery, please consult your family physician before starting to exercise.

It is important to start slowly, as you will not have been as active since surgery. You can begin initially with a few minutes of activity and gradually progress (i.e. either increase the time you are performing the activity or the distance you are covering).

The intensity of your workout should allow you to carry out a conversation or talk comfortably while exercising. It is best to choose low-impact activities such as swimming, cycling, power walking or Aqua-Fit.

For further guidance about participating in exercise classes go to patient education at our website: www.sunnybrook.ca/content/?page=Focus_MSK_info

Talk with a physiotherapist if you need more specific advice.
## Tracking your Knee Range of Motion

| Date | Knee Straightening | Knee Bending |
|------|--------------------|--------------|
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