**EXERCISE LOG:  *Total Joint Replacement Patients***

* Use this exercise log to track your physical therapy after you leave Surgery Center.
* Track your exercise for no less than 4 weeks. Place a check mark in each box to record when you do 1 set of each exercise.
* A set is 10 repetitions of each exercise, except for the ankle pumps. Ankle pumps are 15-20 repetitions for 1 set of ankle pumps.
* Aim for 3 or more sets every day for each exercise and put a check mark in each box when set is completed.
* For the recumbent bike, aim for at least two 10 minutes sessions or one 20 minute session per day.
* Blank sheets are to be used for additional exercises assigned by your Physical Therapist.

**Week 1 Dates: \_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **EXERCISE** |  |  |  |  |  |  |  |
| Quadriceps Set |  20 reps | **** | **** | **** | **** | **** | **** |
| Gluteal Set | 20 reps | **** | **** | **** | **** | **** | **** |
| Heel Slides | 20 reps | **** | **** | **** | **** | **** | **** |
| Straight-leg Raise | 20 reps | **** | **** | **** | **** | **** | **** |
| Abduction | 20 reps | **** | **** | **** | **** | **** | **** |
| Ankle Pumps | 20 reps | **** | **** | **** | **** | **** | **** |
| Sitting Knee Flexion/extension | 20 reps | **** | **** | **** | **** | **** | **** |
| Recumbent Bike | 3-5 mins | **** | **** | **** | **** | **** | **** |
| Heel Prop | 5 mins | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |

**Week 2 Dates: \_\_\_\_\_\_\_\_**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **EXERCISE** |  |  |  |  |  |  |  |
| Quadriceps Set | reps | **** | **** | **** | **** | **** | **** |
| Gluteal Set | reps | **** | **** | **** | **** | **** | **** |
| Heel Slides | reps | **** | **** | **** | **** | **** | **** |
| Straight-leg Raise | reps | **** | **** | **** | **** | **** | **** |
| Abduction | reps | **** | **** | **** | **** | **** | **** |
| Ankle Pumps | reps | **** | **** | **** | **** | **** | **** |
| Sitting Knee Flexion/extension | reps | **** | **** | **** | **** | **** | **** |
| Recumbent Bike | reps | **** | **** | **** | **** | **** | **** |
| Heel Prop | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |

**Week 3 Dates:\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **EXERCISE** |  |  |  |  |  |  |  |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |

**Week 4 Dates: \_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **EXERCISE** |  |  |  |  |  |  |  |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |

**Week 5 Dates:\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **EXERCISE** |  |  |  |  |  |  |  |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |

**Week 6 Dates: \_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **EXERCISE** |  |  |  |  |  |  |  |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |
|  | reps | **** | **** | **** | **** | **** | **** |

**How physical therapy helps muscles**

The physical therapy exercises in the care guide focus on muscles that help you move your legs.

**Quadriceps muscles (thigh muscles)**

Quadriceps muscles are a group of 4 muscles that work together to straighten your knee. These muscles are located on top of your thigh. This muscles group helps you:

• Move from sitting to standing

• Go up stairs

• Be more stable in your knee when standing

• Lift your leg onto the bed

**Hamstring muscles (back of the thigh)**

Hamstring muscles are the muscles that bend your knee and help extend your hip. They are located on the back of your thigh. These muscles help you:

• Rise from a chair

• Step over objects

• Work with your quadriceps to stabilize your knee when standing

**Hip flexors (front of your hip)**

Hip flexors are the muscles that bed your hip. They lie across the front of your hip joint. These muscles help you:

• Swing your leg forward with each step

• Raise your leg to place your foot on a step

• Get your leg out of bed

**Gluteal muscles (butt muscles)**

Gluteal muscles are a group of muscles that extend or straighten your hip. They are your buttocks muscles. These muscles help you:

• Lift your buttocks off the bed

• Rise from a chair

• Move your leg side to side

• Help pull your leg back when you walk

**Why is physical therapy so important?**

Physical therapy helps your body recover more fully and quickly after knee or hip replacement surgery. Many people lose strength before surgery because walking or exercising is too painful or difficult. Physical therapy helps your return more quickly to full use of your legs and your normal activities of daily living.

**Muscle memory (muscle brain)**

Every time you move a muscle, your brain leans how to make the movement. When you do any physical activity, your brain and muscles remember how you did it.

When movements are repeated many times, your body develops *muscle memory*. The muscles get used to the movement, and the brain remembers the skills learned.

Every time you do your physical therapy exercises, your muscles and your muscle memory get stronger. Doing physical therapy exercises before surgery builds muscle memory. After surgery, your body already knows the exercises, and the exercises are easier to do.

**QUADRICEPS SET**

The quadriceps is the front of **knee** muscle. Tighten this muscle to make your kneecap move. Hold this contraction for 5 counts and then relax. This exercise is done with the leg straight and can be performed standing, sitting, or lying down. Repeat 10 times.

**GLUTEAL SET**

Lie on your back. Keep both legs straight and squeeze your buttocks together. Feel your buttocks muscle tighten and hold contraction for 5 seconds. Repeat 10 times.

**HEEL SLIDES**

Lie on your back. Bend the knee of your surgery leg and slide the heel towards your buttocks as far as you can. Then slide the heel away from your buttocks until the knee is straight. Repeat 10 times.

**STRAIGHT-LEG RAISE**

Lie on your back. Start with your good leg (non-surgical) bent. Keep your surgical leg straight and raise and lower the leg off the bed in an upward motion. Repeat 10 times, or as many times as you are able. ***Hip patients do not perform this exercise unless otherwise instructed by physical therapist*.**

**TRY THIS WHILE STANDING IF IT IS TOO HARD IMMEDIATELY AFTER SURGERY**

**HIP ABDUCTION/ADDUCTION**

Lie on your back in a bed. With kneecaps and toes pointing towards the ceiling, move your surgical leg out to one side and then back to the middle. Keep your surgical leg on the bed don’t let it fall off the side of the bed. Repeat 10 times or as many as you are able.

**TRY THIS WHILE STANDING IF IT IS TOO HARD IMMEDIATELY AFTER SURGERY**

**ANKLE PUMPS**

Lie on your back or sit in a chair. Slowly bend ankles up towards your head and then extend foot by pointing toes away from the head (emphasis on up). Repeat 15-20 times. Understand that you cannot perform too many ankle pumps.

**SITTING KNEE FLEXION/EXTENSION (if you are having knee replacement surgery)**

Sit on the edge of a bed or chair. 1. Slide foot back and bend surgical knee as far as possible. Hold position for 5 seconds. Relax and slide the foot forward. . Repeat 10 times. 2. Raise the foot of the surgical leg off the floor until the knee is straight as possible. Hold position for 5 seconds. Lower the foot slowly back to the floor. Repeat 10 times

**Typical activity recommendations by for knee and hip total joint replacement patients, as approved by total joint replacement surgeons:**

|  |  |  |  |
| --- | --- | --- | --- |
| **ALLOWED**  | **ALLOWED WITH EXPERIENCE**  | **NO CONSENSUS**  | **NOT RECOMMENDED**  |
| Stationary cycling Road cycling Golf Swimming Normal walking Speed walking Hiking Canoeing Square dancing Ballroom dancing Bowling Shuffleboard  | Aerobics Yoga/Pilates Ice skating Cross-country skiing Stationary skiing Doubles tennis Horseback riding Rowing Treadmill/elliptical  | Squash/racquetball Single tennis Weight machines Roller skating Weight lifting Baseball Gymnastics Handball Hockey Rock climbing Fencing  | Jogging Basketball Football Soccer Volleyball \*some of these activities will need to be discussed on a one-on-one basis with your surgeon before participation. Some exercises may vary for hip vs. knee replacement. |

**Typical knee join loads to our normal or replaced knee joint during exercise:**

|  |  |  |  |
| --- | --- | --- | --- |
| **ACTIVITY** | **FORCE ON YOUR KNEE** | **FORCE ON YOUR KNEE JOINT IF YOU WEIGH 150 LBS** | **FORCE ON YOUR KNEE IF YOU WEIGH 200 LBS** |
| Walking-regular pace | 2.8 times your body weight | 420 pounds | 560 pounds |
| Walking – fast pace | 4.3 times your body weight  | 645 pounds | 860 pounds |
| Fast downhill walking | 8 times your body weight | 1200 pounds | 1600 pounds |
| Fast downhill walking using ski poles | 6.4 times your body weight | 960 pounds | 1280 pounds |
| Cycling\* | 1.2 times your body weight | 180 pounds | 240 pounds |
| Running (7 mph) | 6 times your body weight | 900 pounds | 1200 pounds |
| Downhill skiing medium slopes | 10 times your body weight if you are a beginner 3.5 times your body weight if you are skilled  | 1500 pounds525 pounds | 2000 pounds700 pounds  |

Cycling – increasing the resistance increases the force on your knee joint. Increasing the speed results in little to no charge in the force on your knee joint. Raising the seat height on your bike will decrease the force on your knee.