

Partial Knee Replacement Guide and Therapy Protocol

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You have made the decision to have a joint replacement to decrease your knee pain and improve your quality of life. Joint replacement is a major event in every patient's life and understandably you will have questions throughout the process. This guide is to help you through this process.

Getting Ready for Surgery - Check List

If you are diabetic - have your hemoglobin A1c checked

Dr. Horazdovsky requires all diabetic patients to have their sugars well managed. Your hemoglobin A1c needs to be less than 7.5 to have surgery. It is your responsibility to have this checked. Make an appointment with your primary care physician as soon as possible so, if needed, this number can be improved while you wait for surgery. If your hemoglobin A1c is greater than 7.5 at your preoperative physical, your surgery will be cancelled.

Get a Pre-operative Physical Exam

Before surgery, a preoperative physical is necessary. This is done by your primary care physician and will need to be completed within one month of surgery. Bring an up-to-date list of the current medications and supplements you are taking including the doses of each to this appointment.

Make a Post-operative Appointment

You should have a post-operative appointment with Patrick or Dr. Horazdovsky scheduled for 2 weeks after surgery. This appointment is typically made at the time you schedule surgery, if it is not please call to schedule this appointment prior to surgery. At this appointment your incision will be checked and x-rays will be taken of your new knee.

Arrange for Help After Surgery

Dr. Horazdovsky strongly prefers all patients go home from the hospital after surgery and will very rarely discharge patients to nursing homes for post-operative recovery. You should arrange for family members or friends to help you at your home or their home after surgery. You may find it helpful for someone to be available including overnights for the first 2-3 days.

There is research that shows patients who are discharged home following joint replacement surgery recover faster and have fewer complications. When you are at home you are walking more frequently because most nursing homes require a staff member to be with patients at all times when they are walking. Walking often helps to decrease pain and stiffness.

If you are concerned about having stairs to navigate after surgery, you will do stairs prior to leaving the hospital. You can practice how you will do stairs before you have surgery. Remember to go up with the good leg and down with the operative leg. Patients often find it helpful to hold the railing in one hand and use a cane in the other. It may also be helpful to have one walker on each level so you don't have to bring it up and down the stairs.

Maintain a Healthy Weight

It is important for your recovery that you are at a healthy weight for your surgery. The risk of complications is higher for patients who have a BMI greater than 40. If your BMI is greater than 40 you will need to lose weight to decrease your BMI. Your BMI can be calculated at www.calculator.net/bmi-calculator or with the following formula:

The most effective way to lose weight is diet modification. Twin Cities Orthopedics has a nutritionist that is happy to work with you before your surgery on ways to improve your diet to facilitate weight loss. Please let us know if this is a service you would be interested in exploring.

Make Physical Therapy Appointments

You will need physical therapy after surgery, these appointments should be made prior to your surgery. You should also arrange for transportation to and from physical therapy as you will not likely be driving for a few weeks after surgery. Therapy can be done through Twin Cities Orthopedics or another therapist of your choice. We do not typically use home therapy, Dr. Horazdovsky prefers patients do therapy at a physical therapy office so you are getting out of the house and the therapy offices have equipment necessary to help in your post-operative rehabilitation.

Physical therapy appointment scheduling:

Burnsville: 952-456-7000 Edina: 952-456-7000 Eagan: 952-456-7600

Gait Aides

After surgery you will use a walker, crutches, and/or a cane for an average of 2-4 weeks. You can borrow these from someone you know or they can be acquired in our Physical Therapy department or the hospital. If you need instruction on the use of these one of our Physical Therapists will be happy to help.

Stationary bike

If you have or can borrow a stationary bike, it is the very best exercise you can do for your knee after surgery. Before surgery, move the bike in a spot that will be easy for you to access. If you don't have a stationary bike, that is okay, walking is still great exercise.

Absence from Work

The time frame for returning to work after a partial knee replacement varies depending on you and your job. Patients who have a desk job are able to return to work on the average of 3-6 weeks. If you have a more physically demanding job it may be 10-12 weeks before you are back at work. If you need paperwork filled out for your employer bring this to the office prior to your surgery, try to avoid bring any paperwork to the hospital. You can also mail, drop off or fax (952-456-7042) paperwork to the office to the attention of Emily.

Getting your house ready for your return after surgery

There are a few things you can do before surgery to make your transition home after surgery easier including: move items you regularly use to a level that is easy to access, have a phone that is nearby, remove any tripping hazards (throw rugs, etc), and prepare meals for after surgery.

Get an Antibacterial Soap

Prior to surgery, we ask that you clean with an antibacterial soap such as Exidine. If you are not able to get Exidine, you could use an antibacterial soap like Dial or Hibiclens instead. You should shower with this for *two* showers before surgery – one the evening before, and one the morning of surgery. If you are having surgery at a Fairview facility, read the attached information regarding showering before surgery.

Donating Blood

Blood loss at the time of surgery typically is not enough to require a transfusion. It is not necessary to donate blood before surgery. If a transfusion is needed following surgery you will be given blood donated by another person. This blood is always thoroughly screened and tested.

Dental Appointments

Dr. Horazdovsky recommends waiting 3 months after surgery to have any routine dental work done. Plan ahead and have your dental work up-to-date prior to surgery. To avoid delaying your surgery, our recommendation is to have any dental work done at least one month prior to surgery in case you need additional work done before surgery.

One Week before Surgery

Hydrate! Remember to drink plenty of fluids (mainly water) the week before surgery.
Stop taking any vitamin supplements (except your multi-vitamin), herbal medications, over-the-
counter medications, aspirin, or any anti-inflammatory medications (i.e., Ibuprofen, Motrin, Advil
naproxen sodium, Naprosyn, or Aleve).
If you take a prescription blood thinning medication, your primary care physician will direct you
when to stop taking this prior to surgery, usually 5-7 days.
Shower with Exidine twice before surgery as instructed.

Night before Surgery

Take a shower with Exidine soap or an antibacterial soap.
You might find it nice to put freshly laundered sheets on your bed for you to come home to after
your hospital stay.

Eating and drinking instructions:

- You should not have any solid food, milk/milk products, or chewing tobacco 8 hours before surgery
- You can have clear liquids we recommend water or Gatorade up to two hours before surgery
- You can have your regular daily medications with a sip of water up to 30 minutes before surgery
- Again, DO NOT eat anything within 8 hours of surgery

YOUR SURGERY WILL BE CANCELLED, THE DAY OF SURGERY, IF YOU DO NOT FOLLOW EATING AND DRINKING REQUIREMENTS

Day of Surgery

Before Arriving at the Hospital

Take another shower with Exidine or antibacterial soap before you come to the hospital. After you shower you should put on freshly laundered clothes. You should not use any lotions or creams on your skin the morning of surgery.

Before Surgery

Plan to arrive to the hospital or surgery center 2 hours prior to your surgery. The surgery center or hospital will confirm this time with you in the days leading up to surgery. Dr. Horazdovsky will see you in the preoperative area before your surgery. Everyone will also meet with one of the board-certified anesthesiologists prior to surgery. They will discuss different types of anesthesia, risks and possible complications of the anesthesia. We do prefer to do this surgery under a spinal anesthetic, but you will discuss this further with the anesthesiologist.

During Surgery

Surgery Time – The surgery will take between 2-3 hours. This time includes getting you positioned, Dr. Horazdovsky operating, and waking you up from the anesthetic after the surgery. **Catheter** – we don't routinely use catheters during surgery, however if you have history of prostate surgery or a diagnosis of enlarged prostate, let Patrick or Dr. Horazdovsky know.

After Surgery

Recovery Room - After surgery you will spend about 1 hour in the recovery room and then you will be moved up to your room on the surgery and orthopedic floor if your surgery was at the hospital, or transferred to your care suite from the Crosstown or Eagan Surgery centers. If your surgery is being done as an outpatient, you will be discharged home at this time.

In the Hospital

Pain after surgery - Dr. Horazdovsky works closely with the hospital nurses to control your pain with pain medication. **Even with the medication expect to feel some pain**. The first night you will have less pain because the nerve block that was placed by the anesthesiologist prior to surgery will still be working. Combinations of oral and IV medication are used to manage your pain while in the hospital or surgery center. Pain medications are opioid derivative medications that can make you itchy, nauseous, sleepy, dizzy, and/or constipated. We recommend using the least amount of narcotic possible to control your pain. You will also be taking Tylenol and anti-inflammatories to help control your pain. Please discuss these medications with Dr. Horazdovsky/your care team if you have issues with these medications.

The Incision – The incision is typically 6-8 inches long. Your wound will be closed with sutures that will dissolve on their own; this typically takes 6-8 weeks. Your bandage will be removed at your post-operative appointment. Do not scrub, soak or submerge the incision until it is completely healed, typically at about 4 weeks after surgery.

Blood Clots – We do a few different things to help reduce the risk of developing blood clots after surgery.

- 1. In the hospital, you will be started on Aspirin 325mg the morning after surgery.
- 2. While in the hospital, you will wear sleeves on your feet that constantly inflate with air and deflate on their own.
- 3. You may be discharged with compression socks, if not, you are welcome to pick up a pair from the pharmacy to help with swelling in the leg(s).
- 4. You will be discharged from the hospital with Aspirin 325mg that you will take once a day for six weeks after surgery.
- 5. Walk! Walking and moving are a big component in helping prevent blood clots. It also helps to reduce pain and improve stiffness.

Leaving the Hospital

Discharge

Most patients are discharged the day after surgery. You will work with your nurse, the social worker, physical therapist, and Dr. Horazdovsky to determine when it is safe for you to discharge home. Again, most of Dr. Horazdovsky's patients are able to go right home from the hospital and not into a transitional care facility.

You will be discharged home from the hospital with the following medications:

1. **Aspirin 325mg** - You will take an aspirin (325mg) once a day for 6 weeks. If you were taking a baby aspirin (81mg) prior to surgery you may resume this after the 6 weeks of the full-strength aspirin.

If you were taking Coumadin or another anticoagulant medication prior to surgery you will resume this instead of taking the aspirin

- 2. **Oxycodone 5mg** You may take 1-2 tabs every 4-6 hours for pain rating 6-10.
- 3. Tramadol 50mg You may take 1-2 tabs every 4-6 hours for pain rating 3-5.
- 4. **Celebrex 200mg** You will take this 1 time per day for 3 days before surgery and for 5 days after surgery.
- 5. *Gabapentin (Neurontin) 300mg* You will be discharged with 3 days of this medication. Gabapentin helps with nerve related symptoms and can also help with sleep.
- 6. **Vistaril (Hydroxyzine) 50mg** You will take 1-2 tabs of this medication up to 3 times per day. It will help with muscle spasms. It can also help with sleep and may cause some drowsiness.
- 7. **Zofran (Ondansetron) 4mg –** You will take 1 tab every 8 hours as needed for nausea.
- 8. **Senna** this is a stool softener and laxative combination pill. You will likely be constipated after surgery due to being less active after surgery, the anesthetic, and the narcotic pain medication. Taking a stool softener will help this. You will take 1-2 tablets twice a day as needed. In addition, you might find it helpful to have Miralax and/or prune juice/prunes available. Also, eat a fiber rich diet and drink lots of water.
- 9. Omeprazole 20mg You will take 1 tab by mouth every day for 6 weeks (as long as you are on the Aspirin) to help prevent gastrointestinal symptoms secondary to other medications and the stress of surgery.

Medications NOT prescribed for you that you may want to have at home:

- Sleep aide most patients have some trouble sleeping at night after surgery. This can be for varies reasons. You can try over the counter medication like Tylenol PM, melatonin, or other over-the-counter sleep aides.
- 2. *Iron* You will lose some blood during surgery which will cause some fatigue after surgery. Although your hemoglobin will go back to normal on its own within a few weeks of surgery, you can take an iron supplement to help this. Note that iron will make you more constipated. Iron is also absorbed better if taken at the same time as Vitamin C.

Home after surgery

Pain after surgery

It is important to keep your pain at a level so you can do your therapy exercises; walk and start to do activities you normally do during the day, such as preparing a meal. It is also important to keep your pain to a level that you can rest. **Remember, you likely will have some pain with activity after surgery.**

You will be taking narcotic pain medication for a short time after surgery to help relieve your pain. Narcotic pain medications are opioid derivative medications that can make you itchy, nauseous, sleepy, dizzy, and/or constipated. They are also addictive. Please take narcotic pain medications sparingly but use as needed to control your pain. Do not let your pain get severe before taking your medication, severe pain is harder to control. However, expect to feel some pain after surgery, even with the pain medication. Patients typically use pain medication the longest to sleep at night and for physical therapy. We recommend you take your pain medication 45-60 minutes before physical therapy. It is not necessary to wake yourself up at night for pain medications. Everyone heals differently and can tolerate a different amount of pain but most patients are on pain medication for about 3 weeks. As you get farther and farther from surgery you will be able to take less and less pain medication. You will find you can wean yourself from the narcotic pain medication by either decreasing the dose (taking one tablet at a time instead of two) or increasing the time between doses (taking your medication every 5 hours instead of every 4 hours).

Use Tylenol (also known as acetaminophen)! A great way to manage your pain is to alternate Tylenol with your narcotic pain medication. Evidence shows that taking Tylenol between doses of narcotic medication can help control pain better than just narcotic medication alone. Tylenol can also help reduce the total amount of narcotic medication you need to take.

There are other ways to relieve pain besides medications. When you use other methods along with medication, these techniques can help reduce pain.

- Ice is one of the best non-medication therapies you can do for pain after surgery. Ice will help manage swelling and inflammation, which will help reduce pain.
- Relaxation tapes or Guided Imagery is a proven form of focused relaxation that coaches you in creating calm, peaceful images in your mind -- a "mental escape."
- Listening to soft music, changing your position in bed, or tuning in to your favorite television show are other ways to relieve or lessen pain.
- Make sure you are comfortable with your treatment plan. Talk to Dr. Horazdovsky's team and the
 hospital nurses about your concerns and needs. This will help avoid miscommunication, stress,
 anxiety, and disappointment, which may make pain worse. Keep asking questions until you have
 satisfactory answers. You are the one who will benefit.

Medication Refills

If you need a refill of your pain medication prior to your first post-operative appointment please contact our office. Please allow 24 to 48 hours for refills to be processed. **Any refills needed before the weekend will need to be submitted on Thursday. We do not refill narcotic pain medication in the evenings or on the weekends.** You or a family member will need to allow for time to come to our office to pick these up. Please let our office know if someone will be picking the prescription up for you, we will make note of this and they will need to show a photo ID in order to pick it up.

Sleep

Sleep is very important in post-surgical recovery. After surgery it is not uncommon for patients to have difficulty with sleeping, both in the hospital and once they get home. Before considering a sleep aide, it is important to evaluate your sleep hygiene. Dr. Horazdovsky recommends limiting caffeine after noon, limiting screen time after 8pm, and trying natural sleep aides such as Sleepy Time tea or Melatonin. These may be picked up at most grocery stores or pharmacies. When using Melatonin, it is important to remember that this is meant to help you fall asleep more naturally. If you remain active, you will override the effects of this medication. We recommend using 1-3mg 30-60 minutes before you begin your bedtime routine. This medication is safe to use with your other prescriptions.

^{*}Remember **do not drive** until you are off the narcotic pain medication.

Your endurance will be decreased after surgery. The easiest tasks will take longer and you will tend to fatigue very easily. This will get better as healing progresses and your strength returns.

Swelling

Swelling will last about 6 to 12 months after surgery. It is normal for your knee to be stiff in the morning and swollen in the evening. It is very important to keep your leg elevated and iced over the course of the first month. Icing and elevation will help to decrease the stiffness and improve your knee motion. The best position to elevate your leg is to have the knee above the level of your heart and your ankle above the knee. You can place a pillow under your calf, not your knee, for comfort. Ice the knee after physical therapy and at least 4-5 times a day. Keep the ice on your knee for 20-30 minutes at a time, then off for 30 minutes. Repeat, repeat, repeat as much as you need. Wearing compression stockings (TED hose) may also help with this. These can be found at most pharmacies or home medical supply stores.

<u>Incision</u>

Your incision should remain dry until your first post-operative appointment. You should not put any ointments or creams on the incision. It is recommended that you refrain from submerging your incision in water until the incision is fully healed to avoid infection, this takes about one month. However, you may let water run over the incision while showering after your first post-operative appointment.

Diet

It is normal to have a decreased appetite after surgery; however, you need to eat a well-balanced diet to heal and maintain your energy. Here are a few recommendations:

- Fiber and Grains these will help to stimulate your digestive system. Patients tend to struggle with constipation after surgery due to anesthesia, medications, and decreased activity. Eating grains such as oatmeal and quinoa can help get your digestive system back to normal.
- □ Fruits most fruits have a high-water content to assist with hydration. Fruits that are high in antioxidants (berries, red grapes, plums) can help with healing. Fruits that are high in vitamin C (kiwis, strawberries, citrus fruits) help fight inflammation in the body, pineapple is also helpful for healing and decreasing swelling. Prunes are great for aiding in digestive function.
- □ Lighter Proteins protein is a good source of amino acids which help in the healing process. Try to stick to lighter proteins after surgery (fish, chicken, almonds) as these are easier for the body to digest.
- □ Probiotics you will get antibiotics while in the hospital to help prevent infection. Antibiotics kill both good and bad bacteria in the body so this can affect your digestive system. A probiotic supplement or probiotic foods like yogurt can aid in digestion.

Physical Therapy

You will have physical therapy 1-3 times a day while in the hospital. When you are discharged from the hospital the best exercise you can do is ride a stationary bike. This will help increase your knee flexibility as well as reduce stiffness. You will start by rocking the pedals back and forth without making a full revolution. You will be able pedal around backwards before you can go around forwards. You can start on the stationary bike as soon as you are comfortable, the sooner the better. You should start by doing just 5-10 minutes and working up to more time as your pain allows. You should also work on the therapy exercises given to you by your Physical Therapist 1-3 times a day.

Physical Therapy will last anywhere from 6 to 12 weeks depending on the individual. Most appointments will be scheduled 2-3 times a week at first. Rehabilitation is very individualized and is tailored to how you feel and progress during your therapy session. Your therapist will document the progress of your knee flexibility, pain control, and swelling. You should also keep track of your range of motion to follow your progression in physical therapy. The goal is to get 0-120 degrees of motion in your knee following surgery. You will not get your motion back overnight, this takes time, patience, and commitment to your therapy exercises. It is your responsibility to do your exercises daily and make your therapy appointments. Your commitment to your exercise program is the key to a full recovery. Leg and knee strengthening will begin at your first therapy appointment and continue throughout therapy. There is a chart at the end of this packet that you can bring with you to each of your therapy appointments to record your range of motion.

You will be using an assistive device such as crutches or a walker to help with your weight bearing as you heal. Your therapist will help you progress your walking as you get stronger. Gradually increase how far and how long you walk. You should start with 3-4 short walks every day. After your walk, lie down, elevate and ice your knee to reduce swelling.

Driving

You will not be able to drive right after surgery. You will need to arrange for a ride home from the hospital. You will also want to arrange for rides to your physical therapy appointments at least for the first few weeks after surgery. You can return to driving when you feel you can safely operate the vehicle and you are no longer taking narcotic pain medication during the day.

Life after Partial Knee Surgery

Activity

The goal of having your knee replaced it to get you back doing all the activities that you want to do. This includes walking, gardening, golf, tennis, even downhill skiing. The only activity that Dr. Horazdovsky would like you to avoid is long distance running. This is because the repetitive impact of running on the joint can wear the polyethylene plastic insert faster.

Kneeling

You are able to kneel on a padded surfaced after your partial knee replacement surgery. Try to avoid any prolonged kneeling on a hard surface such as a wood or concrete floor.

Dental Antibiotic

After partial joint replacement surgery it is best to wait 3 months before having any routine dental work or cleaning done. Once you do go back to the dentist after surgery you will need to take an antibiotic. You should take this prior to any dental cleaning for two years and for major dental work indefinitely. If you tolerate the antibiotics, you may consider using them for your lifetime for all dental work. The antibiotic is to prevent the bacteria from your mouth getting into your blood and causing an infection in your joint. You can request this antibiotic through our office.

Traveling

You can travel as soon as you feel comfortable after your joint replacement surgery. Dr. Horazdovsky typically recommends waiting one month after surgery before flying due to an increase risk of blood clots. If you are traveling within the first three months after surgery (but after you have completed the 6 weeks of Aspirin) you should take one 325mg aspirin daily starting the day before you travel and continue this one day after you travel. This includes both long road trips or if you are flying. It is also recommended that you wear compression socks for both long road trips or while flying.

Please note your joint replacement <u>will</u> make the security alarms go off at the airport. You simply need to inform the checkpoint worker that you have a joint replacement and they will screen you accordingly. You should allow for extra time to get through security at the airport. TSA does not accept security cards saying you have a joint replacement.

Questions?

If you have any further questions, before or after surgery, please contact Dr. Horazdovsky's care team at 952-846-2203.

Your Appointments

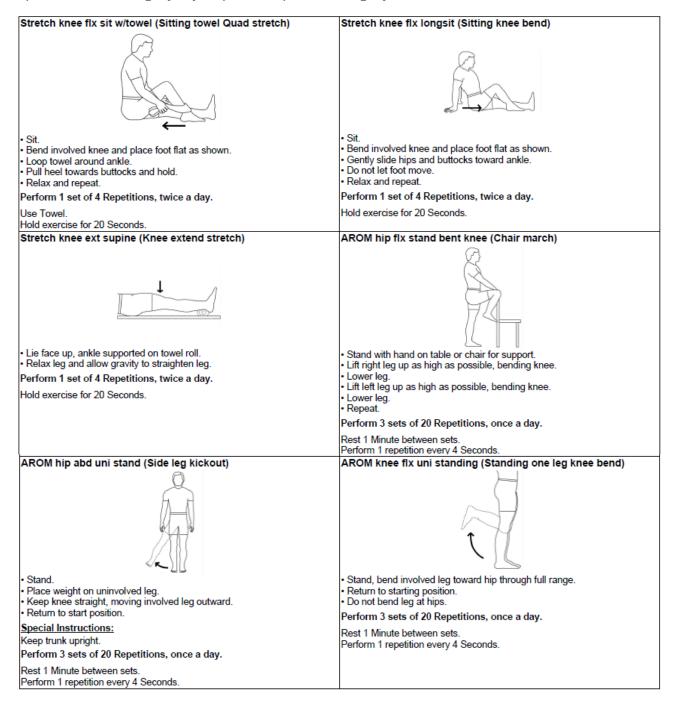
Surgery Date:
Post-Operative Follow-up Date:
Pre-Operative History & Physical Exam with Primary Care Provider:
Dental Cleaning Appointment:
Physical Therapy Week 1 Appointment #1:
Physical Therapy Week 1 Appointment #2:
Physical Therapy Week 1 Appointment #3:
Physical Therapy Week 2 Appointment #1:
Physical Therapy Week 2 Appointment #2:
Physical Therapy Week 2 Appointment #3:
Physical Therapy Week 3 Appointment #1:
Physical Therapy Week 3 Appointment #2:
Physical Therapy Week 3 Appointment #3:
Physical Therapy Week 4 Appointment #1:
Physical Therapy Week 4 Appointment #2:
Physical Therapy Week 5 Appointment #1:
Physical Therapy Week 5 Appointment #2:
Physical Therapy Week 6 Appointment #1:
Physical Therapy Week 6 Appointment #2:
Physical Therapy Week 7 Appointment #1:
Physical Therapy Week 8 Appointment #1:

Your Knee Range of Motion

Some patients find it beneficial to see the progress being made on range of motion. You may use the below chart to help you track this. Dr. Horazdovsky will also ask you what your motion was in therapy and this can help you keep track of that.

Date of Appointment	Extension (how straight your knee goes) 0 degrees	Flexion (how much you can bend your knee)
GOALS	0 degrees	120 degrees

Below are some of the physical therapy exercises you will be doing after surgery. They will be easier to perform after surgery if you practice prior to surgery.



AROM ankle PF bil stand (Double heel raise)



- · Stand, using chair for balance.
- Raise up on toes, through full range.
- Return to start position and repeat.

Perform 3 sets of 20 Repetitions, once a day.

Rest 1 Minute between sets. Perform 1 repetition every 4 Seconds.

Stretch knee flx sit w/towel (Sitting towel Quad stretch)

Perform 1 set of 4 Repetitions, twice a day.

Use Towel.

Hold exercise for 20 Seconds.

Stretch knee flx longsit (Sitting knee bend)

Perform 1 set of 4 Repetitions, twice a day.

Hold exercise for 20 Seconds.

Stretch knee ext supine (Knee extend stretch)

Perform 1 set of 4 Repetitions, twice a day.

Hold exercise for 20 Seconds.

AROM hip flx stand bent knee (Chair march)

Perform 3 sets of 20 Repetitions, once a day.

Rest 1 Minute between sets.
Perform 1 repetition every 4 Seconds.

AROM hip abd uni stand (Side leg kickout)

Perform 3 sets of 20 Repetitions, once a day.

Rest 1 Minute between sets.
Perform 1 repetition every 4 Seconds.

AROM knee flx uni standing (Standing one leg knee bend)

Perform 3 sets of 20 Repetitions, once a day.

Rest 1 Minute between sets. Perform 1 repetition every 4 Seconds.

AROM ankle PF bil stand (Double heel raise)

Perform 3 sets of 20 Repetitions, once a day.

Rest 1 Minute between sets. Perform 1 repetition every 4 Seconds.