



Postoperative Physical Therapy Guide



**Limb Lengthening and Complex Reconstruction Service (LLCRS)
Hospital for Special Surgery**

Dear Patient,

You have embarked on a journey to a better lifestyle. Our office, in conjunction with the HSS Rehabilitation Department, has constructed this Postoperative Physical Therapy Guide as a helpful tool for your recovery.

Stretching the joints after surgery is important. Exercise for range of motion of the joints above and below the bone cut is critical. For example, the knee and ankle must be exercised when having a tibia procedure. As the adjustments are being done, the bone is growing longer. We want to ensure that the soft tissue also stretches. Range of motion exercises for those undergoing ankle distraction surgeries is also imperative. You will be taught basic stretches and exercises by our physical therapists while in the Hospital. Physical therapy will be ongoing at home and continue with outpatient therapy after your first postoperative visit.

The following are specific exercises for external fixator patients. They should be completed on a daily basis. They are divided into 'Tibia', 'Femur', 'Hinged Foot/Ankle', and 'Fixed Foot/Ankle'. Modifications to these exercises may be necessary depending on your particular situation.

This is an excellent tool to present to your physical therapist as well. Your physical therapist will then construct a more elaborate exercise regimen that pertains to your condition.

Please contact the office with any questions.

Thank you for your confidence in our medical care.

Tibia



Calf Stretch:

Sit on bed as shown with your knee straight. Use your green stretch strap to pull your foot back towards you.

Hold for _____ seconds

Perform _____ repetitions _____ times a day

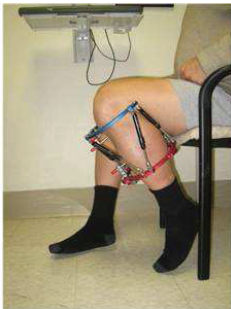


Passive Knee extension with hand:

With your foot on a towel roll or pillow, use your hands to gently press down above your knee to help flatten in out on the bed.

Hold for _____ seconds

Repeat _____ repetitions _____ times a day.



Knee Flexion Step 1:

Sit in a chair on a hard floor with socks on.

Slide your _____ foot backwards as far as tolerated to allow for bending of your knee.

Perform _____ repetitions _____ times a day.



Knee Flexion Step 2:

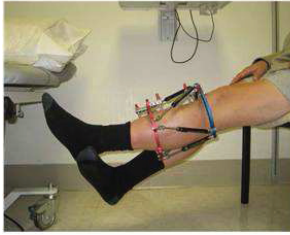
Cross your legs at the ankle and use your good leg to push your _____ leg backwards to feel more of stretch.

Then slowly return to the starting position.

Perform _____ repetitions _____ times a day.

Tibia

Active Assitive Knee Extension:



Sit in a chair.

Put your good leg behind your _____ leg at the ankles.

Use your good leg to help straighten your _____ leg until your knee is straight.

Perform _____ repetitions _____ times a day.



Ex-fix Heel Slides Step 1:

Start with your _____ leg straight on the bed



Ex-fix Heel Slides Step 2:

Slide your _____ heel back towards your buttocks
Then slide back to the starting position.
Be sure to control the entire movement smoothly.

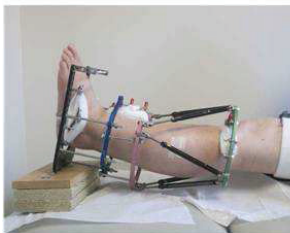
Perform _____ repetitions _____ times a day



Proper resting position type 1:

Place a towel roll under your _____ ankle. Gently relax your
_____ leg to allow your knee to slowly lower down to the bed.

Do throughout the day when not ambulating.



Proper resting position type 2:

If your fixator extends into the foot place firm object under the last ring of
you external-fixator or under your ankle if frame does not cover your foot.

This allows your knee to become as straight as possible (flat on the bed)

Do throughout day when not ambulating

Tibia



Ex-fix SLR Step 1:

Gently squeeze your _____ knee towards the bed.
Bend the same foot back towards you.



Ex-fix SLR Step 2:

Keeping your knee straight, lift your _____ leg of the bed to a height of 12-18 inches.

Hold _____ seconds

Perform _____ repetitions _____ times a day

Femur



Knee Flexion: Dangle

Sit in a chair or on the edge of your bed and let your operated leg just hang downwards with gravity. The operated leg can be supported by the opposite leg. The goal is right angle (90 degrees).

Perform _____ repetitions _____ times a day



Knee flexion Step 1:

Sit in a chair or on the edge of your bed



Knee Flexion Step 2:

Slide your _____ foot backwards as far as tolerated to allow for the bending of your knee. Use your good leg to assist your _____ leg further backwards for a greater stretch. Goal is right angle (90 degrees).

Then slowly return to the starting position.

You may want to put your foot on a towel to allow the foot to slide easier.

Perform _____ repetitions _____ times a day

Femur



Knee Extension:

Sitting in a chair or on your bed, slowly try to straighten out your _____ leg so your knee is fully straight and then return to the starting position.

You may use your _____ leg to assist your leg upwards if necessary.

Perform _____ repetitions _____ times a day



Heel Slide Step 1:

Start with your _____ leg straight on the bed



Heel Slide Step 2:

Slide your _____ heel back towards your buttocks. Then slide back to the starting position.

Be sure to control the entire movement smoothly.

Perform _____ repetitions _____ times a day



Passive Knee Extension:

Place a towel roll under your _____ ankle to allow your knee to become as straight as possible.

This is a good resting position and should be used throughout the course of the day.



Prone Lying:

Lie on your stomach _____ times a day for _____ minutes at a time.

This will allow for stretching of your hip flexors

Femur



Prone Knee Flexion:

Lying on your stomach, slowly bend your _____ knee as shown.

Perform _____ repetitions _____ times a day



SLR Step 1:

Gently squeeze your _____ knee down towards the bed.



SLR Step 2:

Keeping your knee straight, lift your _____ leg off the bed to a height of 12-18 inches.

Hold for _____ seconds.

Perform _____ repetitions _____ times a day.

Hinged Foot/Ankle



Ankle Active PF/DF Step 1:

Unlock frame as instructed during your Physician Assistant or Physical Therapist. Place firm object under top ring so your foot ring can clear the bed.

Bend your _____ foot back towards you as far as possible



Ankle Active PF/DF Step 2:

Slowly push your foot away from your body and try to point your toes towards the opposite wall.

Perform repeatedly in a slow fashion so your foot goes all the way towards you then away from you.

Perform _____ repetitions _____ times a day.



Calf Stretch with strap:

With your frame unlocked.

Place your green strap around the ball of your foot as shown. Gently pull the strap so your foot bends back towards you.

Hold for _____ seconds

Repeat _____ repetitions _____ times a day



Great Toe ROM Step 1:

Gently use your hands to stretch your toes back towards your body.

If you cannot reach, have someone perform for you.



Great Toe ROM Step 2:

Gently use your hands to stretch your toes away from your body.

If you cannot reach, have someone perform for you.

Perform _____ repetitions _____ times a day

Fixed Foot/Ankle



Great Toe ROM Step 1:

Gently use your hands to stretch your toes back towards your body.

If you cannot reach, have someone perform for you.

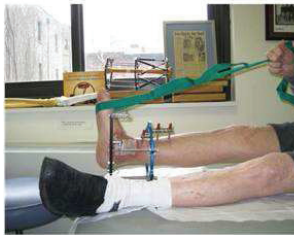


Great Toe ROM Step 2:

Gently use your hands to stretch your toes away from your body.

If you cannot reach, have someone perform for you.

Perform _____ repetitions _____ times a day



Forefoot Stretch with Strap:

Place your green strap around the top portion of your foot as shown. Gently pull the strap back towards your body so your forefoot bends back as well.

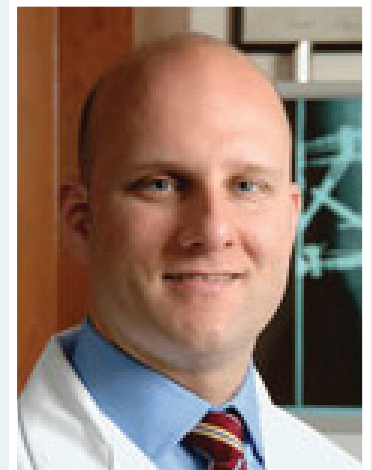
Hold for _____ seconds

Perform _____ repetitions _____ times a day

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