

# **Proximal Hamstring Repair Rehabilitation Protocol**

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## HAMSTRING SURGERY

The recovery process after Hamstring surgery is straight-forward and this document is designed to help you and your physical therapist to get the best outcome!

Please visit Dr. Huang's website for post-operative care and early motion exercises. This page has many resources for you including training videos on dressing removal, Scooter instruction, brace instruction, and even range of motion exercises!

The website is: <https://www.huangortho.com/hip-surgery-patients>

General recommendations:

- Do not hesitate to contact Dr. Huang's team with any questions or concerns
- Less is more! Do not push too hard, rest is an important aspect to recovery
- Manual therapy is an important part of your recovery, make sure your therapist includes range of motion, soft tissue manipulation, and joint mobilizations throughout your recovery.
- Setbacks are normal, recovery is never a smooth and straight line. Try not to get frustrated if you hit a setback and aim to work through it with your therapist
- If it hurts, do not do it! No pain no pinching is the name of the game after a hamstring surgery
- If you have access to a pool, request the aquatic protocol

## AFTER SURGERY

1. Medications: we give you a variety of medications to try to make the recovery go smoothly. Remember that most of these medications are AS NEEDED. So, if you do not need them, do not use them.
  - a. Pain medication (usually oxycodone or hydrocodone). This is the narcotic. It is to take the edge off of surgical pain. It will not eliminate the pain. These are addictive so please use sparingly.
  - b. Stool softener (Colace). While taking the narcotic, please take a stool softener to counteract the constipation caused by the pain medication.
  - c. Anti-nausea (ondansetron or phenergan). This is provided if you have nausea after surgery.
  - d. Muscle relaxant (cyclobenzaprine or other). This is provided to help with muscle spasms that can occur after surgery. This can be taken with the pain medication or all by itself. Please be aware that it makes most patients sleepy.
  - e. Blood thinner (aspirin or other). All surgical patients are at risk for blood clots. Based on your personal risk, we will prescribe one. Duration is based on the complexity of the surgery and the duration of risk.

2. Hip Brace: You will not need a hip brace.
3. Scooter: The position of protection after hamstring surgery is with the hip straight (think standing upright) and with the knee bent. When up and moving about, a scooter can accomplish this position for you. Weight bearing through the knee is perfectly fine.
4. If you chose to have a N'Ice or GameReady machine, we will help you set this up ahead of time. Please give us advanced notice.
  - a. For either machine, you can leave the cold compression on for 30-45 minutes before giving it a break. **Please note that the N'Ice or GameReady may not be reimbursed by your insurance company and that the patient may incur the cost of these devices.**
  - b. Ice packs or frozen bag of peas can be a great way to provide cold therapy to the knee. We recommend keeping these on for 20 minutes at a time and then allowing the knee to warm back up for another 20 minutes. Always keep a wash cloth or other layer between the skin and the ice pack.

### **RETURN TO WORK**

1. As far as returning to work, if you have a desk type job you can return to work when your pain medication requirements decrease, and you can safely walk with your crutches. Typically, this is between 5 - 10 days after surgery.
2. Patients who have jobs where light duty is not permitted will be out of work for a minimum of 6 - 12 weeks. Please discuss this with us as soon as possible so we can help you get all the details right!

### **WHEN CAN I DRIVE A CAR?**

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**REMEMBER, IT IS ILLEGAL TO TAKE PRESCRIPTION PAIN MEDICATIONS  
AND OPERATE A MOTOR VEHICLE!**

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1. First, you must not be taking any prescription pain medications.
2. Patients who have had surgery on the left hip, and who have an automatic transmission may drive when they can comfortably get the leg in and out of the car.
3. Patients who have had surgery on the left hip and have standard transmissions, should not drive until they have good muscular control of the leg. This usually takes 4-6 weeks.
4. Patients who had surgery on the right hip should not drive until they have good muscular control of the leg. This usually takes 4-6 weeks.

## PROXIMAL HAMSTRING REPAIR PROTOCOL

The intent of this protocol is to provide the therapist and patient with guidelines for the post-operative rehabilitation course after proximal hamstring surgery. This protocol is based on a review of the best available scientific studies regarding hamstring rehabilitation. It is by no means intended to serve as a substitute for one's clinical decision making regarding the progression of a patient's post-operative course. It should serve as a guideline based on the individual's physical exam/findings, progress to date, and the absence of post-operative complications. If the therapist requires assistance in the progression of a post-operative patient they should consult with Dr. Huang.

**Progression to the next phase based on Clinical Criteria and/or Time Frames as Appropriate.**

### PHASE 1 (0-6 weeks post-operatively)

Physical Therapy: Home exercises begin on day 1. Physical therapy begins within a week following surgery date and continue at 1-2 times per week for 12-16 weeks.

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|-----------------------|--|
| Rehabilitation Goals  | <ul style="list-style-type: none"> <li>● Pain relief</li> <li>● Protective phase (scooter when upright)</li> </ul>   |
| Precautions           | <ul style="list-style-type: none"> <li>● Avoid coupled hip flexion with knee extension</li> <li>● Full weight bearing through knee on scooter 6 weeks post-operatively</li> </ul>  |
| Range of Motion       | <ul style="list-style-type: none"> <li>● Week 0-3: To tolerance passive ROM: 0- 90 degrees hip flexion (without knee extension)</li> <li>● Week 3-6: To tolerance ROM in all directions hip flexion</li> </ul>   |
| Therapeutic exercises | <p>Phase 1: Week 1-2</p> <ul style="list-style-type: none"> <li>● Quad sets</li> <li>● Ankle pumps</li> <li>● Transversus abdominus activation</li> <li>● Posterior pelvic tilts</li> <li>● Heel slides</li> </ul> <p>Phase 2: Week 2-6</p> <ul style="list-style-type: none"> <li>● Begin AROM/Isometrics                             <ul style="list-style-type: none"> <li>○ Hamstrings sets</li> <li>○ Gluteal isometrics</li> <li>○ Standing calf raises</li> <li>○ Clam Shells</li> <li>○ Sidelying hip abduction</li> <li>○ Calf raises</li> <li>○ Anti-Gravity Treadmill (4-6 weeks)</li> </ul> </li> <li>● NMES: for quads as needed (quad sets, small short arc quad)</li> </ul> |

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|---------------------------|---|
| Cardiovascular activities | <ul style="list-style-type: none"><li>• Upper Body Ergometer</li></ul>                                |
| Progression Criteria      | <ul style="list-style-type: none"><li>• Painfree PROM from 0-90 degrees</li></ul>                     |
| Modalities                | <ul style="list-style-type: none"><li>• Cryotherapy as needed for pain relief post-exercise</li></ul> |

## PHASE 2: (Week 6-12 post-operatively)

Physical Therapy: Continue with PT 1-2 times per week pending therapist discretion.

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|---------------------------|--|
| Rehabilitation Goals      | <ul style="list-style-type: none"> <li>● Restore normal gait pattern</li> <li>● Improve functional mobility for transfers, ambulation and ascending/descending stairs.</li> </ul>  |
| Precautions               | <ul style="list-style-type: none"> <li>● Avoid squatting below 90 degrees</li> <li>● Avoid dynamic stretching</li> <li>● No impact or running.</li> </ul>  |
| Range of Motion           | <ul style="list-style-type: none"> <li>● Restore AROM and PROM when compared bilaterally</li> <li>● Restrict ROM 0-90 degrees for squatting</li> </ul>   |
| Manual Therapy            | <ul style="list-style-type: none"> <li>● Incision mobilization as needed</li> <li>● Stretching to tolerance (limited by pain)</li> <li>● Hamstring stretching (8 weeks): Contract-relax or Hold relax technique to tolerance</li> </ul>  |
| Therapeutic Exercises     | <ul style="list-style-type: none"> <li>● Mini (partial) squat</li> <li>● Gait training</li> <li>● Double leg weight shift with progression to single leg stance activities</li> <li>● Initiate hamstring strengthening exercises; hamstring isometrics, heel slides, double leg bridges, theraball bridges, theraball hamstring curls, prone hamstring knee flexion.</li> <li>● Step ups progress to lateral step downs - increased depth as tolerated with appropriate biomechanics</li> <li>● Lightweight leg press starting small range and progress to 90 degrees knee FL.</li> <li>● Clam shells</li> <li>● Standing hip extension and abduction</li> <li>● Band walks</li> <li>● Gentle static stretching (8 weeks postoperative)</li> </ul> |
| Cardiovascular activities | <ul style="list-style-type: none"> <li>● Upper body ergometer or circuit training</li> <li>● Stationary bike (slowly add resistance)</li> <li>● Elliptical (8 weeks - slowly add resistance)</li> </ul>  |
| Progression Criteria      | <ul style="list-style-type: none"> <li>● Normalized gait pattern</li> <li>● Pain free strengthening both with isometrics, concentric and co-contraction activities.</li> <li>● Normalized hamstring strength with manual muscle testing</li> </ul>   |
| Modalities                | <ul style="list-style-type: none"> <li>● Ice 20 minutes within 1 hour at a time 3 times per day as needed</li> </ul>   |

### PHASE 3: Week 12-16 post-operatively

Physical Therapy: 1-2 times per week

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|---------------------------|--|
| Rehabilitation Goals      | <ul style="list-style-type: none"> <li>● Biomechanically appropriate control and pain free with additions of more dynamic and sport related activities.</li> </ul>   |
| Precautions               | <ul style="list-style-type: none"> <li>● No pain with strengthening or stretching</li> <li>● Post-exercise muscle soreness resolves within 1 day.</li> </ul>   |
| Therapeutic Exercises     | <ul style="list-style-type: none"> <li>● Continue core and hip stabilization activities</li> <li>● Progress hamstring strengthening: progress toward more lengthened and eccentric strengthening. Single leg forward leaning, Single leg theraball curls, Assisted nordic hamstring curls,</li> <li>● Begin movement training with low velocity leg swings, lunges. Start with forward progression and progress toward multi-plane. Progress toward medium velocity as tolerated by patient.</li> <li>● Initiate impact exercise from double leg to single leg as tolerated by patient with good control.</li> <li>● Begin jogging progression, but no sprinting until phase 4.</li> </ul> |
| Cardiovascular activities | <ul style="list-style-type: none"> <li>● Biking, elliptical, Stairmaster, swimming and aqua jogging.</li> </ul>  |
| Progression Criteria      | <ul style="list-style-type: none"> <li>● Dynamic control with medium velocity in multi plane movements.</li> </ul>   |
| Modalities                | <ul style="list-style-type: none"> <li>● Cryotherapy as needed.</li> </ul>   |

## **PHASE 4: (16-20 weeks post-op)**

Physical Therapy: 1 time per week.

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| Rehabilitation Goals                     | <ul style="list-style-type: none"><li>● Good control with sport related activities, including running, kicking and impact.</li></ul>   |
| Precautions                              | <ul style="list-style-type: none"><li>● No pain during strength training</li><li>● Post exercise soreness should be less than 1 day.</li></ul>   |
| Therapeutic Exercises                    | <ul style="list-style-type: none"><li>● Continue to progress strengthening of hamstring with eccentric strengthening. Add resistance as tolerated with good control.</li><li>● Continue Hip and core stability</li><li>● Increase running and sprinting drills</li><li>● Continue plyometric exercises including impact activities both single and double leg.</li><li>● Progress movement drills to more high velocity to simulate sport related activities (especially for sprinting and kicking athletes)</li><li>● Sport related drills and non-contact activities</li><li>● Instruct patient on dynamic warm-up for return to sport progression</li></ul> |
| Progression Criteria for Return to Sport | <ul style="list-style-type: none"><li>● Dynamic sport related activities without pain or increased swelling</li><li>● Less than 10% deficit with return to sport hip test when compared bilaterally</li></ul>  |