Jourdan M. Cancienne, M.D.
Sports Medicine
Shoulder, Hip, Knee Arthroscopy
Shoulder Replacement Surgery

MIDWEST ORTHOPAEDICS AT RUSH

Midwest Orthopaedics at Rush
Joliet Office
963 129th Infantry Dr. Joliet, IL 60435

Midwest Orthopaedics at Rush
Naperville Office
55 Shuman Blvd Suite 700. Naperville, IL 60563

Liesl Giermann, Secretary
708-492-5964

DISCHARGE INSTRUCTIONS & PHYSICAL THERAPY PROTOCOL: Proximal Hamstring Repair

- What are the indications for hamstring surgery?
  - The hamstring may tear from chronic wear or high impact injury, causing the tendon to detach from the bone or causing the bone to avulse. There are varying degrees of tears, involving 1-3 of the hamstring tendons and different levels of retraction. Partial tears involving less than 2 tendons and with less than 2cm of retraction may be repaired endoscopically, using a camera and small incisions in the crease of the buttock. Full-thickness tears involving 2 tendons or more, with greater than 2cm of retraction are more amenable to open repair. Patients who have sustained an injury the proximal hamstring and have developed pain around the ischium (sit bone) with walking, standing, sitting, or exercise, and limitations in daily activity, and who have failed conservative treatment with time, rest, NSAIDS, physical therapy, and/or injections, are indicated for surgical intervention.

- What does hamstring repair entail?
  - The patient undergoes general anesthesia and is placed in a prone (face down) position on the operating room table. If taking an endoscopic approach, then two small incisions are made in the gluteal fold. If an open approach, then one larger incision is made in the gluteal fold. In certain instances, with extensive retraction of the tendon, a T-shaped incision is required. The ischial tuberosity is identified and debrided, then the torn muscle/tendon junction is found and reattached to the ischium using suture anchors. In certain instances (extensive retraction) a donor graft is required to reattach the tendon to the ischium.

- What are the risks of surgery?
  - Risks include bleeding, blood clot, nerve injury to the sciatic nerve, vascular injury, infection, persistent pain/dysfunction, leg weakness, or other complication from anesthesia, including death. These risks are extremely rare and our pre, intra, and postoperative procotol are highly aimed at reducing these risks.

Jourdan M. Cancienne, M.D.
Sports Medicine
Shoulder, Hip, Knee Arthroscopy
Shoulder Replacement Surgery

MIDWEST ORTHOPAEDICS AT RUSH

Midwest Orthopaedics at Rush
Joliet Office
963 129th Infantry Dr. Joliet, IL 60435

Midwest Orthopaedics at Rush
Naperville Office
55 Shuman Blvd Suite 700. Naperville, IL 60563

Liesl Giermann, Secretary
708-492-5964

DISCHARGE INSTRUCTIONS & PHYSICAL THERAPY PROTOCOL: Proximal Hamstring Repair

- Recovery after your surgery entails controlling swelling and discomfort, healing, return of range-of-motion of the hip joint, regaining strength in the muscles around the hip joint, and a gradual return to activities. The following instructions are intended as a guide to help you achieve these individual goals and recover as quickly as possible after your hamstring repair.

- COMFORT
  - **Cold Therapy**
    - If you elected to receive the **circulating cooling device**, this can be used continuously for the first 3 days, (while the initial post-op dressing is on). After 3 days, the cooling device should be applied 3 times a day for 20-30 minute intervals.
    - If you elected to receive the **gel wrap**, this may be applied for 20 minutes on, 20 minutes off as needed. You may apply this over the post-op dressing. Once the dressing is removed, be sure to place a barrier (shirt, towel, cloth, etc.) between your skin and the gel wrap.
    - If you elected to use **regular ice**, this may be applied for 20 minutes on, 20 minutes off as needed. You may apply this over the post-op dressing. Once the dressing is removed, be sure to place a barrier (shirt, towel, cloth, etc.) between your skin and the gel wrap.
  - **Medication**
    - **Pain Medication-** Take medications as prescribed, but only as often as necessary. Avoid alcohol and driving if you are taking pain medication.
      - You have been provided a narcotic prescription postoperatively. Use this medication sparingly for moderate to severe pain.
      - **You are allowed two (2) refills of your narcotic prescription if necessary.**
      - When refilling pain medication, weaning down to a lower potency or non-narcotic prescription is recommended as soon as possible.
      - Extra strength Tylenol may be used for mild pain.
      - Over the counter anti-inflammatory medications (Ibuprofen, Aleve, Motrin, etc.) can be used for breakthrough pain, follow instructions on bottle.

Jourdan M. Cancienne, M.D.
Sports Medicine
Shoulder, Hip, Knee Arthroscopy
Shoulder Replacement Surgery

Midwest Orthopaedics at Rush
Joliet Office
963 129th Infantry Dr. Joliet, IL 60435

Midwest Orthopaedics at Rush
Naperville Office
55 Shuman Blvd Suite 700. Naperville, IL 60563

MIDWEST ORTHOPAEDICS AT RUSH

Liesl Giermann, Secretary
708-492-5964

- **Anti-coagulation medication:** A medication to prevent post-operative blood clots has been prescribed (Aspirin, Lovenox, etc.) This is the only medication that MUST be taken as prescribed until directed to stop by Dr. Forsythe.
- **Nausea Medication –** Zofran (Odansetron) has been prescribed for nausea. You may take this as needed per the prescription instructions.
- **Constipation Medication -** Colace has been prescribed for constipation. Both your pain medication and the anesthesia can cause constipation. Take this as needed.

- **Driving –** Driving is NOT permitted for six weeks following surgery.

❖ ACTIVITIES

- **Range-of-Motion** – Your range of motion will be limited by your brace for the first 4-6 weeks. Motion of your hip will begin once physical therapy has been prescribed. You are encouraged to move your foot and ankle as tolerated.
- **Brace** – A Knee Flexion Brace has been applied. Wear this at all times including during sleep. You may remove it briefly to bathe and dress. This brace will be used for approximately 4-6 weeks.
- **Exercises** – These help prevent complications such as blood clotting in your legs. Point and flex your foot and wiggle your toes. Thigh muscle tightening exercises should begin the day of surgery and should be done for 10 to 15 minutes, 3 times a day, for the first few weeks after surgery.
- **Weightbearing** – You are allowed to put partial weight on your operative leg with only your toe touching the ground. Walk using two crutches or a walker. You may touch your foot on the floor for balance. Do this within the limits of pain.
- **Physical Therapy** – PT is not started until 4-6 weeks after surgery. You should call the physical therapist of your choice for an appointment as soon as possible after surgery. A prescription for physical therapy, along with physical therapy instructions (included in this packet) must be taken to the therapist at your first visit. You will see Dr. Cancienne prior to starting physical therapy.
- **Athletic Activities** – Athletic activities, such as swimming, bicycling, jogging, running and stop-and-go sports, **should be avoided** until allowed by your doctor.
- **Return to Work** – Return to work as soon as possible. Your ability to work depends on a number of factors – your level of discomfort and how much demand your job puts on your leg. If you have any questions, please call.

Jourdan M. Cancienne, M.D.
Sports Medicine
Shoulder, Hip, Knee Arthroscopy
Shoulder Replacement Surgery

MIDWEST ORTHOPAEDICS AT RUSH

Midwest Orthopaedics at Rush
Joliet Office
963 129th Infantry Dr. Joliet, IL 60435

Midwest Orthopaedics at Rush
Naperville Office
55 Shuman Blvd Suite 700. Naperville, IL 60563

Liesl Giermann, Secretary
708-492-5964

❖ WOUND CARE

- **Bathing** - Tub bathing, swimming, and soaking of the incision **should be avoided** until allowed by your doctor - usually 4-6 weeks after your surgery. Keep the dressing on, clean and dry for the first 3 days after surgery.
- **Dressings** - Remove the dressing 3 days after surgery. Your incision is covered with Derma Bond, a surgical glue meant to protect the wound. This will remain for 2-3 weeks. Do not scrub this area. The glue will slowly dissolve.
  - You may shower 3 days after surgery with waterproof band-aids over your incision.
  - Sterile gauze is recommended to cover your incision for the first 2-3 weeks. You may apply this with tape or Tegaderm, which is the bandage you had immediately following surgery. This may be purchased at your local drug store.

❖ EATING

- Your first few meals, after surgery, should include light, easily digestible foods and plenty of liquids, since some people experience slight nausea as a temporary reaction to anesthesia

❖ CALL YOUR PHYSICIAN IF:

- Pain in your knee persists or worsens in the first few days after surgery.
- Excessive redness or drainage of cloudy or bloody material from the wounds (Clear red tinted fluid and some mild drainage should be expected). Drainage of any kind 5 days after surgery should be reported to the doctor.
- You have a temperature elevation greater than 101°
- You have pain, swelling or redness in your calf.
- You have numbness or weakness in your leg or foot.

❖ RETURN TO THE OFFICE

- Your first return to our office should be within the first 1-2 weeks after your surgery. You can find your appointment for this first post-operative visit in the post op instruction folder.

Jourdan M. Cancienne, M.D.
Sports Medicine
Shoulder, Hip, Knee Arthroscopy
Shoulder Replacement Surgery

MIDWEST ORTHOPAEDICS AT RUSH

Midwest Orthopaedics at Rush
Joliet Office
963 129th Infantry Dr. Joliet, IL 60435

Midwest Orthopaedics at Rush
Naperville Office
55 Shuman Blvd Suite 700. Naperville, IL 60563

Liesl Giermann, Secretary
708-492-5964

REHABILITATION PROGRAM: Proximal Hamstring Repair

NOTE: The following instructions are intended for your physical therapist and should be brought to your first physical therapy visit.

- ***PHASE I (1-6 weeks postop)***
- *** Typically, we will not have patients start formal PT until 4-6 weeks postop*
- *** Patient will perform HEP including DVT prevention and isometric exercises to allow time for optimal healing*
- **Rehabilitation Goals**
  - Protection of the repaired tendon(s) Pain control
  - Weight Bearing
  - Use axillary crutches for up to 8 weeks
  - Post-operative weeks 0-2: Touch down weight bearing
  - Brace: hinged knee brace locked at 45-50 degrees at all times until week 4-6 (based on physician order)
- **Precautions**
  - Avoid hip flexion coupled with knee extension (hamstring stretch) - AVOID
  - Avoid unsafe surfaces and environments
- **Suggested Therapeutic Exercise**
  - Quad sets
  - Ankle pumps
  - Abdominal isometrics
  - Passive knee range of motion (ROM) with no hip flexion during knee extension
  - Post-operative weeks 3-4: Begin pool walking drills (if incision healed, without hip flexion coupled with
  - knee extension), hip abduction, hip extension, and balance exercises
  - Scar mobilizations
  - Cardiovascular Exercise: Upper body circuit training or upper body ergometer (UBE)
  - Progression Criteria: 6 weeks post-operative
- ***PHASE II (begin after meeting Phase I criteria, usually 6 weeks after surgery)***
  - Appointments: 2x/week for 5-12 weeks
- **Rehabilitation Goals**
  - Post-operative weeks 4-8: Unlock hinged knee brace to 30 degrees flexion for several days, then 0 degrees flexion/extension. Progress weight bearing as tolerated with weaning from crutches
  - Normalize gait
  - Good control and no pain with functional movements, including step up/down, squat, partial lunge (do not exceed 60° of knee flexion)
- **Precautions**
  - Avoid dynamic stretching

Jourdan M. Cancienne, M.D.
Sports Medicine
Shoulder, Hip, Knee Arthroscopy
Shoulder Replacement Surgery

MIDWEST ORTHOPAEDICS AT RUSH

Midwest Orthopaedics at Rush
Joliet Office
963 129th Infantry Dr. Joliet, IL 60435

Midwest Orthopaedics at Rush
Naperville Office
55 Shuman Blvd Suite 700. Naperville, IL 60563

Liesl Giermann, Secretary
708-492-5964

- Avoid loading the hip at deep flexion angles
- No impact or running

Suggested Therapeutic Exercise

- Non-impact balance and proprioceptive drills – beginning with double leg and gradually progressing to single leg
- Stationary bike
- Gait training
- Begin hamstring strengthening – start by avoidance of lengthened hamstring position (hip flexion combined with knee extension) by working hip extension and knee flexion moments separately; begin with isometric and concentric strengthening with hamstring sets, heel slides, double leg bridge, standing leg extensions, and physioball curls
- Hip and core strengthening
- Cardiovascular Exercise: Upper body circuit training or UBE
- Progression Criteria
- Normal gait on all surfaces
- Ability to carry out functional movements without unloading the affected leg or pain while demonstrating good control
- Single leg balance greater than 15 seconds
- Normal (5/5) hamstring strength in prone with the knee in a position of at least 90° knee flexion

PHASE III (begin after meeting phase II criteria, usually three months after surgery)

- Appointments 2x/week for 12-16 weeks

Rehabilitation Goals

- Good control and no pain with sport and work specific movements, including impact
- Precautions
- No pain during strength training
- Post-activity soreness should resolve within 24 hours
- Suggested Therapeutic Exercise
- Continue hamstring strengthening – progress toward strengthening in lengthened hamstring positions; begin to incorporate eccentric strengthening with single leg forward leans, single leg bridge lowering, prone foot catches, and assisted Nordic curls
- Hip and core strengthening
- Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to the other and then 1 foot to same foot
- Movement control exercise beginning with low velocity, single plane activities and progressing to higher velocity, multi-plane activities
- Initiate running drills, but no sprinting until Phase IV
- Cardiovascular Exercise: Biking, elliptical machine, Stairmaster, swimming, and deep water running

Jourdan M. Cancienne, M.D.
Sports Medicine
Shoulder, Hip, Knee Arthroscopy
Shoulder Replacement Surgery

MIDWEST ORTHOPAEDICS AT RUSH

Midwest Orthopaedics at Rush
Joliet Office
963 129th Infantry Dr. Joliet, IL 60435

Midwest Orthopaedics at Rush
Naperville Office
55 Shuman Blvd Suite 700. Naperville, IL 60563

Liesl Giermann, Secretary
708-492-5964

Progression Criteria

- Dynamic neuromuscular control with multi-plane activities at low to medium velocity without pain or swelling
- Less than 25% deficit for side to side hamstring comparison on Biodex testing at 60° and 240° per second

PHASE IV (begin after meeting phase III criteria, usually 4-5 months after surgery)

- Appointments: 1-2x/week for 16+ weeks

Rehabilitation Goals

- Good control and no pain with sport and work specific movements, including impact

Precautions

- No pain during the strength training
- Post-activity soreness should resolve within 24 hours

Suggested Therapeutic Exercise

- Continue hamstring strengthening – progress toward higher velocity strengthening and reaction in lengthened positions, including eccentric strengthening with single leg forward leans with medicine ball, single leg dead lifts with dumbbells, single leg bridge curls on physioball, resisted running foot catches, and Nordic curls
- Running and sprinting mechanics and drills
- Hip and core strengthening
- Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to other and then 1 foot to same foot
- Movement control exercise beginning with low velocity, single plane activities and progressing to higher velocity, multi-plane activities
- Sport/work specific balance and proprioceptive drills
- Stretching for patient specific muscle imbalances
- Cardiovascular Exercise: Replicate sport or work specific energy demands

Return to Sport/Work Criteria

- Dynamic neuromuscular control with multi-plane activities at high velocity without pain or swelling
- Less than 10% deficit for side to side hamstring comparison on Biodex testing at 60° and 240° per second
- Less than 10% deficit on functional testing profile