

# What to Expect from a Procedure to Lengthen the Muscles at the Back of Your Child's Hip

## WHY IS MY CHILD'S HIP ALIGNMENT IMPORTANT?

The muscles at the back of your child's hip and thigh (biceps femoris or hamstrings) are short or "tight." This makes walking, moving, standing or sitting uncomfortable for your child. This condition may cause your child to walk in a crouched position. It may even cause your child pain.

A thigh-lengthening procedure will

- Improve walking, standing and sitting
- Improve overall posture while standing or moving
- Reduce pain

## ABOUT HAMSTRING LENGTHENING SURGERY

During the operation, the surgeon makes a small incision in the hamstrings to release the tight muscles in the back of the thigh. After the surgery, your orthopedic team will place a knee immobilizer or brace on your child's leg, placing it in the proper position for healing.

Hamstring lengthening is an outpatient surgery and most children go home on the day of surgery.

## RECOVERY AT HOME

Before surgery, your care team will prepare you and your child for daily activities **while wearing a knee immobilizer or cast**. This plan includes instructions for bathing, dressing and moving around safely after surgery. Follow the surgeon's instructions for limiting your child's activity while they are healing. Make sure to avoid overstretching or high-impact activities, such as running and jumping, during the healing process.

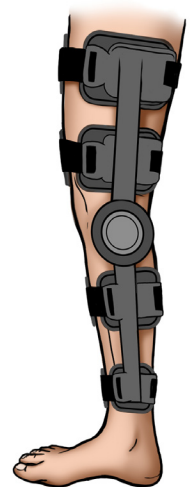
It is common to have leg pain or be uncomfortable in the first few weeks after surgery. Your child may also have spasms or jerky movements as their leg heals.

## FOLLOW-UP APPOINTMENTS

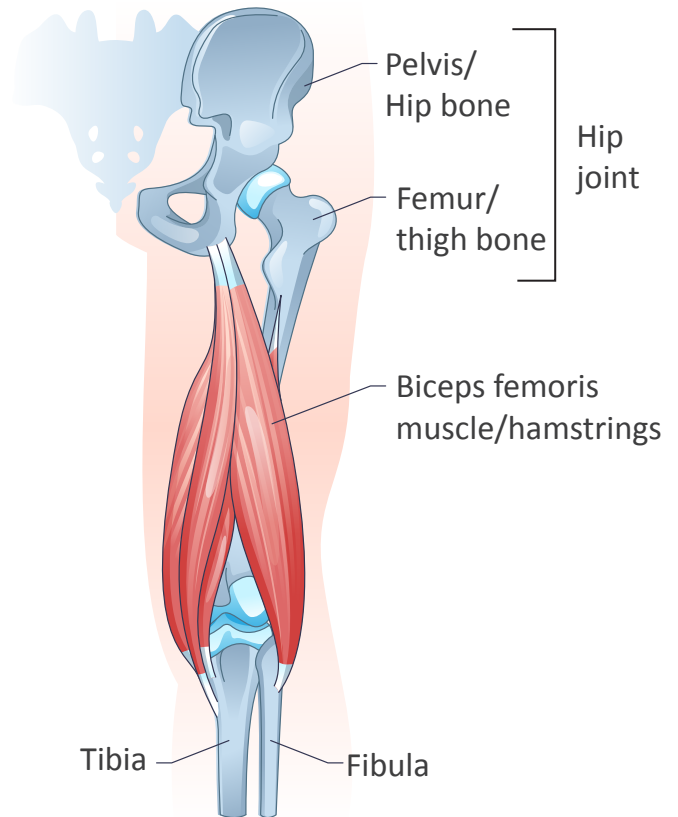
Your orthopedic surgeon will work with you and your child to develop a treatment plan based on your child's healing progress.



Your child may wear a long-leg cast to hold the leg in position.



Your child may wear a knee brace while the hamstring heals.



# Guidance for Your Therapist and Care Providers: Post-Op

## HAMSTRING LENGTHENING

### Immediate Post-Surgical to Day 21

#### RESTRICTIONS AND IMMOBILIZATION

- Weight bearing as tolerated (WBAT)
- Avoid impact activities (running, jumping, skipping, hopping)
- Wear knee immobilizer as specified above during the day and at night
  - OK to remove for bathing, dressing, toileting, walking, etc.
- Contact surgical team if pain or discomfort is limiting use of knee immobilizer
- **For ambulatory kids (i.e., GMFCS I-III):**
  - Knee immobilizer ideally worn during the day when resting and overnight as able to be tolerated by patient
  - Preference is for 8-10 hours of continuous wear overnight
- **For non-ambulatory kids (i.e., GMFCS IV-V):**
  - Knee immobilizer ideally up to 20-22 hours/day as able to be tolerated by patient.
  - Wear knee immobilizer in therapy if possible during the first 3 weeks post-op except when performing active knee ROM in non-weight bearing position

#### THERAPY FOCUS (Initial instruction by inpatient PT prior to hospital d/c, then outpatient PT approx. 1 week post-op):

- Protect the surgical site including the incision and underlying surgical tissues
  - Isometric exercises: glute max and quadriceps
  - While resting, perform ankle pumps every hour
- Home exercise instruction including:
  - Positioning: 10 minutes of long sitting every hour while child is awake; wear immobilizer as noted above
  - Stretching: no active stretching during this time
  - Strengthening:
    - Active knee ROM in non-weight bearing position
    - Straight leg raises in all planes (initiate in OP PT)

#### CRITERIA TO PROGRESS

- Uneventful healing of the surgical tissues
- Independent with home exercise program
- Pain well controlled

### Day 22 to Completion of PT Care

#### RESTRICTIONS AND IMMOBILIZATION

- Continue knee immobilizer during the day as specified above (until at least 6 week surgical follow-up) & all night. The knee immobilizer can be removed for therapy, exercises at home, walking, bathing, toileting and dressing

#### THERAPY FOCUS

Surgical incision scar mobility after adequate wound closing is achieved (about 4-6 weeks)

- Gait training with focus on knee extension during stance and terminal swing, upright posture
- If patient is struggling to meet gait-related goals, consider referral to Lokomat program
- Initiate active hamstring stretching (once adequate wound healing has occurred)
- Initiate active knee range of motion in weight-bearing position (i.e., parallel bars)

#### After 6 week follow up:

- Surgical team will determine if the patient needs to continue knee immobilizer during the day
  - Once knee immobilizer is discontinued during the day, continue to wear knee immobilizer at night only until 6-12 months post-surgery
- Progress quad and glut max strengthening and hamstring strengthening without resistance
- Progress independence with gait and transfers (may continue to need assistive device) and focus on quality of movement

#### After 12 weeks:

- Begin hamstring resistance training