Orthopod®
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A Patient's Guide to

Rehabilitation Following Hip Fracture Surgery

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Introduction

A hip fracture can present complications due to being immobilized. The goal of rehabilitation after hip fracture surgery is to help you begin moving as quickly as possible to avoid the serious complications that can happen with being immobilized in bed.

This guide will help you understand

- **precautions to keep in mind after surgery**
- **expectations for your therapy evaluation and treatments**
- **safe exercises to improve your mobility and strength**

Precautions after Surgery

Surgeons use different methods to surgically treat hip fractures. As a result, the precautions you'll follow after surgery depend on your surgeon's preference and the way the surgery was done.

Rest

Avoid activities that put a strain on the surgical area. If you feel pain, stop or alter what you are doing. Pain at this stage indicates strain or irritation. During your activities, let pain guide your decisions about what you do.

Artificial Hip Precautions

If you had hemiarthroplasty surgery, use your hip precautions at all times.

Weightbearing

You will use a walking aid, such as a walker or crutches, after surgery. The amount of weight you are able to bear when standing or walking will depend on the type of procedure you had and the advice of your surgeon.

Toe-Touch Weightbearing

After a noncemented hemiarthroplasty or for procedures using metal plates and pins, you should touch only your toes down on the side where the surgery was done.

Comfortable Weightbearing

After a cemented hemiarthroplasty or if a compression screw was used, you will likely be given the okay to place a comfortable amount of weight on your foot while standing or walking.

Exercises

Any exercises you do should be done only following instruction by your surgeon or therapist. The kinds of exercises you do depend on your particular procedure. Extra pain after these or other exercises usually indicates that you are overdoing it. You may need to change the number of repetitions, the amount of pressure applied, or how often you are doing your exercises.

Therapy Visits

Inpatient Therapy

A physical or occupational therapist will direct your recovery after surgery. Patients usually stay in the hospital between three and seven days after hip fracture surgery. You'll be encouraged to move from your hospital bed to a chair several times the first day after surgery. Then you'll begin getting up and walking using your crutches or walker. However, you

may need to keep from placing too much weight on your foot while you stand or walk. You'll be safe to go home when you can get up and move about safely with your walker or crutches, you are able to do your exercises, and your caregiver has made all the needed preparations for you to go home.

Home Therapy

Once discharged from the hospital, your therapist may see you for one to six in-home treatments. This is to ensure you are safe in and about the home and getting in and out of a car. Your therapist will make recommendations about your safety, review your exercise program, and continue working with you on walking and strengthening. In some cases you may require additional visits at home before beginning outpatient physical or occupational therapy. Home therapy visits end when you are safe to get out of the house.

Outpatient Therapy

Your surgeon may prescribe four to eight weeks of therapy in an outpatient clinic. The goals of treatment are to help you regain hip range of motion, maximize your strength, walk without a limp, and resume your activities.

On your first visit to outpatient therapy, your therapist will ask many questions about your condition. Your answers will help guide your therapist's examination. You will probably be asked how your condition is affecting your day-to-day activities. Rating your pain or symptoms on a scale of one to ten helps your therapist gauge how you're doing now and how your pain and symptoms change with treatment. Here are some other questions your therapist may ask you.

- How is your hip feeling since the surgery?
- Are you feeling pain now?
- How do your symptoms affect your daily activities?

Therapy Examination

After reviewing your answers, your therapist will do an examination that may include some or all of the following checks.

Posture

Your therapist may check your overall posture, including the alignment of your back, pelvic bones, hips, knees, and ankles. Your therapist will also check the surgical area to make sure the incisions are healing. By comparing each side, your therapist can determine if there is swelling, bruising, or any loss in muscle size.

Gait

By watching you walk, your therapist can check to see that you are putting only a safe amount of weight through your operated leg and that your walking aid is adjusted for you.

Range of Motion (ROM)

Your therapist may check the range of motion (ROM) in your hip. This is a measurement of how far you can move your hip in different directions. Measurements might include forward (flexion) and back (extension) motions, rotating the hip in (internal rotation) and out (external rotation), and side-to-side movements (abduction and adduction). If you are following hip precautions for hemiarthroplasty, care will be taken not to move your hip in directions or positions that stress the surgical hip. The therapist may record your ROM during each visit to chart your progress.

Strength

Your therapist may have you hold against resistance in order to test the muscles around the hip and knee. Muscles that may be checked include the quadriceps (thighs), buttocks, hamstrings, and calves. The results are compared to your other side. Weakness in key muscles will be addressed with a strengthening program.

Palpation

Your therapist will feel the soft tissues around the sore area. This is called *palpation*. Through palpation, the therapist checks skin temperature and swelling, pinpoints sore areas, and looks for tender points or spasm in the muscles around the sore area.

Planning Your Care

Your therapist will evaluate your answers and your examination results to determine the best way to help you. Then your therapist will write a plan of care. The plan of care lists the treatments that will be used and the goals that you and your therapist decide on to get your daily activities done safely and with the least amount of discomfort. The plan also includes a prognosis, which is your therapist's idea of how well the treatments will work and how long you'll need therapy in order to get the most benefit.

Therapy Treatments

Controlling Pain and Symptoms

Your therapist may choose from one or more of the following treatment interventions to begin helping you control your symptoms.

Rest

Rest is an important part of treatment after surgery. If you are having pain with an activity or movement, it usually indicates that there is still irritation. You should try to avoid all movements and activities that increase your pain. Be sure to use your crutches or walker as assigned, and put only the amount of weight on your leg as approved by your surgeon. The goal is to keep your symptoms to a minimum, while promoting healing.

Heat

Heat makes blood vessels *vasodilate* (get larger), increasing the blood flow. This action helps flush away chemicals that cause pain. It also helps bring in healing nutrients and oxygen. True heat in the form of a moist hot pack, a heating pad, or warm shower or bath is more beneficial than creams that merely give the feeling of heat. Hot packs are usually placed on the sore area for 15 to 20 minutes up to four times each day. Special care must be taken to make sure your skin doesn't overheat and burn. It's not a good idea to sleep with an electric hot pad at night. You may find you have less pain and better mobility after applying heat.

Ice

Ice makes blood vessels *vasoconstrict* (get smaller), decreasing the blood flow. This helps control inflammation and the pain it causes. Ice treatments are easy to do at home. You can use cold packs, ice bags, or ice massage. Cold packs or ice bags are generally placed on the sore area for 10 to 15 minutes up to four times each day. Put a wet towel between the cold pack and your skin. You may feel less pain by applying ice.

Electrical Stimulation

Gentle electrical currents through the skin can help ease pain and decrease swelling. Electrical stimulation eases pain by replacing pain impulses with the impulses of the electrical current. Electrode pads are placed over the sore area, and the stimulation is generally applied for about 15 minutes. Once the pain lets up, the muscles begin to relax. Some patients say electrical stimulation feels like a gentle massage. By relaxing the muscles, you may be able to exercise and do your activities easier.

Therapeutic Exercise

Whether at work, home, or play, your capabilities depend on your physical health and function. Specialized treatments and exercises can help maximize your physical abilities, including movement, balance, and strength. Exercises are used to help improve motion, strength, and endurance in the hip. Your

program could also address key muscle groups of the buttocks, thigh, and calf.

Improving Range of Motion (ROM)

The swelling and irritation from a hip surgery can cause stiffness in the hip. To improve your range of motion (ROM), your therapist can use hands-on joint and muscle stretching and specific exercises. Active movement and stretching as part of the clinic and home program can also help restore movement. Getting your hip moving will help with your overall hip ROM, easing pain and making it easier to do your exercise and activities.

Pool Therapy

Exercising in a pool eases movement. The buoyancy of the water makes exercising easier, lends resistance, and helps you begin walking with less stress on your hip. If your surgeon has given you weightbearing restrictions, avoid putting pressure down on the foot of your operated leg, even in the pool. If your therapist works with you in the pool, only a few visits are usually all that are needed before you transition to a regular program on land. If you are getting good benefits in the pool, you may want to plan a program for the longer term that integrates aquatic exercises. You may also want to find the best aquatic facility for your needs and obtain a membership. The warmth of the water can help muscles relax, improve circulation, and ease soreness.

Strengthening

The swelling and pain from your hip problem and surgery can lead to weakened muscles around the hip. When muscles weaken from pain or disuse, other muscles overpower the weaker ones. This type of imbalance changes the way the joints usually work. Strengthening exercises are used to restore muscle balance so the hip joint works smoothly during your movements and activities.

Progressive Resistive Exercises (PREs)

Many kinds of progressive resistive exercises (PREs) are now taught in rehabilitation using pulley systems, free weights, rubber tubing, manual resistance, and computerized exercise devices. These exercises typically start with lighter weights with lots of repetitions, and as endurance increases, more weight is gradually used with fewer repetitions. Using PREs is a way to apply graded resistance to muscle groups to gradually help them gain endurance and strength.

Functional Training

Therapists also use functional training when you need help doing specific activities with greater ease and safety. Functional training simulates day-to-day activities like stair climbing, pivoting, and squatting, depending on which phase of rehabilitation you have completed.

Gait Training

Your therapist will work with you to fine tune the way you walk. By helping you get back to a normal walking pattern, you'll avoid placing extra strain on the hip joint. You might walk on a treadmill in front of a mirror so you can gauge your walking pattern and make needed corrections. Your therapist will also train you to walk on uneven surfaces and to go up and down stairs safely. The goal is to help you walk normally and safely on a variety of surfaces.

Closed Kinetic Chain Functional Exercises

In closed kinetic chain functional exercises, the leg or foot is fixed on a surface while movement and resistance take place in the joints and muscles above. These types of exercises are important because they are like the activities we do every day. For example, a partial squat exercise is the same action as lowering yourself onto a chair or couch. A leg press is a lot like the action of going up a stair or step. These exercises add strength and

stability around the muscles and joints of the hip and leg.

Balance Exercises

Balance exercises help retrain your position sense, also called *joint sense*. You can think of these exercises like balance training. Examples include balancing on one leg with your eyes open and closed, walking on uneven or soft surfaces, and practicing on various balance boards. Some therapists also use special manual exercises to improve joint sense. Improving joint sense strengthens and stabilizes the hip joint, easing pain and improving function.

Home Program

Your therapist's goal is to help you learn ways to keep your symptoms under control and improve your strength and range of motion. Before you are done with therapy, more measurements may be taken to gauge your progress since the beginning of therapy. When you are well under way, your regular visits to the therapist's office will end. Your therapist will continue to be a resource for you, but you will be in charge of your own ongoing rehabilitation program.

Prevention

Improving your balance, range of motion, and strength can help you control symptoms and avoid future problems. Continue your home program as instructed by your therapist. If you had a hemiarthroplasty, you should continue using your hip precautions until your surgeon says it’s OK to discontinue using them.

Notes