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Hip Joint Replacement Surgery Active-Assisted Exercise Program

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Helper Assisted Home Exercises

After hip replacement surgery, the amount of strength loss in the surgical hip is usually quite significant. Post-operative hip replacement patients often have difficulty even lifting their operative legs against the resistance provided by gravity alone. As a result, they may have difficulty advancing their exercise programs independently.

During post-operative hip exercises, additional assistance provided by helpers (usually a spouse or family member lifting the patient's operative leg) often leads to better functional outcomes, quicker exercise progression to more advanced training, and better independence with post-operative exercise programs as compared to post-operative patients who do not have additional support or help.

Most family members, however, are hesitant to provide this level of assistance due to fear of damaging the post-operative hip or causing undue pain by inadequate or inappropriate limb handling.

Active-assisted range of motion (ROM) exercises are done by the patient and a helper. In active-assisted exercises, the patient performs the desired movements or activity to the best of their ability only requiring the assistance of a helper to:

- complete a full range-of-motion,
- reduce resistance to the limb, by support or
- help move the limb when the patient fatigues and can no longer safely control the limb.

Active-assisted exercises are usually initiated early in the home rehabilitation process when strength loss is usually greatest.

End ranges are determined by the post-surgical patient's level of discomfort. Assistance is provided only to help move the post-operative limb within the tolerances of the patient.

Some soreness, however, may be associated with all post-operative hip exercises whether assistance by a spouse or family member is provided or not.

A good rule of thumb is that symptoms should be low level (usually 1-3/10 levels on a 10-point scale with 1 being the lowest symptoms and 10 being the worst symptoms imaginable) and dissipate quickly (within 2-3 minutes) after stopping assisted exercises. The adage of "no pain, no gain" does not apply.

The principle role of active-assisted exercises are to help the patient complete full sets and repetitions of the prescribed exercises with **ONLY AS MUCH ASSISTANCE AS THE PATIENT NEEDS TO COMPLETE THE EXERCISE.**

Too much assistance and strengthening activities will suffer from inadequate resistance levels. Too little assistance and the patient will not be able to move their operative limb through a full range of motion resulting in strength gains in very short ranges of motion (not throughout the range as needed for function).

The more you and your helpers work on active-assisted exercises, the easier it will be to determine appropriate levels of assistance. Excellent communication between the patient and the helper is essential for successful completion of active-assisted exercises.

How do I (we) get started?

- Learn active-assisted ROM exercises from the patient's home-health therapist. Practice the exercises with the assistance of the patient's home-health physical therapist. They can instruct you on correct hand holds and assistance needs of the patient. Physical therapists can also show your helper the easiest way to do the exercises so they do not get hurt or tired.
- Find a comfortable position for the helper to assist. Most helpers and patients prefer to use the bed for exercising. Your helper may need to sit with your leg cradled in their lap. This will help keep them from hurting their back or other muscles.
- Do all ROM exercises slowly, smoothly, and gently. Never force, jerk, or over-stretch a muscle. This can hurt the muscle or joint instead of helping.
- Move the joint only to the point of resistance. This is the point where you cannot bend the joint any further.
- Stop ROM exercises if the person feels pain. Ask the person to tell you right away if he/she feels increased pain and soreness that does not stop after ceasing the exercise. The exercises may cause mild symptoms, but again, should subside quickly. Try the exercise again modifying the helper's assistance level; this should reduce the soreness noted with the exercise.



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Hand Placement for Hip Extension Exercise

Patient lies on stomach to perform hip extension strengthening exercise.

Helper supports the patient's thigh above the knee joint and the ankle.

Additional assistance is only needed to help the patient lift the thigh off of the support surface (bed) and assist the leg back to the bed in the event the patient fatigues and is unable to independently lower the leg slowly.



HELPER: Watch for signs of muscle fatigue which includes quivering or shaking muscles around the hip and increased feeling of weight in the operative limb; additional support may be needed.

Hand Placement for "Clamshell" Exercise

Patient lays on non-operative hip in sidelying; operative hip is on top. For comfort, a small pillow can be placed between the knees.

Additional assistance is provided by the helper in lifting the leg up and out with support at the knee joint; ankles stay together.

Remember to keep the hip joint forward; do not let the hip roll back during the lifting phase of this exercise.



Hand Placement for Hip Abduction Exercise

Patient lays on non-operative hip in sidelying; operative hip is on top. For comfort, a small pillow can be placed between the knees. Additional assistance is provided by the helper in lifting the leg to the side with support above the knee joint and at the ankle.

Remember, the movement is straight up and slightly back towards the helper.

HELPER: Make sure the top hip is rolled forward of an imaginary vertical line drawn straight through both hips. Do not let the patient roll backwards at the hip when completing this exercise.

