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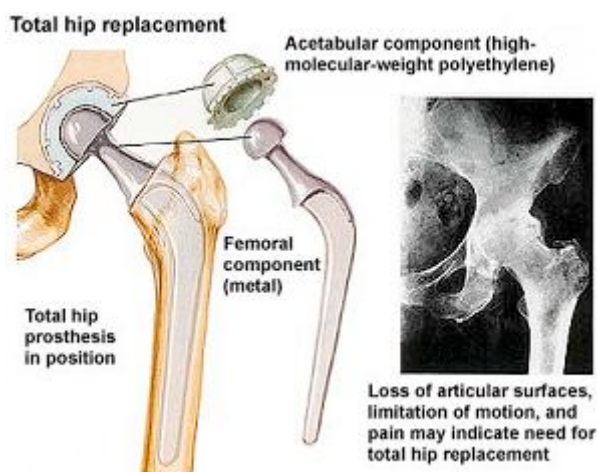
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Rehabilitation Protocol After Total (& Partial) Hip Replacement

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Goal: to restore range of motion (ROM), strength, and function to the hip, including a pain free gait and ability to climb stairs, ability to rise from a chair unassisted & reach to tie your shoes, while avoiding problems such as low back pain and instability.

Pre-op medical evaluation: All patients must be evaluated by their primary care physician (PCP) within 3 months prior to surgery. Please contact your family doctor or internist to arrange for a preoperative medical evaluation (pre-op clearance) to ensure the surgery does not carry an undue risk. Diabetics should have their blood sugars under control (hemoglobin A1C levels <6.9%). Patients with inflammatory arthritis (e.g. rheumatoid arthritis) should contact their rheumatologist or PCP about reducing or discontinuing immunosuppressive medications several weeks before and after surgery.

Personal preparation for surgery: If you are a smoker, stopping for a few weeks before and after surgery will lessen risk of complications such as blood clots or pneumonia. Dental work and kidney or bladder problems and procedures should be taken

care of prior to the hip replacement if possible, as these procedures can cause a temporary bacteremia (bacteria in the bloodstream). Addressing these conditions prior to hip replacement lessens risk of infection after surgery.

Facts: **a.** Unlike a total knee replacement, a total hip replacement is performed without incision thru a major muscle group. Thus healing time is usually substantially less than after a knee replacement. Although rehabilitation time is usually 6-8 weeks, it is possible with early aggressive rehabilitation to be walking without assistive device (with no limp) and resuming driving and other activities within 2-4 weeks after surgery.

b. Dr. Abrahamsen uses a posterior approach to the hip, so internal rotation of the hip (knee or toes pointing in) is to be avoided, especially in the 1st 6 weeks. Crossing the legs at the knees is to be avoided indefinitely, as is bending forward to get up out of a chair, to prevent dislocation. Although it is safest not to bend the hip past a right angle, or 90 degrees, it is safe beginning 4 weeks after surgery to bend the hip high enough to put a sock on or cut toenails if the knee is outside both hands when reaching for the foot (preventing the hip from internally rotating).

c. You will have a Foley catheter inserted in your bladder in surgery after you are anesthetized. It will be removed the morning of the 2nd post-op day. Urinary retention is usually avoided if a catheter is used, but occurs in over half of patients after a total hip replacement if no catheter is used.

d. Unless contraindicated you will be given a blood thinner for 4 weeks after surgery to lessen risk of blood clots (usually Coumadin; generic name is warfarin). Some patients will have inflatable wraps around the lower legs to lessen risk of blood clots. Medications such as ibuprofen (anti-inflammatory agents), aspirin products, and Plavix can affect bleeding and should be discontinued at least 1 week prior to surgery. Birth control pills should be discontinued 1 month prior to surgery, if possible, as they increase the risk of blood clots.

REMINDER:

When the patient agrees to undergo replacement hip surgery they willingly commit to a 2 to 3 month, structured rehabilitation program. They should understand that the end-result depends to a great extent on their discipline, motivation, and perseverance in performing the exercise program. Without their commitment and energy, the surgery is assured to fail to meet their expectations. With their cooperation and dedication they have an excellent chance to regain the strength, motion, and function in the hip to participate in most activities of daily living, including walking without a limp (with no assistive device such as a cane), climbing stairs, tying shoes, playing golf or doubles tennis, and driving.

A physical therapist's treatment and supervision is often recommended for optimal results. Physical Therapy begins in the hospital, and continues either at home or in a Skilled Nursing Facility or Rehabilitation Hospital. Home Health Physical Therapy is arranged after discharge home and continues until the patient is able to travel in a car comfortably, usually for 2 weeks. Outpatient Physical therapy visits are typically 2-3

times a week for 3 weeks beginning 3 to 4 weeks after surgery, then 2 times a week for a 2nd 3 weeks if necessary.

TIMING OF POST-SURGICAL VISITS:

1. 1st 4 Days post-op are usually spent in the hospital.
2. To be discharged home directly from the hospital and avoid inpatient rehabilitation, the patient must be able to get out of bed and to the bathroom and back with minimal assistance. Inpatient rehabilitation for 1 or 2 weeks is recommended for the patient who will be living alone when they return home.
3. WEEK 3 or 4– office visit for wound check & x-ray, arrange outpatient physical therapy
4. WEEK 8- strength check
5. It is not necessary to return for routine follow-up after recovering from total hip replacement. It is a myth that hip replacements wear out after a certain period of time, the way car parts wear out. The majority of patients will never have a problem with their hip replacement. However, if pain severe enough to cause a limp or interfere with sleep develops after the final office visit, it is wise to return to the office for a check-up.

The following exercise program should be followed **daily on your own** to achieve the goals expected at the end of each time interval. This detailed protocol has been designed as a reference specifically for you and your physical therapist.

REHABILITATION PROGRAM

IMMEDIATELY POST-OP

1. **ACTIVITY:** A foam brace will be strapped between the legs immediately after surgery, and should be used when in bed to prevent dislocation for the 1st 3 days, or until a patient has enough strength to lift the operated leg up with the knee straight when in bed. This means sleeping on your back the first few days after surgery. When muscle strength and tone returns dislocation is much less likely.
2. **DIET:** Your nurse will start you with clear liquids then advance your diet slowly as tolerated. Avoid greasy or rich foods in the 1st 48 hrs. after surgery.
3. **RANGE OF MOTION:** The patient should begin moving their feet up and down at the ankles (“ankle pumps”) in the recovery room, as soon as the anesthetic wears off. This exercise helps circulation in the legs and helps prevent blood clots. It should be continued for 1 week after surgery, several times a day.
4. **WOUND CARE:** Do not get the incisions wet in the 1st 14 days after surgery. If the bandage accidentally gets wet, it should be changed with a dry, sterile dressing such as 4x4 gauzes & tape. Staples are to be removed by the Home Health Nurse or Rehabilitation Facility Nurse 13 days post-op.

5. **GOAL:** The goal in the first day after surgery is comfort and safety. You will likely need less pain medication in the long run if you ask for medication as frequently as you need it in the 1st few days after surgery, rather than trying to put up with the pain until medication becomes absolutely necessary. A good night's sleep is essential. Prescription sleeping pills are ordered and available in the hospital and should be used if necessary.

1st 3 Days After Surgery

1. **ACTIVITY:** A hospital physical therapist will be with you in the first few days when you get out of bed & walk to ensure safety. The therapist will provide a walker to use while you are in the hospital, which they will leave in your room once you are safe using it unsupervised. You are not to get out of bed on your own until given permission by the therapist.
2. **RANGE OF MOTION:** Bend and straighten your knee slowly several times a day beginning the 1st day after surgery. Even if you are strapped in the foam brace, you can begin using the muscles that move your knee (& hip) by bending a straightening the knee a few degrees.
3. **STRENGTH:** Straighten the knee actively by pushing the knee down against the bed, beginning the day after surgery. On the 2nd day begin trying to lift the leg up with the knee straight when in bed. The goal is to be able to lift the leg 3 or 4 days after surgery.
4. **WOUND CARE:** The dressing will typically be changed the 3rd day after surgery. Do not get the incision wet. Sponge baths are appropriate.
5. **GOAL:** The goal in the first 3 days after surgery is comfort and safety. You will likely need less pain medication in the long run if you ask for medication as frequently as you need it in the 1st few days after surgery, rather than trying to put up with the pain until medication becomes absolutely necessary. A good night's sleep is essential. Prescription sleeping pills are ordered and available in the hospital and should be used if necessary.

Day 4 thru 14

1. **PAIN:** If you are discharged home a prescription for pain pills will be given to you the day of discharge.
2. **ACTIVITY:** Gradually increase the time on your feet, as comfort allows. You may walk inside the house with a walker, but do not go outside until doctor or physical therapist tells you it is safe. Do not reach for anything on the floor until the doctor or therapist gives the OK. When you are in bed you should have a regular pillow between your knees to remind you not to cross your legs, until strength is nearly back to normal. Do not lie on the operated side until 6 weeks after surgery. You may lie on the opposite side if you put a pillow or 2 between your knees.

3. **RANGE OF MOTION:** It is safe to bend & straighten the knee and hip but do not bend past a right angle at the hip (90 degrees).
4. **STRENGTHENING:** Strengthen the hip using straight leg raising exercises that the physical therapist shows you. It is safe to lift the leg with the knee straight when in bed, and even move the leg outward & back in when comfort & strength allow.
5. **WOUND CARE:** Continue sponge bathing. Your Home Health Nurse or Skilled Nursing Facility Nurse will change your dressing daily for 5 days (more often if needed). Any drainage should stop by the 7th post-op day. Any wound drainage after the 7th post-op day should be reported by the nurse to Dr. Abrahamsen. Rarely, a post-operative hematoma must be debrided surgically (to prevent infection, if drainage persists after 7 days post-op). Dr. Abrahamsen prefers that **staples** (or sutures) be removed on a Tuesday, 14 days after surgery, as he is normally available in the office on Tuesdays to answer any questions that the nurse may have about wound care. You may **shower** (get the wound wet) the day after the staples are removed. Do not go in a public swimming pool or the ocean until 4 weeks post-op.
6. **GOAL:** By 2 weeks, the hip should move to 90 degrees flexion, but may still be sore, stiff, and swollen. Do not be discouraged if some swelling persists. You should be able to lift the leg with the knee straight when in bed, and even move the leg outward & back in after raising it off the bed, without using your hands or your other leg to help.

WEEK 2-6

1. **PAIN & SWELLING:** You may use dry or moist heat on the hip or thigh and massage sore & tight muscles.
2. **MEDICATIONS:** Coumadin (blood thinner) is typically discontinued 4 weeks after surgery, although it may be discontinued earlier if you recover faster than average. Take or Tylenol as needed. You should be tapering your use of prescription pain pills and discontinuing their use by 6 weeks after surgery.
3. **RANGE OF MOTION:** Physical Therapy is in home for the 1st 2 weeks at home then can be continued as an outpatient if needed (a doctor's prescription is required for outpatient physical therapy). Increase ROM using the exercises your therapist recommends. Don't flex the hip past 90 degrees.
4. **STRENGTHENING:** Continue with twice a day straight leg raising exercises, abduction strengthening, and ankle/toe raises.
5. **GOAL:** By 4 weeks you should be able to touch the front of your ankle and walk with a cane with a slight limp.
6. **ACTIVITY:** You may get the incision wet. You may use dry or moist heat on the hip or thigh and massage sore & tight muscles. You may walk outside the house if you feel safe. Use your walker until you feel safe using a cane. Sexual relations may be resumed when you feel comfortable as long as the wound is healed (the wound is typically healed by 2 weeks post-op). You may drive when comfortable once you are able to walk safely without the walker.

WEEK 6-10

1. **MEDICATIONS:** Take ibuprofen or Tylenol as needed.
2. **RANGE OF MOTION:** Continue to increase ROM to allow ability to tie shoe, keeping both hands inside the knee when reaching for the foot. You may flex the hip past 90 degrees if it is abducted and externally rotated. Ask the therapist or doctor to show you how.
3. **STRENGTHENING:** You may use any exercise equipment available to you in your home, gym, and health club. Use lower weight and a higher number of repetitions (20 to 30) to build endurance. Repetitions should be done slowly until you are certain you can do the exercise comfortably. Try to exercise 1 hour a day (breaking it up into comfortable intervals), at least 3 to 5 times per week.
4. **GOAL:** By 10 weeks the range of motion of the hip should allow tying a shoe. You should feel well enough to resume light activities such as light doubles tennis, short game golf shots, and light swimming.
5. **ACTIVITY:** Let discomfort be your guide. You may walk without a cane when you are no longer limping. Do not attempt to lift anything heavy.

WEEK 11 - 16

1. **PAIN:** It is not unusual to require occasional Tylenol or ibuprofen after activities.
2. **STRENGTHENING:** Weight training or other fitness training are allowed as pain allows. You are not to run or jump on a hip replacement.
3. **GOAL:** By 16 weeks, the hip should feel well enough to begin return to some activities and sports including doubles tennis & golf. A hip replacement is not designed to last under high physical demands. Running, jumping, and sports such as basketball, competitive baseball, soccer, & singles tennis are to be avoided.
4. **COMMENT:** It may take between six months and a year to regain full confidence in the operated hip. Confidence can only be regained by subjecting your hip to the demands of the activity that you desire to return to.

ANSWERS TO COMMON QUESTIONS**How long will I be in the hospital?**

Total Hip Replacement usually requires a short (3-4 day) hospital stay.

How long does the surgery take to perform?

The surgery usually requires 2 hours to perform.

What is the risk of blood transfusion?

According to Florida Blood Services "Clinical Transfusion Today" (Winter 2006 p.2), the risk of Hepatitis B is 1 in 200,000; Hepatitis C risk is 1 in 2,000,000; HIV (AIDS) risk is 1 in 2,000,000.--reference: Labmedicine, Vol 36 p717 (2005)

When will I see the doctor?

Dr. Abrahamsen makes rounds each day while you are in the hospital, usually in the morning (before 9am). The 1st office visit after discharge from the hospital is usually 4 weeks after surgery. By this time you should be comfortable traveling in a car to the office. If you go to a rehabilitation facility, the medical doctor at the rehabilitation facility will make rounds--usually once a week.

If I go to a rehabilitation or skilled nursing facility, when can I go home?

The rehabilitation facilities normally have a weekly meeting that involves the social worker, physical therapist, nurse coordinator, and medical director. They will make a judgement, based on your progress and your home situation, when it is safe and advisable for you to go home. In general Dr. Abrahamsen recommends that you be able to get out of bed and to the bathroom and back safely, without assistance, before you are discharged home.

When can I drive a car?

When you feel safe and confident behind the wheel so you can avoid getting into an accident. Generally, driving is resumed within the first 4 to 6 weeks after surgery, but may take longer if you require pain medication frequently. Do not drive when you are taking pain pills.

When can I return to work or school?

Motivated people who have a sitting or desk job can usually be back at work by 4 to 6 weeks after surgery.

What is the success rate of the surgery?

98% of patients will have relief of pain and be able to walk, climb stairs & participate in normal day to day activities.

Must I take an antibiotic before dental work or other procedures?

Yes, it is recommended by the American Academy of Orthopaedic Surgeons (AAOS Information Statement, **Antibiotic Prophylaxis for Bacteremia in Patients with Joint Replacements, 2009**) that an antibiotic be taken prior to dental work in the 1st 2 years after a joint replacement, unless you have complete upper and lower dentures (or no teeth). Taking an antibiotic prior to dental appointments is especially important if you may have a dental infection (e.g. painful tooth or swollen gum). It is controversial if an antibiotic needs to be taken prior to routine cleanings (Dr. Abrahamsen recommends taking it). Patients who are immunocompromised (e.g. rheumatoid arthritis or Type I diabetes) are at higher risk and may be considered for prophylaxis indefinitely. Prophylaxis is also recommended before endoscopy (e.g. colonoscopy or cystoscopy).

Will my legs be the same length?

Because stability takes precedence over leg length, it is occasionally necessary to use an implant that lengthens the leg, to minimize the risk of dislocation. It is possible to predict leg lengthening before surgery in most patients, as those with a "varus" hip (more

than average hip angle) are the ones at most risk. Leg length after surgery is best determined by the post-operative x-ray and doctor's measurements, not by observing how you stand or walk after surgery.

Are there any permanent restrictions after a hip replacement?

Do not bend from the waist when rising from a chair (avoid soft chairs or sofas that make rising difficult). No running or jumping. You may tie your shoes or do toenail care if you are sitting with knees apart and reach both hands in between the knees.

Will I set off the metal detector at the airport?

Possibly. The United States Transportation Security Administration (TSA) regulations state: *"It is recommended (but not required) that you advise the screener that you have a metal implant and where the implant is located. Screeners will need to resolve all alarms associated with metal implants. Most alarms will be able to be resolved during a pat-down. Therefore, clothing will not be required to be removed or lifted as part of the inspection process."*

What sports can I participate in after a knee replacement?

A survey of the Hip Society concluded golf, swimming, stationary or road cycling, bowling, ballroom dancing, shuffleboard, hiking, square dancing, & speed walking are all **allowed** after total knee replacement. Other activities, including weight lifting, skiing, doubles tennis, horseback riding, & rowing are **allowed with experience**. There was **no consensus** for singles tennis, hockey, racquetball, roller skating, & baseball. Activities **not allowed** included jogging, soccer, basketball, volleyball, & football.

Can my therapist watch the operation?

Yes, the therapist can call 724-6169, ext. 203, and inform our medical assistant if they would like to observe the surgery. It is a hospital policy that non-medical personnel are not permitted in the operating room; this includes family and friends.

If you have any more questions and you should, please write them down in the space below and call 724-6169 for our medical assistant, or ask Dr. Abrahamsen at your next office visit.