



Risks of Surgery Total Hip Replacement

Summary of Procedure

Total Hip Replacement is a surgical procedure designed to relieve pain and restore function to the hip joint. In this surgery, the ball and socket of the hip joint are replaced with an artificial ball and socket. The surgery varies in its complexity, but usually takes about 2 hours to perform, and the hospital stay is usually 3-4 days. The recovery time also varies, and depends on many factors, especially the health of the patient, but usually patients can walk with only a cane (or less) by about three months. The artificial parts can be fixed to the patient's body with bone cement, or an uncemented prosthesis can be used, with the goal of having the patient's bone grow into the metal. Commonly, a combination is used (hybrid hip replacement).

Complications of Hip Replacement Surgery

In general, hip replacement surgery is extremely successful, and the medical literature supports success rates, as measured by patient satisfaction with the procedure, of more than 95%. Unfortunately, as with all surgery, the success rate is not 100%, and there can be complications. Some of the most common complications are listed below, with a brief explanation of each one. (Note that not all possible complications have been listed.)

- **Infection.** Any time the skin is violated in an operation, a germ can enter the wound and cause an infection. Usually the body can fight the infection, but in the presence of an artificial material, such as a total joint prosthesis, the body often is unable to fight the infection. Infected total joint replacements are a disaster, because curing the infection often requires removal of the prosthesis followed by a long period of antibiotics. If the infection is successfully treated, the prosthesis may be reimplanted at a later time. Infections can occur immediately after the surgery, or they can occur at any time after the surgery if a germ travels through the body and settles into the joint. Fortunately, the infection rates are low, being approximately less than 1%, but this may be higher if the patient has diabetes or another condition which lowers the body's resistance to infection. To prevent infection, we use antibiotics and careful sterile technique.
- **Bleeding.** All surgeries cause some bleeding. Hip replacement surgery can be associated with the loss of 2 or more pints of blood because the bony surfaces can bleed quite a lot. Patients commonly elect to give blood for themselves (autologous blood donation) or have family members donate blood for their use (directed donor blood) to minimize the risk of transfusion, although this may not be necessary if the patient has a high blood count to start with. If a transfusion is necessary, there is a small risk of transmission of diseases like HIV and Hepatitis, and there is a small chance of a poor match with the transfused blood.



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- **Blood Clots.** During any surgery, especially one on the legs, there is a risk of the blood clotting in the blood vessels instead of flowing normally. This is called a DVT, or deep venous thrombosis. A large clot can be associated with substantial swelling of the leg, or there may be no signs at all. If the clot migrates through the blood vessels to the heart and lungs, it can cause a pulmonary embolus or PE, in which the important blood vessels in the heart and lungs are blocked, with potentially life threatening consequences. Blood clots are quite common in the legs after hip surgery, although PEs, fortunately, are not. All patients who undergo hip replacement surgery are at risk, although we try to minimize the risk with the use of blood thinners or devices that compress the legs to keep the blood flowing.
- **Dislocation.** During the hip replacement surgery, the surgeon takes the ball out of the socket to put in the new parts, and then he or she puts it back in socket. Especially for the first few months, the patient can pop the hip ball out of the socket if the hip is moved the wrong way. Our physical therapists teach the hip surgery patient how to move properly to prevent a dislocation. If dislocations become frequent, repeat surgery may be needed.
- **Wound healing problems.** Occasionally, the incision does not heal as quickly as the surgeon would like, or there may be a collection of blood under the skin (a hematoma) which causes continued drainage. Sometimes a second surgical procedure is needed to correct the problem.
- **Different leg lengths.** During the hip surgery, the surgeon will make every effort to equalize the leg lengths. Usually, any difference between the lengths of the two legs is hardly noticeable, but in some cases, one leg can end up shorter or longer than the other, requiring the use of a lift in one shoe.
- **Injuries to nerves, blood vessels, and other structures.** There are several important blood vessels and nerves in the vicinity of the hip joint which are at theoretical risk during the surgery. Damage to these structures is rare. The most at risk nerve is the sciatic nerve. If this nerve were to be stretched or damaged in another way during the surgery, the patient could lose some movement and sensation in the foot and leg below the knee. It is also possible to have a fracture of the bone of the thigh or pelvis during insertion of the prosthesis. This complication could prolong the surgery and increase recovery time.
- **Medical problems related to anesthesia and surgery.** Hip replacement surgery is usually done in an older group of patients, and these patients often have a variety of medical problems, including heart disease, diabetes, and the like. While anesthesia is usually very safe, there is always the risk of a complication such as a heart attack or stroke during or after the surgery. Lung problems, such as asthma, can be worse after surgery, especially in smokers, and pneumonia can be a serious complication as well.
- **Medications given for anesthesia or pain can have varying effects as well, such as allergic reactions, nausea, vomiting, itching, constipation, or confusion.**



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- Stiffness and heterotopic ossification. Some patients never regain good motion of their hip joints, and this is mostly related to stiffness in the tissues (muscles, tendons, and ligaments) around the hip. In rare cases, new bone can form around the hip joint limiting motion.

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- Loosening. Despite our best efforts, our artificial joints do not last forever. Most artificial hips can be expected to last 10 to 15 years if they are put in well and treated well by the new owner. When the joints start to wear out, they usually become loose, and they can become painful. Some joints can become loose very soon after the initial surgery, and it is not always clear why. If the loose joint is very painful, revision surgery may be necessary, and it is usually a larger and more difficult procedure than the original hip replacement.
- Persistent pain or limp. While hip replacement surgery is generally very effective at relieving pain, some patients continue to experience pain in their hips, or they continue to limp. The pain or limp may come from the hip joint itself, possibly related to scarring and stiffness, or to muscle weakness. In other cases, the pain is from the outside of the hip bone (bursitis), or is referred from other areas, especially the low back. Some patients experience an annoying pain in the thigh after hip replacement, especially if done without bone cement. While the pain usually subsides, it may take many months to resolve. Studies have demonstrated that functional improvement often continues for 2 years or more, as muscles weakened from years of limited use start working properly again.

In conclusion, hip replacement surgery is a major operation, and while successful most of the time, there is definitely the risk of serious complications which can make a person significantly worse than if they had not had the procedure. As a result, any decision to proceed with the surgery should be carefully considered, and we usually do not recommend undergoing surgery unless simpler and safer measures, such as medications or the use of a cane, have failed to relieve symptoms. If a patient does elect to have surgery, he or she can be confident that we will do what we can to minimize the risks in order to achieve a successful outcome.

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