Total hip arthroplasty (THA) is one of the most successful orthopedic procedures performed today. For patients with hip pain due to a variety of conditions, THA can relieve pain, can restore function, and can improve the quality of life. The complications during total hip arthroplasty can be categorized as intra-operative or post-operative. Most complications in total hip arthroplasty are infrequent and can be prevented or treated readily if anticipated and recognized. Complications associated with any major surgical procedure, including those related to anesthesia, comorbid medical conditions, medications, and allergic reactions, can also occur.

The major potential intra-operative complications are fractures, nerve injury and blood vessels. Fractures: Most intra-operative fractures occur on the femoral side during stem insertion. Nerves: Injury to the sciatic nerve is the most common, but the femoral, obturator, and superior gluteal nerves can also be injured. The peroneal division of the sciatic nerve is more susceptible to injury than the tibial division. Blood vessels: Injuries to blood vessels are infrequent, the main blood vessels can be affected.

The major potential post-operative complications are: Thromboembolism, which is the largest risk of perioperative mortality after total hip arthroplasty. Using thromboprofilaxy procedure the complication rate is 0.1 percent. Infection following hip replacement is uncommon (between 0.4 and 1.5 percent of patients). Antibiotics are routinely given (during the first 24 hours only) to help prevent infection.

Aseptic loosening of the joint implant is most often caused by wear of the prosthetic components. It is the most common long-term problem associated with total hip replacement, although the number of people who develop loosening is decreasing as prosthetic materials and surfaces are improved. Osteolysis and wear are the most common complication for implant failure. It is usually asymptomatic until aseptic loosening is reached. Dislocation of the artificial hip joint is a very painful and unpleasant complication and occurs in less than 2 percent of patients. Breakage of the implant itself can occur as a result of wear and tear of the prosthesis, often over a period of years. Older implants are more likely to break, while newer prostheses are stronger and more durable. This is a rare occurrence, with less than 1.0 percent of people experiencing breakage. Change in leg length — for the patient often an unpleasant complication. Generally wearing a lift in one shoe is helpful.