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### **What is a hip fracture**

A broken hip is a common injury, especially in elderly individuals. In the United States, hip fractures are the most common broken bone that requires hospitalization; about 300,000 Americans are hospitalized for a hip fracture every year.

A "broken hip" and a "hip fracture" mean the same thing!

### **How do hip fractures happen?**

Hip fractures in the elderly are most often caused by a fall, usually a seemingly insignificant fall.

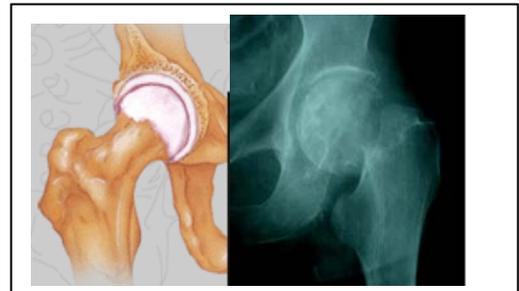
In younger patients with stronger bones, more common causes of a broken hip include high-energy injuries such as car accidents

Elderly patients with osteoporosis are at much higher risk of developing a hip fracture than someone without osteoporosis. Other risk factors associated with hip fracture are female sex, Caucasian race, slightly built individuals, and limited physical activity.

### **Are all hip fractures the same?**

No. Hip fractures are generally separated into two types of fractures

1. **A femoral neck fracture** occurs when the ball of the ball-and-socket hip joint is fractured off the femur. Treatment of a femoral neck fracture depends on the age of the patient and the amount of displacement of the fracture.



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2. **An intertrochanteric hip** fracture occurs just below the femoral neck. These fractures are amenable to repair more often than femoral neck fractures. The usual surgical treatment involves placement of a plate and screws to stabilize the fractures



Treatment of a hip fracture almost always requires surgery.

### **What is the treatment of a femoral neck fracture?**

Treatment of a femoral neck fracture depends on several factors. The most important criteria to consider are:

- 1.The amount of displacement of the fracture
- 2.The age of the patient

In younger patients, those under 60 to 65 years old, every effort will be made to avoid a partial hip replacement. Hip replacements work very well for less active patients, but they tend to wear out in younger, more active patients. Therefore, in young patients, a chance may be taken to avoid hip replacement.

### **Hip Pinning**

A hip pinning is a procedure done to place several screws across the fractured bone. Hip pinning is generally only done in patients with a femoral neck fracture that is well aligned and minimally displaced. In young patients, as described above, hip pinning may be attempted even if the bones are not properly aligned. However, even in this setting, a partial hip replacement may be necessary.

When a hip pinning is performed, a patient is usually under general or spinal anaesthesia. A small incision is made on the outside of the thigh. Using x-ray to guide your surgeon, several screws are passed across the fracture in order to stabilize the broken bones.

Patients can generally place as much weight on

the hip as is tolerated, but this will vary

in some cases--check with your surgeon

before initiating any therapy or exercise.

As the bones heal, the pain will generally subside.

The primary concern with femoral neck fractures

is that the damaged blood supply to the bone

will lead to non healing or bone death needing

Total hip arthroplasty



## **Hip Hemiarthroplasty**

A hip hemiarthroplasty is the word used to describe a half of a hip replacement. In this procedure, the ball of the ball-and-socket joint is removed, and a metal prosthesis is implanted into the joint. Hip hemiarthroplasty is favoured in patients with displaced fractures because of the complications described above with trying to repair these fractures.

A hip hemiarthroplasty is performed under general anaesthesia or spinal anaesthesia. An incision is made over the outside of the hip. The fractured femoral head is removed, and replaced with a metal implant. In a normal hip replacement, the socket of the pelvis would also be replaced. This can be done in patients with pre-existing arthritis or a very active patients.

Rehabilitation is initiated immediately and patients can usually walk with their full weight on the implant. Patients tend to feel much better after the surgery, and usually return to walking quite quickly.

## **Total hip arthroplasty**

Is indicated in fracture neck femur in elderly patient

who are independent and mobile patients.

The complications are similar to other surgeries on the hip.

Dislocation incidence is slightly higher than elective total hip arthroplasty



## **What is an intertrochanteric hip fracture?**

An intertrochanteric hip fracture occurs lower than a femoral neck fracture.. Intertrochanteric hip fractures have a different treatment because they do not have the issues with damage to blood flow to bone seen with the femoral neck fractures. Because the bone blood flow is usually in tact, these fractures can usually be repaired, and do not require the hip replacement procedure described previously.



## **What is the treatment of an intertrochanteric hip fracture?**

Intertrochanteric fractures are usually repaired with a metal plate and screws. The patient is given a general or spinal anesthesia in the operating room. They are then positioned in a manner to realign the fractured bone. Once the fracture is well

positioned and confirmed to be in a good position using x-ray, an incision is made on the outside of the thigh.

### **What is the rehabilitation following treatment for an intertrochanteric hip fracture?**

Patients are usually allowed to begin walking immediately following surgery. In some cases, if there were small fracture fragments or difficulty with alignment of the fracture, weight may be restricted. Most commonly, patients will get up with the physical therapist within a day following surgery. Time for complete healing is usually about 12 weeks, but most patients are walking well before that time

### **Information about hip fracture complications**

Complications are very common in patients who sustain a hip fracture. One of the most important reasons for performing surgery on patients who have a hip fracture is to help prevent these complications. By getting patient up and out of bed as soon as possible, the risk of complications is diminished.

### **What post-operative complications are high after a hip fracture?**

1. Death in the first year following a broken hip are around 25%, and the rates are highest in older populations.
2. The cause of mortality following a hip fracture is often due to blood clots, pneumonia, or infection. Furthermore, only about 25% of patients who sustain a broken hip return to their pre-injury level of activity.
3. Fracture neck of femur when fixed with screws:  
20% Avascular necrosis ie., head of the femur loses blood circulation and collapses  
15% may not heal requiring re-operation
4. Fracture intertrochanteric fracture:  
Hip heals shortening; external rotation  
Failure of fixation device to hold the fracture

The majority of patients who sustain a hip fracture will require prolonged specialized care, such as a long-term nursing or rehabilitation facility. Only 50% can retain their pre-injury mobility.