Hip Fracture,
Open Reduction and Internal Fixation (ORIF)
Pre-op and Procedure

A hip fracture, or broken hip, can happen to anyone. To fix it, surgery is usually needed. One method is called open reduction and internal fixation, or ORIF for short. "Open reduction" means an incision (cut) is made to open the fracture area. This lets the surgeon see the broken bone. The bone pieces will be put back together. Some type of hardware will be used to hold the bones in place. That is called "internal fixation." Screws, pins, rods or a metal plate might be used.

More than 250,000 people in the United States break a hip every year. Nearly all of them are treated successfully with surgery.

BEFORE THE SURGERY

You should be as healthy as possible before surgery for a broken hip. Sometimes this means waiting until other health problems are addressed. Then, the operation can be scheduled. To find out if you are ready for surgery:

- A medical evaluation will be done. This examination will include checking your heart and lungs.
- Imaging tests. These let the surgeon see what the fracture looks like. They could include:
  - X-rays to find exactly where the break is.
  - Computed tomography (CT) scan. A CT scan takes pictures using X-rays and a computer. This can give a better view of the broken hip.
  - Magnetic resonance imaging (MRI scan). It uses a magnet, radio waves and a computer. It may show a hidden fracture that cannot be seen on X-ray or CT.
- Blood tests.
- Urine test. It is possible to have a urinary tract infection and not know it.
- Talking with an anesthesiologist. This is the person who will be in charge of the anesthesia (medication to stop the pain) during the surgery. An ORIF procedure usually is done with general anesthesia (being asleep during surgery), or a spinal anesthesia is used to make you numb (no feeling) from the waist down but awake during the operation. Ask your surgeon if there is an advantage to one type of anesthetic over the other.

You will need to stop taking certain medicines.

- The admitting physician will have you stop using aspirin and non-steroidal anti-inflammatory drugs (NSAIDs) for pain relief. This includes prescription drugs and over-the-counter drugs such as ibuprofen and naproxen.
- If you take blood-thinners, ask your healthcare provider when you should stop taking them.

You will have to give what is called informed consent. This requires signing a legal paper that gives permission for the surgery. To give informed consent:

- You must understand how the procedure is done and why.
- You must be told all the risks and benefits of the procedure.
- You must sign the consent. Or, a legal guardian can do this.
- Signing should be witnessed by a healthcare professional.

The day before the surgery, eat only a light dinner. Then, do not eat or drink anything for at least 8 hours before the surgery. Ask if it is OK to take any needed medicines with a sip of water.

LET YOUR CAREGIVERS KNOW ABOUT

On the day of your surgery, your caregivers will need to know the last time you had anything to eat or drink.

This includes water, gum and candy. Also make sure they know about:

- Any allergies.
- All medications you are taking, including:
  - Herbs, eyedrops, over-the-counter medications and creams.
  - Blood thinners (*anticoagulants*), aspirin or other drugs that could affect blood clotting.
- Use of steroids (by mouth or as creams).
- Previous problems with anesthesia, including local anesthetics.
- Possibility of pregnancy, if this applies.
- Any history of blood clots.
- Any history of bleeding or other blood problems.
- Previous surgery.
- Family history of anesthetic complications
- Smoking history.
- Any recent symptoms of colds or infections.
- Other health problems.

THE SURGERY

The preparation:

- Small monitors will be put on your body. They are used to check your heart, blood pressure and oxygen level.
- You will be given an intravenous line (IV). A needle will be inserted in your arm. It is hooked to a plastic tube. Medication will be able to flow directly into your body through the IV.
- You will be given anesthesia.
  - For general anesthesia, the anesthesiologist may hold a mask gently over your face. You will breathe in gases that will make you sleep. A tube also might be put in your throat. This would let you continue to get anesthesia during the procedure.
  - For spinal anesthesia, a drug will be injected (shot) into the spinal cord area. This will make the body numb from the waist down.
- The hip area will be scrubbed with a special solution to kill any germs.
- The procedure:
  - Once you are asleep or numb, the surgeon will move the bones (realign the fracture) before any incisions are made. The goal is to get the bones back to their normal position.
  - X-rays may be taken. This is to check the position of the bones.
  - An incision is made over the hip. It will go through the muscles to the broken bone.
  - The bones will be put in place. Some type of hardware will be used to hold the bone together.
  - The hip is a ball-and-socket joint. The "ball" part of the joint is the very top of the upper leg bone (*femur*). Sometimes the very top of the upper leg bone is replaced with a man-made piece. If it is replaced, this is called a partial hip replacement. Sometimes a complete or total hip replacement will be preformed, replacing both the ball and the socket. This is the preferred treatment if there is any appearance of arthritis in the hip joint.
  - The incision is closed with small stitches or staples.
  - A dressing (medicine and a bandage) is put over the incision.
  - An ORIF procedure can take several hours.

AFTER SURGERY

- You will stay in a recovery area until the anesthesia has worn off. Your blood pressure and pulse will be checked every so often. Then you will be taken to a hospital room.
- You may continue to get fluids through the IV for awhile.
- Some pain is normal after an ORIF procedure. You will probably be given pain medicine. Be sure to tell your caregivers if the pain becomes severe.
- It is important to be up and moving as soon as possible after an operation. Physical therapists will help you

start walking. You will probably need to use a walker for a while. Follow the therapists instructions regarding weight bearing on the injured leg.

- To prevent blood clots in your legs:
  - You may be given special stockings to wear.
  - You may need to take medicine to prevent clots.
- Most people stay in the hospital for several days after this surgery.
- Physical therapy is usually needed. Some people go to a rehabilitation center (a long-term care center or transitional care unit) before going home. Ask your healthcare providers what would be best for you. Often social workers are available to help you and your family make the best decision for you.

RISKS AND COMPLICATIONS

All operations have some risk. Being unhealthy increases risks. That is why you want to be as healthy as possible before this surgery. Possible problems after ORIF may include:

- Blood clots.
- Bleeding.
- Infection near the incision.
- Lung infection (*pneumonia*).
- Pain that continues after the operation.
- Trouble walking. Some people may need to continue using a walker.

HOME CARE INSTRUCTIONS

- Medication.
  - Take any pain medicine that your surgeon suggests. Follow the directions carefully. Do not take over-the-counter painkillers unless the surgeon says it is OK. Medicine such as aspirin or ibuprofen can increase the chances of bleeding.
  - Your healthcare provider may prescribe a blood-thinner for several weeks to 2 months. These drugs prevent blood clots.
- Wound care.
  - Check the area around the incision carefully each day. Look for any redness or swelling. Also check for any fluid that is seeping from the incision. Tell your healthcare provider if you see anything.
  - Do not get the incision wet until your surgeon says it is OK.
- Activity.
  - Most people will need the help of a walker or crutches for some time.
  - You will need to continue physical therapy once you are home. This often lasts for several months.
  - You will learn how to avoid putting stress on your hip while it heals if that is the direction given by your surgeon.
  - Be sure to do any exercises the therapist suggests. These exercises will help make your hip stronger.
  - Special equipment might make life at home easier. One example is a seat for the shower. Another is a raised toilet seat.
  - Ask your healthcare provider when you can resume other activities, such as work, driving or sex.
- Follow-up care.
  - The surgeon may need to take out stitches or staples. This is usually done about two weeks after the operation.
  - The surgeon will do X-rays to check how your hip is healing.

SEEK MEDICAL CARE IF:

- You have any questions about medications.
- You feel weak.
- You are too tired to walk every day.
- Pain continues, even after taking pain medicine.
- You develop a fever of more than 100.5° F (38.1° C).

SEEK IMMEDIATE MEDICAL CARE IF:

- The incision becomes red or swollen. Or, it bleeds.
- Your leg or foot becomes painful and swollen.
- Your leg becomes pale or blue. It feels cold. It tingles or is numb.
- You have trouble breathing.
- You have chest pain.
- You develop a fever of more than 102° F (38.9° C).

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