Hip Implants

Hip implants are medical devices intended to restore mobility and relieve pain usually associated with arthritis and other hip diseases or injuries. Every hip implant has a distinct set of benefits and risks. The key design features of each implant including size, material and dimensions make each system unique. In addition, the same hip implant system will have different outcomes in different patients. It is also important to recognize that hip implants may need to be replaced eventually. Factors that influence the longevity of the device include the patient’s age, sex, weight, diagnosis, activity level, conditions of the surgery, and the type of implant chosen.

In the United States, there are currently five types of total hip replacement devices available with different bearing surfaces. These are:

- Metal-on-Polyethylene: The ball is made of metal and the socket is made of plastic (polyethylene) or has a plastic lining.
- Ceramic-on-Polyethylene: The ball is made of ceramic and the socket is made of plastic (polyethylene) or has a plastic lining.
- Metal-on-Metal: The ball and socket are both made of metal.
- Ceramic-on-Ceramic: The ball is made of ceramic and the socket has a ceramic lining.
- Ceramic-on-Metal: The ball is made of ceramic and the socket has a metal lining.

An orthopaedic surgeon should determine which hip implant will offer the most benefit and least risk for each patient. When making a recommendation, orthopaedic surgeons should consider several factors such as the patient’s age, weight, height, activity level, and cause of hip pain. Hip surgery may involve total hip replacement or it may involve hip resurfacing.

During total hip replacement surgery, the damaged portions of the hip joint are removed. The ball (femoral head) is removed and replaced with a prosthetic ball made of metal or ceramic, and the socket (acetabulum) is removed and replaced with a prosthetic cup. The cup consists of one or two components made of metal, ceramic or plastic. A stem is also placed in the femur to support the femoral head. The femoral head attaches to the taper of the stem.

During hip resurfacing surgery, the femoral head is not removed. Instead the femoral head is trimmed and capped with a metal covering. Any damaged bone and cartilage within the socket are removed and replaced with a metal shell. In hip resurfacing surgery, both components are made of metal.

Hip surgery, like any medical procedure, carries risks. The risks of surgery include:

- A reaction to the anesthesia
• Heart attack
• Wound infection
• Excessive bleeding
• Blood clots

There may be adverse events after surgery, regardless of the type of hip system implanted including:
• Hip dislocation, when the ball of the thighbone (femur) slips out of its socket in the hip bone (pelvis)
• Bone fracture
• Joint infection
• Local nerve damage with numbness/weakness
• Device loosening or breakage
• Difference in leg lengths
• Bone loss (osteolysis)

Patients who have hip implants should be aware of potential symptoms that may occur after 3 or more months after surgery that may indicate that their device is not functioning properly. Symptoms may include:
• Pain in the groin, hip or leg
• Swelling at or near the hip joint
• A limp or change in walking ability
• Noise (popping, grinding, clicking or squeaking) from the hip joint

Depending on the severity of the adverse event(s), additional surgery may be necessary.

Many of the recommendations, warnings and contraindications outlined on this website are from the manufacturers' labeling.