

Update -Total Joint Replacement - by Linda Rasmussen, MD

There are over 400,000 total joint replacements done in the US every year. New advances seem to be emerging all the time.

For instance, in the case of hip replacements by using specialized instruments, we have been able to significantly decrease the size of the skin incision. Incisions used to be 12 inches and now they are generally only 3 to 4 inches. As always, it is important for the surgeon to see the patient's anatomy through the incision in order to achieve perfect placement of the replacement components. We have been using a small incision for over 10 years and still are able to expect very good outcomes.

In the hip, there are a number of options for component surfaces for the prosthesis' cup and head. Metal on plastic (polyethylene) is the most commonly used articulation. With the stronger cross-linked polyethylene, this articulation should last 15-20 years.

Metal on metal articulations are popular in younger patients. However there are a couple of cautions. One is that, some patients react to the metal particles that can result from normal wear. The metal can form masses in the groin, be painful and eventually the replacement components have to be replaced. Interestingly, the long-term effects of the small metal wear particles are yet to be revealed.

Another caution is; young women that could bear children are not candidates for the metal on metal appliances since the metal particles can pass into the unborn child.

A ceramic head on a plastic insert has very low wear rates and is more commonly used on young patients.

Ceramic on ceramic articulations have become less popular. Squeaking can sometimes occur. There is no way to measure the risk factors for this and be able to determine whose will squeak and whose will not. The ceramic is also brittle by comparison and can fracture, although this has been less of a problem as product advances continue.

Hip resurfacing is similar to hip replacement. It involves capping the femoral head with a metal prosthesis and placing a cup in the pelvic bone. This procedure saves the bone on the femur. The articulation is metal on metal.

The surgeon's learning curve for this technique is very high. It takes about 50 surgeries to do learn how to do it well. Additionally, the operation takes longer to perform than a hip replacement.

The neck of the femur can fracture. So, it is not recommended for women or older men. As patients grow older, their bones can thin and they can fracture. Make sure you have an experienced surgeon who has performed a good number of this procedure.

Knee Replacements

Incisions in knee replacement surgery are a bit different than what was discussed in hip surgery. The smaller (minimally invasive) knee incision has not been proven to have superior results. In fact, there is a high incidence of the metal replacement components not getting properly aligned due to the surgeon's inability to see enough of the anatomy. There is a point at which too small an incision can be bad for the long-

term success of the knee prosthesis. Therefore, we have refined the technique to make an incision that is not too aggressive, but will still provide the right visibility to insure the proper components' alignment.

In the knee, metal (cobalt chrome) on plastic is the primary material articulation we are using. Experiments with other articulations are still ongoing.

Partial knee replacement or Unicompartmental knee replacement involves replacing one side of the joint instead of both sides. This surgery actually takes longer than the replacement surgery. In reality, only a few people are candidates for this procedure. A good outcome does not last as long as a total knee replacement.

There is a problem with doing a total knee replacement after a unicompartmental knee replacement, as it becomes a more difficult surgery. It is advised that the patient make sure that their surgeon has the experience of doing a high volume of this procedure.

People with knee problems must also know that a deformity in a knee can not be corrected. This is a significant reason that replacement surgeries are so beneficial.

In the end, you want a hip or knee that is pain free, works well, doesn't dislocate or get infected and lasts a long time. The size of the incision or concerns about the latest technology, should not be your priority. Anticipating a good outcome and a positive life style change are great motivators in choosing replacement to eliminate pain and lack of mobility.