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SHOULDER REPLACEMENT

Arthritis of the shoulder is very common. It occurs when the cartilage covering of the humeral head (ball) and the glenoid (socket) wears away and the joint becomes painful and stiff. The cartilage surface (hyaline or joint cartilage) is a very special covering that cannot be reproduced at this time. When the cartilage wears away, the joint surfaces become rough and deformed and it is like rubbing sand paper against sandpaper. Shoulder replacement is the treatment of choice when pain is severe and there is loss of motion/function.

Although there are about 400,000 hip and knee replacements (each) done in the US each year, there are only about 50,000 shoulders replaced, although this number is rising fast. There are very few surgeons in the US that perform more than 5 per year (the average of US Orthopedic Surgeons) because it is a difficult and less common operation. The results over many decades are excellent and many studies have been published since the 1970's. Dr Bailie participates in and authors many studies and book chapters on shoulder replacement, and has contributed to the development of several types of shoulder implants. He has first-hand knowledge of the current state-of-the-art in shoulder arthritis treatment.

TSA (Total Shoulder) is the "gold standard" for surgical treatment of arthritis and has been done since the 1970's. If the joint is painful or has lost significant motion despite anti-inflammatory medicines and exercises, then surgery is indicated. In rare cases, a trial of joint arthroscopy and joint lubrication injections can be used. Newer injections also included regenerative medicine techniques such as PRP and stem cells. However, in severe arthritis this typically does not help and when it does, it is temporary. In addition, TSA outcomes are better if it performed early, before loss of shoulder & muscle function. This is because the muscles begin to weaken and deteriorate with severity of disease and some of the function cannot be recovered. There is also more permanent bone destruction in chronic arthritis and this can adversely affect the results of surgery. Early replacement preserves shoulder mobility and strength and leads to the best outcomes.

Various types of prostheses (artificial joints) are available and must be individualized in each case. I use a humeral (ball part) resurfacing implant in younger, active people, with a preserved glenoid socket (younger than 60 yrs). Dr. Bailie has one of the largest experiences in the world with this procedure in this patient population.

TSA is done for osteoarthritis or rheumatoid arthritis, avascular necrosis (insufficient or poor blood supply to bone with collapse of cartilage), post-traumatic, erosive, other inflammatory or post-arthroscopic chondrolysis (the breaking down and absorption of cartilage). Each has its own special and unique characteristics and the result of shoulder replacement varies greatly among these different problems.

We will discuss your circumstances and issues that pertain to your type of arthritis. In all of these instances, the problem is the cartilage loss resulting in pain, loss of motion, and function. Replacing or resurfacing diseased parts will help most people return to a less painful, and often pain-free, active lifestyle. However, you must remember that this surgery creates an ARTIFICAL JOINT is very complicated. It is not a natural shoulder, although it can feel normal at the end of treatment. In some cases, we cannot replace the socket because of the anatomy or because the disease has gone on for too long. In these situations, a partial replacement (Hemi-arthroplasty) is done by just replacing or resurfacing the humeral ball. Pain relief is about 80% that of TSA. Often the decision for what procedure to perform has to be made in surgery.

Complete replacement of the ball & socket is preferred for more advanced cases, with more predictable pain relief and function. For those over 60 years old, I currently recommend a full replacement unless there are unusual circumstances. For those under 60, I prefer a resurfacing type of replacement of the humerus only (Hemiarthroplasty), which is less invasive. In addition, you may be offered a new stemless device that Dr Bailie co-designed with an international team of engineers and surgeons. This device (BIOMET Nano) is currently under FDA investigation and Dr. Bailie is the only surgeon west of the Mississippi allowed to use it.

The most important factors in predicting success are:

1. Pre-op range of motion: worse motion can make it more difficult to regain motion after surgery
2. Functional disability: The more disabled pre-op, the better the patient satisfaction with surgery
3. Bone destruction: the more deformed the anatomy, the more difficult the surgery and the less likely the anatomy can be restored completely, resulting in less satisfactory of an outcome (especially true for the glenoid socket)
4. Patient expectations: we have a goal of normal motion, no pain and return to function and see improvements for 12-18 months after surgery. Motivated and dedicated patients who continue their rehab show the best

results over time. However, the procedure should only be done to eliminate PAIN- everything else is considered a "bonus".

5. Rehab: we have a very specific rehab program directed by one of the biggest names in shoulder therapy in the world and we feel this is critical to our success over the years

RISKS of replacement surgery includes: infection (acute or late), nerve/blood vessel injury (temporary or permanent), hematoma, stiffness, instability (dislocating implant) fracture/breakage of the implants, bone fracture during implantation, loosening of the implants over time, gradual destruction of bone from a loose implant, failure of soft tissue healing, size mismatch in unusual anatomy, need for further surgery to correct the above complications, anesthesia risks and death.

No blood transfusions are typically needed and only an overnight surgical center stay is required at most. Many patients are able to leave the same day of surgery. Exercises start on the first day and formal rehab begins by the 2nd week. All patients will be required to see Todd Ellenbecker, PT or his staff at Physiotherapy Associates in Scottsdale BEFORE the surgery for rehab planning.

Finally, it is suggested that you obtain antibiotics for dental, gastro-intestinal or genito-urinary procedures. We will provide you with a detailed explanation of this prior to surgery and/or on the first post-op visit. ALWAYS notify your other health-care providers that you have has a joint replacement. **Please be sure any needed dental work is done at least 1 week prior to the replacement surgery. This will lessen the chance of infection. WE DO NOT PRESCRIBE THE ANTIBIOTICS FOR PROCEDURES PERFORMED BY OTHER MEDICAL PROVIDERS.**

I encourage you to research shoulder replacement online or in the bookstore to better understand the options, outcomes and potential complications. I would not suggest this option to you if I did not feel it was in your best interest. Although I perform a large number of replacements, my team and I take each case seriously and do not treat this as "routine" surgery". I have a dedicated team for this demanding surgery. Everybody's participation, especially yours, is critical to the success of surgery.

Please ask any questions along the way as we want to make sure you understand the process, the problems, the treatments and are ready to go physically and emotionally when the time comes for the procedure.

Feel free to email me with any questions via my email link on my website.