

Reverse Total Shoulder



By Dr. Christopher R. Balint

The shoulder joint is a very complicated mechanism. In fact, the shoulder comprises of three bones and four separate joints. Additionally, there are 15 muscles that comprise the shoulder girdle.

Any one or more of these muscles, bones, or joints can be involved in a patient's shoulder pain. In addition, there is a very complicated network of nerves called the brachial plexus that can be involved with upper extremity symptoms. In order to enjoy complete relief from pain, all of these structures must be thoroughly evaluated and treated.

Arthritis of the shoulder can have several causes. Occasionally, there is a history of shoulder injury. A shoulder injury can often tear the rotator cuff of the shoulder (a group of muscles and tendons inside the shoulder joint). Long-standing rotator cuff tear is a common cause for shoulder arthritis. A shoulder injury can also tear the shoulder ligaments (called the shoulder capsule) and can cause "instability of the shoulder." Long-standing instability of the shoulder can also lead to arthritis. Osteoarthritis and rheumatoid arthritis can occur without a traumatic event.

Often times, patients with arthritis of the shoulder can be treated without surgery. We have an exciting array of medications that can decrease the inflammation associated with shoulder arthritis. These newer

medications have fewer side effects and many patients really are having wonderful results with them. We at South Bend Orthopaedics also offer a protocol utilizing diagnostic and therapeutic shoulder arthrocentesis, or joint injection.

For patients requiring shoulder replacement surgery, we are pleased to offer our patients the latest technology in total shoulder arthroplasty. The area of shoulder replacement surgery is advancing quickly and South Bend Orthopaedics is now offering a solution to a debilitating problem with shoulder arthritis — the "Reverse" total shoulder replacement (*Fig. 1*). While the name brings up images of odd anatomical changes, it is really a way to utilize other muscles outside the rotator cuff group to do the job of the rotator cuff and allow surgeons to effectively treat arthritic shoulders.



Figure 1

Implanted reverse total shoulder.

Shoulder arthritis is often accompanied by torn or degenerated muscle and tendons of the so-called “rotator cuff”. Because an intact rotator cuff is critical to the long-term success of total joint replacement in the shoulder, people with this condition often had limited solutions to their pain and discomfort.

This surgery was developed in Europe in the 1980s. It was approved by the Food and Drug Administration (FDA) for use in the United States in 2004. The first Reverse Total Shoulder in the entire Michiana area was put in by South Bend Orthopaedics in May, 2005. Reverse total shoulder replacement is used for people who have:

- Completely torn rotator cuffs and
- The effects of severe arthritis (cuff tear arthropathy)
Fig.2
- Had a previous shoulder replacement that failed
- Badly fractured shoulder



Figure 2 Arthritic shoulder. No rotator cuff.

For these individuals, a conventional total shoulder replacement can still leave them with pain. They may also be unable to lift their arm up past a 90-degree angle. Not being able to lift one’s arm away from the side can be severely debilitating. In reverse total shoulder replacement, the socket and metal ball are switched.

The Reverse Total Shoulder Replacement is a key development in the field of shoulder surgery. It makes better use of the large deltoid muscle covering the shoulder joint. The deltoid is responsible for shoulder motion to the side, front and back. The Reverse Total Shoulder Replacement uses a reverse ball and socket, which is specifically designed for use in patients

with non-functional rotator cuffs, but who have good functioning deltoid muscles. In a normal total shoulder replacement, there is a plastic cup that fits into the shoulder joint itself and a metal ball that fits in the top of the humerus (arm bone). In a reverse total shoulder, the liner and ball change positions, which allows the deltoid to function more like the rotator cuff and restore motion to the shoulder.

How Do I Find Out More About This Procedure?

Make an appointment with one of our specialty physicians here at South Bend Orthopaedics (SBO) to determine if you are a candidate for this procedure.

We at South Bend Orthopaedics are a group of physicians and dedicated medical staff focused to provide you and your family with the best orthopaedic care in a compassionate and comfortable environment. Your individual physician will speak to you regarding your injury, the risks and benefits of both a conservative (non-operative) as well as a potential operative course which best serves your individual situation.



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