



Dr. Richard Bartholomew

New Option for Shoulder Replacement

Every year, thousands of shoulder replacements are performed in the United States to help alleviate pain and restore arm and muscle function. Some patients may have shoulder replacement surgery because they are suffering from severe arthritis in combination with a tear in their rotator cuff, the group of four tendons that attach the four shoulder muscles to the upper arm.

For patients who have arthritis with an intact rotator cuff or a small reparable rotator cuff tear, the standard shoulder replacement surgery works well. But for patients with severe shoulder arthritis, who have rotator cuffs torn beyond repair, the options are limited and standard surgery isn't always beneficial. A major portion of the rotator cuff is needed to function properly with a standard replacement. With a massive rotator cuff tear, this is not possible - there is nearly complete loss of the function of the rotator cuff.

However, these patients now have a new option for shoulder replacement surgery. This procedure, called **reverse total shoulder replacement** makes better use of the large triangular deltoid muscle covering the shoulder joint (see fig 5b). The deltoid is responsible for shoulder motions to the front, side and back. The procedure uses specific implants, which were specifically designed for use in patients with non-functional rotator cuffs and arthritis, but who still have a good, functioning deltoid muscle. This has been relatively recently approved by the FDA.

Reverse total shoulder replacement is a unique procedure. It completely changes the structure of the joint. In reverse total shoulder replacement, the socket and metal ball are switched. The implant places the metal ball onto the shoulder blade and the socket onto the top of the upper arm bone. By shifting the center of rotation, the strength needed to move the arm is shifted away from the damaged rotator cuff muscles and transferred to the healthier deltoid muscle.

In this way, the reverse shoulder can substitute for the lost function of the rotator cuff. In this procedure the general shape of the shoulder remains the same despite the fact that the ball and socket are reversed.

After the surgery

Following surgery, patients immediately start physical therapy by doing simple stretches to get used to their new shoulder. This also allows the tissue in the shoulder to heal and the pain to decrease. Patients begin restoring passive motion during the first six weeks after surgery. After that, they begin strengthening the muscles.

We are seeing great results with this procedure, with range of motion and pain relief.

Fig 5A showing severe rotator cuff arthropathy



Fig 5B showing a reverse total shoulder arthroplasty

