

# Understanding Shoulder Replacement Options



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**I**f you have shoulder arthritis, you know how painful it is and how much the loss of motion in your shoulder can interfere with your life. If you've tried medications and exercises for your shoulder and haven't had much luck, you're probably thinking about shoulder replacement. Although joint replacement isn't the only surgical procedure available, it is the most common one for shoulder arthritis. Shoulder replacement can reduce your pain, improve your strength and increase the range of motion in your shoulder.

Three joints form your shoulder. Working together, they allow you to move your arm. The largest joint - and the one most often affected by arthritis - is the glenohumeral joint. This joint is formed where your upper arm bone (humerus) meets the glenoid cavity, which is part of your shoulder blade

(scapula). Most of your shoulder movement occurs through this ball and socket joint. When the smooth surfaces of the ball and socket become rough, they rub against each other rather than glide.

During a total shoulder replacement, your surgeon removes the arthritic (damaged) parts of the bones that make up your shoulder joint and replaces them with metal and plastic parts (prostheses). The artificial joint is made of metal, usually a titanium or a cobalt-chrome alloy. The stem is placed inside the humerus bone. The glenoid component is made of a special plastic. The glenoid is cemented into place (figure 1). Your surgeon might also clean up the area around your shoulder joint by removing any bone spurs (osteophytes) and the tissue that surrounds your joint (synovium), which can become inflamed and painful.

Although modern shoulder replacement surgery has been in common use for more than 30 years, recent advances in technology and technique have made the procedure safer and more predictable.

Total shoulder replacement isn't necessarily your only option. In certain instances, your doctor might recommend another type of surgery for your shoulder arthritis, including:

› **Hemiarthroplasty.** Hemiarthroplasty is similar to total joint replacement. Rather than replace both the ball and socket with prostheses, in hemiarthroplasty your surgeon replaces only the ball at the top of the upper arm bone. Your surgeon might also smooth out the glenoid cavity of your shoulder blade, though a prosthesis isn't inserted. You might consider hemiarthroplasty if you're younger and plan to use



Figure 1

your shoulder more vigorously than you would be able to with a total shoulder replacement.

› **Reverse shoulder replacement.**

A reverse shoulder replacement is used for patients with degenerative arthritis combined with a dysfunctional rotator cuff. For a reverse shoulder replacement procedure, much of the surgery is the same as a total shoulder replacement. The components of the reverse shoulder replacement are just shaped differently. The socket component is shaped like a ball (called the glenosphere) and is anchored to the scapula with screws. The arm component is a socket that attaches to the upper end of the humerus (figure 2). The advantage of this design is that the prosthesis does not require an intact rotator cuff to function appropriately.



Figure 2

› **Shoulder Resurfacing:** For young active patients with shoulder arthritis, shoulder resurfacing can be a great option. In this case, no saw cuts are made in the bone. Instead, using special reamers, the ball portion of the joint is shaped into a spherical surface and the metal prosthesis is secured on top of it using a screw (figure 3). This surgery is performed through a smaller less invasive incision, results in far less pain than



Figure 3

other replacement options, and allows faster recovery with fewer restrictions.

› **Biologic Resurfacing:** In patients under the age of 35 with shoulder arthritis, instead of using metallic prostheses, the shoulder can be replaced using fresh-frozen living donor tissue, which can biologically incorporate into the native bone and allow the patient almost unrestricted activities.