SHOULDER

Understanding anatomy, pain, treatment, and replacement surgery

Most people don't think about the movement of their joints until their joints become diseased and painful.

Normally, your shoulder joint moves easily, but when you have arthritis or a shoulder injury, the pain can severely limit your ability to move and enjoy life.

This brochure will help you understand shoulder anatomy, treatment options for your shoulder pain and total shoulder replacement surgery. Understanding your options will help you choose the best course of treatment to relieve your pain.

HOW THE SHOULDER WORKS

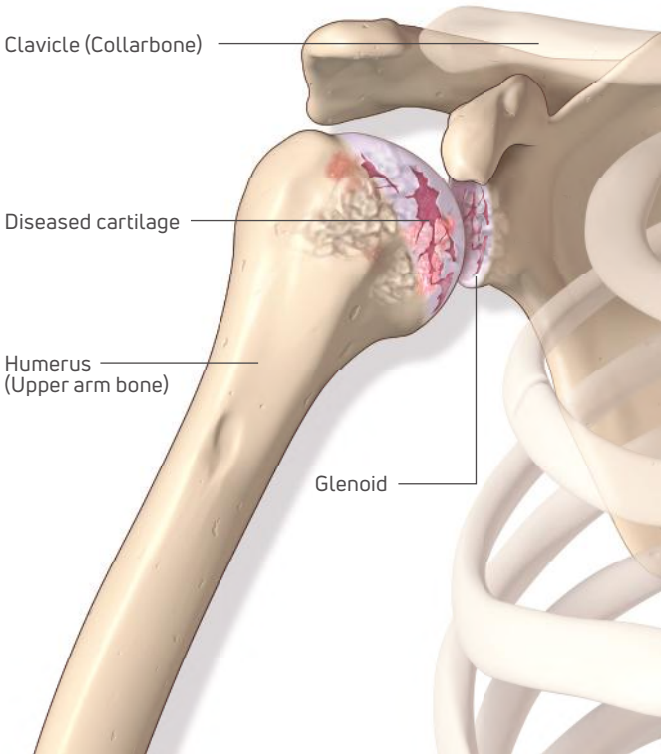
The shoulder is a ball-and-socket joint with three main bones: the upper arm bone (humerus), shoulder blade (scapula) and collarbone (clavicle). In a healthy shoulder, the joint is supported by the muscles that surround the shoulder. Shoulder movement is created and controlled by delicate interactions of more than 30 muscles, tendons and ligaments. The rotator cuff is a group of muscles and tendons that enable the arm to be lifted, reach overhead and do activities such as throwing and swimming.

SEVERE ROTATOR CUFF DAMAGE

In patients with severe rotator cuff damage, the joint can become unstable, severely restricting the patient's range of motion. Over time, the out-of-balance joint can wear down the lubricating cartilage between bones. Bone starts to rub against bone, causing the pain we know as osteoarthritis.

COMMON CAUSES OF SHOULDER PAIN

Common causes of shoulder pain include osteoarthritis, rheumatoid arthritis, and post-traumatic arthritis. As the cartilage lining wears away, the protective lining between the bones is lost. When this happens, painful bone-on-bone arthritis develops. Severe shoulder arthritis is quite painful and can restrict motion in your shoulder. While this may be tolerated with some medications and lifestyle adjustments, there may come a time when surgical treatment is necessary.

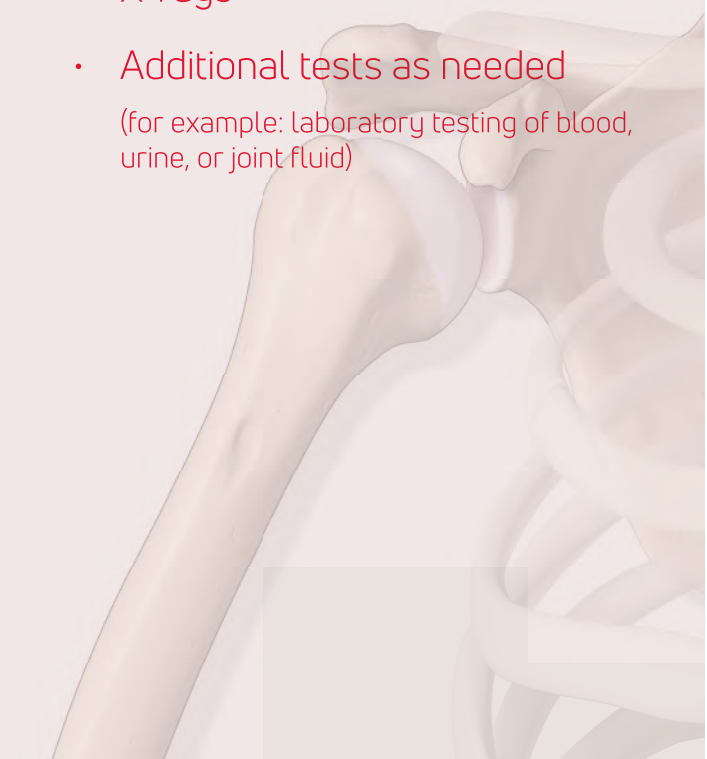


ORTHOPAEDIC EVALUATION

To properly diagnose your condition, your orthopaedic surgeon will conduct a thorough evaluation, which may consist of:

- Review of your medical history
- Physical examination
- X-rays
- Additional tests as needed

  (for example: laboratory testing of blood, urine, or joint fluid)



TREATMENT OPTIONS

Depending on your diagnosis and the severity of your condition, your treatment options may include medications, which may include cortisone injections for temporary pain relief, and/or physical therapy. When shoulder pain and mobility affect your lifestyle, and conservative treatments are not effective, surgery may be needed.

INDICATIONS FOR SURGERY

Shoulder replacement can be extremely helpful to individuals suffering with severe arthritis of the shoulder joint, rotator cuff damage, or a combination of both. Arthritis and rotator cuff damage of the shoulder can be evaluated by X-ray, CT scan or MRI to reveal loss of joint space, soft tissue (rotator cuff) damage and bony changes. In addition, patients with complex shoulder or upper arm fractures resulting from trauma or osteonecrosis (a condition in which the bone can crumble due to lack of blood supply) may also require a shoulder replacement.

THE PROCEDURE

There are 3 types of shoulder replacement, and the type of surgery performed depends on your specific diagnosis. In surgery, the surgeon will remove the worn head of the humerus (upper arm bone) and replace it with a metal ball mounted on a metal component. The metal stem is then placed firmly down into the center of your humerus. A plastic component will be attached to the glenoid. The metal ball and plastic component are designed to glide together to replicate the shoulder joint. A reverse shoulder replacement is different in that the metal ball will be placed on the glenoid component and a concave cup will be assembled to the humeral stem. In either case, your surgeon will conduct several tests during the surgery to help ensure you regain motion in your shoulder.

PARTIAL SHOULDER REPLACEMENT

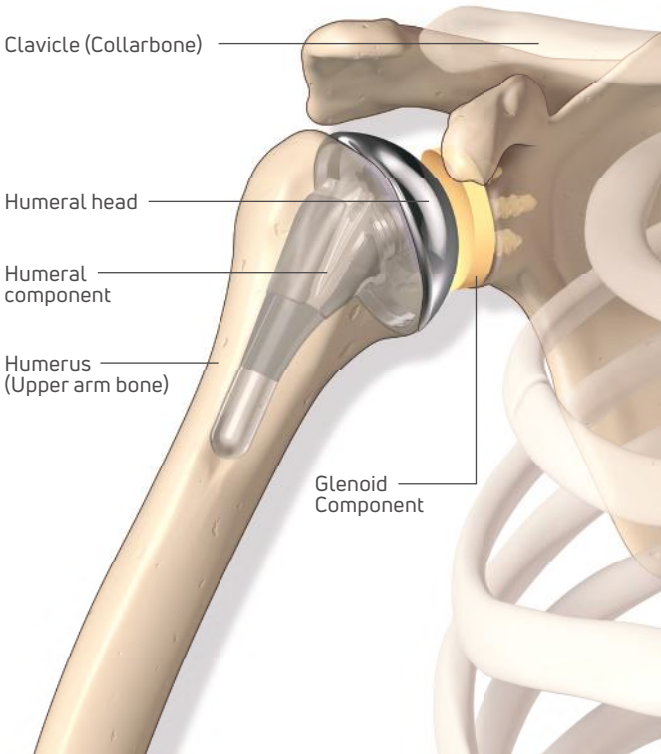
A partial shoulder replacement, also known as hemiarthroplasty, is for patients who do not have severe degeneration of the socket (glenoid). This less invasive procedure involves replacement of the ball or head only with a metal ball and stem prosthesis. The socket portion is left intact.

TOTAL SHOULDER REPLACEMENT

A total shoulder replacement replaces the severely arthritic joint. It involves replacing the head of the upper arm bone (humerus) with a metal ball and stem prosthesis and the socket (glenoid) with a plastic prosthesis. It is recommended for patients who have severe arthritis that is causing pain, stiffness, and limited motion.

ALTIVATE® ANATOMIC SHOULDER PROSTHESIS

The AltiVate® Anatomic Shoulder is designed for patients with severe shoulder arthritis. It's designed to alleviate pain and limited mobility associated with osteoarthritis by replacing the worn-out surfaces of the shoulder with anatomic bone conserving implants.

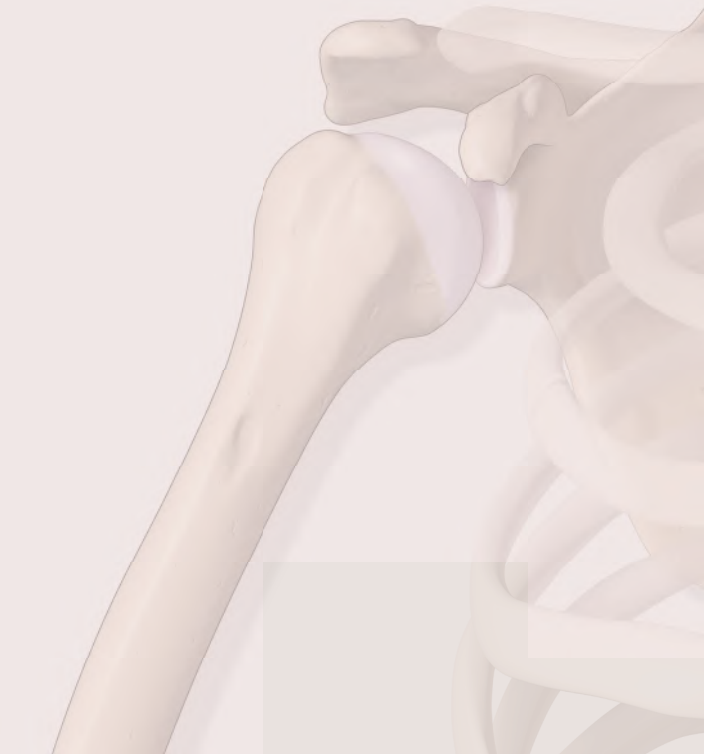


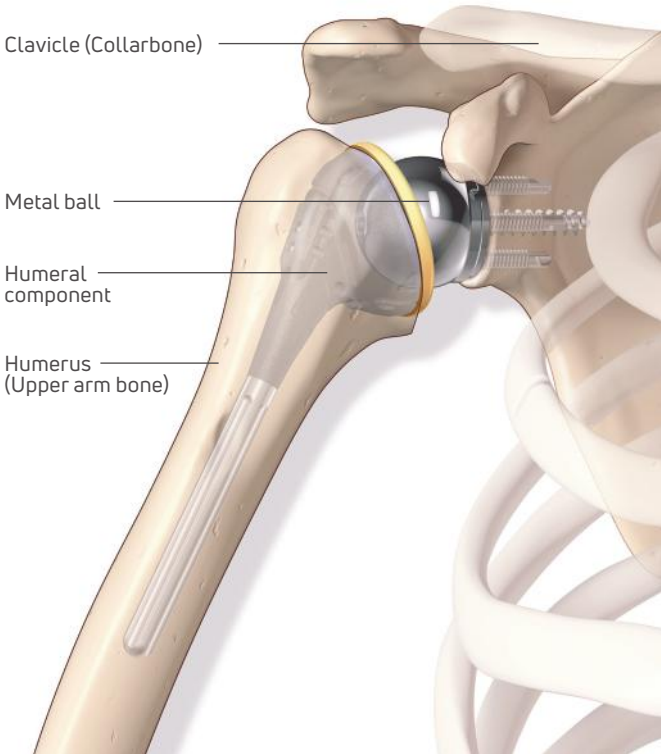
REVERSE SHOULDER REPLACEMENT

Reverse shoulder replacement is reserved for patients who have arthritis and a rotator cuff damage that is too severe to be repaired. In this procedure, the location of the prosthetic ball and socket components are switched to make use of healthy deltoid muscle rather than the damaged rotator cuff muscles to lift the arm. The metal and polyethylene implants mimic the anatomy of the natural shoulder but reverses it to stabilize the joint.

ALTIVATE® REVERSE SHOULDER PROSTHESIS

For those patients with severe deterioration of their shoulder joint, anatomic shoulder implants cannot necessarily address both arthritis and rotator cuff damage. The AltiVate® Reverse® Shoulder is designed to compensate for the damaged rotator cuff and help reduce the painful symptoms of arthritis. The design is based on the clinically successful Reverse Shoulder Prosthesis (RSP®), whose clinical results show improved patient outcomes for at least 10 years after surgery.[1]





IMPLANT LONGEVITY

Vitamin E is a naturally-occurring antioxidant that has been added to some plastic (polyethylene) implants. Blended Vitamin E polyethylene helps provide smooth movement throughout range of motion, maintains the strength of the plastic implant and is shown to reduce long-term wear by up to 92%, which may extend the life of your implant.[2]

RECOVERY

Exercise is an important part of the recovery process. Your doctor or physical therapist will provide you with specific exercises to help restore movement and strengthen your shoulder. In general, your doctor will encourage you to use your "new" joint shortly after your operation, sometimes even the same day. You may work with a physical therapist to resume daily activities and strengthen muscles.

SUMMARY

Your orthopedic specialist will recommend the appropriate treatment and prosthesis for your particular condition. Just know that you don't have to live with severe shoulder pain. If conservative treatments have not been effective for you, talk to your doctor about shoulder replacement.

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MKT0030201-002 REV A

1. Cuff, Derek J., Derek R. Pupello, Brandon G. Santoni, Rachel E. Clark, and Mark A. Frankle. "Reverse shoulder arthroplasty for the treatment of rotator cuff deficiency: a concise follow-up, at a minimum of 10 years, of previous reports." JBJS 99, no. 22 (2017): 1895-1899.

2. Data on file at DJO Surgical®

Individual results may vary. DJO Surgical® is a manufacturer of orthopedic implants and does not practice medicine. Only an orthopedic surgeon can determine what treatment is appropriate. Individual results of total joint replacement may vary. The life of any implant will depend on the patient's weight, age, activity level, and other factors. For more information on risks, warnings, and possible adverse effects please speak with your doctor directly; you should always ask your doctor if you have any questions regarding your particular condition or treatment options.