

TOTAL SHOULDER REPLACEMENT



DePuy Synthes

JOINT RECONSTRUCTION

People inspired™



Shoulder pain

When shoulder pain starts interfering with daily activities, it may be time to consider shoulder surgery. Today there are alternatives created to provide pain relief and freedom of movement. Shoulder replacement is the third most common joint replacement.¹

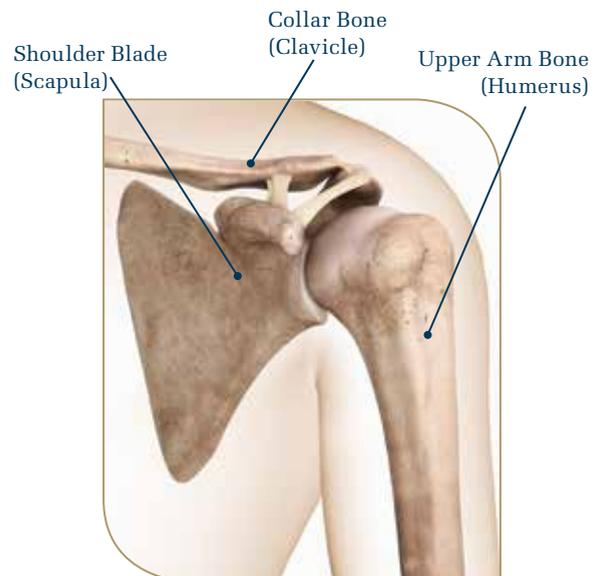
Shoulder joint

Three bones form the shoulder joint.

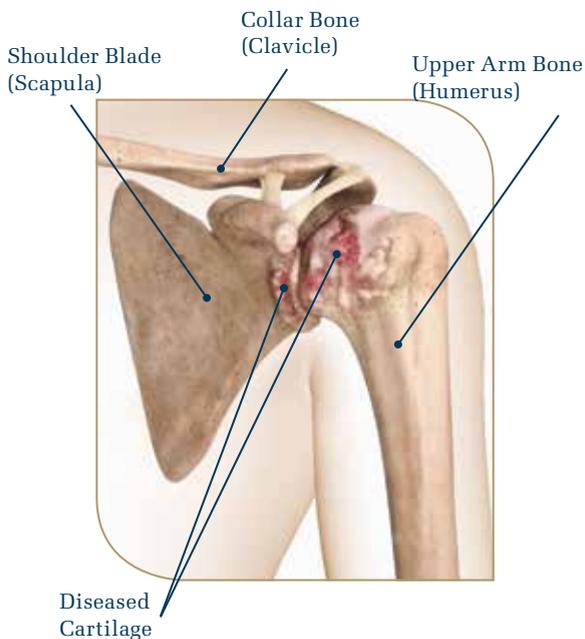
- Collar bone (clavicle)
- Shoulder blade (scapula)
- Upper arm bone (humerus)

The ball and socket of the shoulder joint move smoothly if the cartilage stays healthy and the surrounding muscles, tendons and ligaments remain intact.

Healthy Shoulder



Arthritic Shoulder



The most frequent source of shoulder pain is arthritis, which is defined as the loss or damage of the joint cartilage. People with arthritis typically experience pain, limited motion and stiffness. Your surgeon will determine what procedure and shoulder implant to use based on the extent of damage to the shoulder bones and surrounding tissue. Total shoulder replacement replaces both the ball and socket of the shoulder joint.

Shoulder replacement

When medications, physical therapy and other methods of treatment no longer relieve pain, it may be time to consider shoulder replacement which is designed to help provide pain relief and freedom of movement. More than 100,000 shoulder replacement procedures are performed annually in the United States with many people experiencing pain relief and improved function.² An increasing number of patients are returning to more active lifestyles thanks to advancements in the materials and procedures used in shoulder replacement. Today, shoulder replacement is the third most common joint replacement.¹ In a study of patients with shoulder pain, more than 95% reported having less pain after shoulder replacement.³

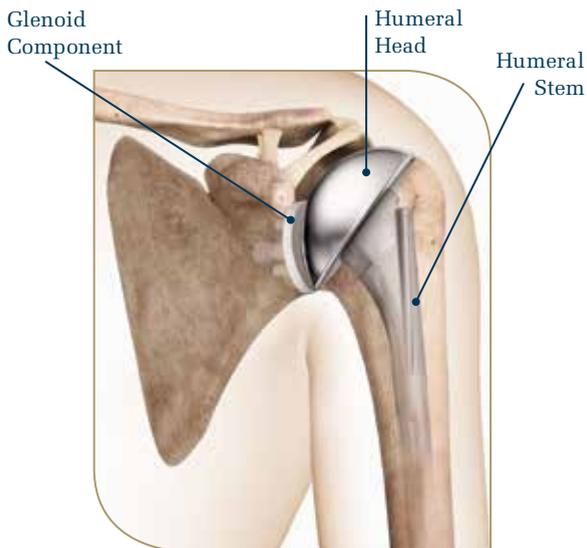
You may benefit from shoulder replacement if:

- Painful movement limits not only work and recreation, but impacts daily activities of normal living.
- Sleep is disturbed due to pain in your shoulder or arm.
- Pain relief is unsuccessful using traditional approaches such as medication, injections or physical therapy.
- The shoulder is stiff and arm movement is limited.
- There may be a grinding or catching sensation as the bone surfaces move against one another.
- X-ray or MRI shows arthritis or other problems.

In total shoulder replacement surgery, the ball of the upper arm bone (humerus) and socket of the shoulder blade (scapula) are replaced with specially designed components.

The humeral implant consists of a metal ball that replaces the head of the humerus, and a stem that is secured into the upper arm bone (humerus).

Shoulder Replacement



The humeral stem is made of titanium for maximum strength. The head is made of cobalt chrome to provide a smooth surface for movement with the shoulder socket (glenoid) component, which is made of medical-grade polyethylene.

The metal ball and stem are selected by your surgeon from multiple sizes to fit the contour and shape of your upper arm bone (humerus). This two-piece construction is known as a modular implant. This modularity allows your surgeon to closely replicate your natural shoulder.

If your surgeon uses only the metal upper arm bone (humeral) components (humeral head and stem), the procedure is called a partial shoulder replacement. If your surgeon uses both the upper arm bone (humeral) components and the shoulder socket (glenoid) implant, the procedure is called a total shoulder replacement. Your surgeon will decide which procedure to use based on the extent of damage to your shoulder.



DePuy Synthes Joint Reconstruction shoulder implants

Every day innovative orthopaedic solutions from *DePuy Synthes Joint Reconstruction* help improve lives. What began more than a century ago as the first commercial orthopaedic company in the United States is today a global leader in orthopaedic devices and supplies, including hip, knee, extremity, trauma, cement and operating room products. *DePuy Synthes Joint Reconstruction's* shoulder replacements are designed to closely reproduce the smooth, complex movement of the natural shoulder.

That's why each shoulder implant from *DePuy Synthes Joint Reconstruction* is based on detailed studies of the shoulder, its structure and function to help you keep going.

Shoulder replacements from *DePuy Synthes Joint Reconstruction* incorporate technologically advanced materials designed to resist the type of wear that typically occurs in shoulder joints. For example, Premieron® cross-linked polyethylene (medical-grade plastic), used to replace the shoulder socket (glenoid) and replicate the smooth cartilage surface reduces wear by 85% over traditional polyethylene.⁴ Polyethylene wear may, over time, contribute to poor implant performance. Improved materials, such as Premieron, help reduce wear.



DePuy Synthes Joint Reconstruction GLOBAL® Shoulder

Options for you

Your shoulder joint is as unique as you are. The variation from person to person is due to differences in size, shape and angle of the bones, as well as other natural variations. With the *DePuy Synthes Joint Reconstruction GLOBAL* system, your surgeon can select the right shoulder implant to help replicate the angles of your natural alignment, which helps restore the smooth, natural movement of the shoulder.

DePuy Synthes Joint Reconstruction Global Shoulder System



Designed for long-term stability

When you move your shoulder, the head of the arm bone rotates within and also travels across your shoulder socket, unlike the simpler back and forth motion of your hip or knee. Earlier shoulder replacement implants did not address this kind of complex multi-

directional movement. The *DePuy Synthes Joint Reconstruction GLOBAL* System is designed to recreate the subtle intricacies that are a part of your shoulder's natural motion.

Important safety information

As with any medical treatment, individual results may vary. The performance of shoulder replacements depends on age, weight, activity level and other factors. There are potential risks, and recovery takes time. People with conditions limiting rehabilitation should not have this surgery. Only an orthopaedic surgeon can tell if shoulder replacement is right for you.

Special instructions

Any infection must be promptly treated with proper antibiotics because infection can spread from one area of the body to another through the bloodstream. Every effort must be made to prevent infection in your implant. Before undergoing any treatment, you should always tell all your doctors (including dentists) that you have a shoulder replacement.

If you are to have dental work performed, please call your surgeon prior to having this work done. Your surgeon will most likely prescribe an antibiotic for you. Antibiotics must be used before and after any medical or dental procedure - a precaution that must be taken for the rest of your life.

This brochure is intended to give you some helpful information about shoulder replacement and guide you through some of the reasons you may want to consider surgery. You should talk to your surgeon if you have specific questions.

References

- 1 Johns Hopkins Gazette. <http://www.hopkinsmedicine.org/Press_releases/2007/03_26_07.html>
- 2 Millennium Research Group, Inc. 2012
- 3 McFarland EG. "Shrug off shoulder surgery myth, Johns Hopkins study suggests." Available at: www.jhintl.net/news/default.aspx?id=3086. Accessed on Feb. 27, 2009.
- 4 Wirth MA, Klotz C, Deffenbaugh DL, *et al.* "Cross-Linked Glenoid Prosthesis: A Wear comparison to conventional glenoid prosthesis with wear particulate analysis." *Journal of Shoulder and Elbow Surgery*. 2009;18(1)130-137

To learn more about shoulder replacement surgery, visit www.shoulderpainsolutions.com.



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