

Understanding  
shoulder pain  
and shoulder  
replacement  
surgery.



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## Renew your passion for living.

If shoulder pain is keeping you from the things you love, you and your doctor may decide it is time for shoulder replacement surgery. While there are many important factors to consider, keep in mind that surgical treatments are designed to reduce pain and restore function.

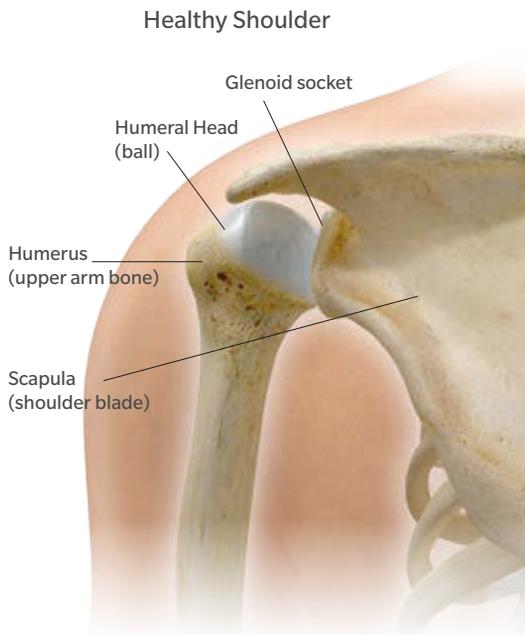
This brochure is intended to provide an overview of shoulder pain and treatment options, and should be reviewed with your orthopaedic specialist. It does not include all of the information needed to determine eligibility for shoulder replacement or for the proper use and care of a shoulder implant. Please consult your orthopaedic specialist for more information.

**For more information or to find a doctor near you, visit [zimmerbiomet.com](http://zimmerbiomet.com)**

The information herein is of a general nature and does not represent or constitute medical advice or recommendations and is for general education purposes only. This information is not meant to replace the specific verbal and written recommendations and instructions provided by your surgeon for your specific situation. Patient treatment plans and outcomes will vary.

## Understanding how your shoulder works

Your shoulder is a ball-and-socket joint made up mainly of two bones. The ball portion of the joint is part of the upper arm bone (humerus), and the socket portion is part of the shoulder blade. The ball fits into the socket, allowing the shoulder to move. The surfaces of the ball and socket bones are very smooth and covered with a tough, protective tissue called cartilage. The cartilage prevents direct contact between these bones and allows them to move smoothly over each other, without friction or wear on the bone surfaces.



## Why does my shoulder hurt?

### Proximal Humeral Fracture

A proximal humeral fracture is the medical name for a broken shoulder. Specifically, it refers to a fracture of the upper arm bone at the shoulder joint. The injury is especially common among older people who suffer from osteoporosis, which causes the bone to become more fragile over time—making it vulnerable to fractures caused by falls or direct blows, like a car accident.



## Rotator Cuff Arthroplasty

The rotator cuff is a group of tendons and muscles that hold the shoulder together, help stabilize it and give it strength. Rotator cuff arthroplasty is a combination of two types of damage—not only has the cartilage been damaged or worn away, the rotator cuff tendon that connects the muscle to the bone has also been severely worn or torn.



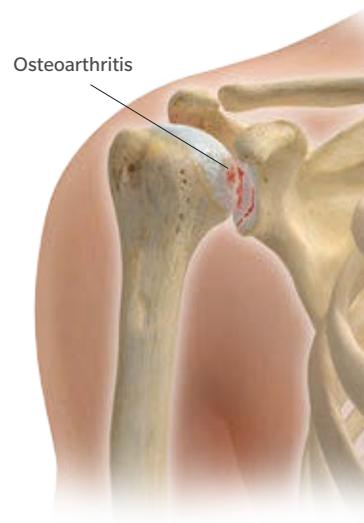
Depending on the extent and cause of the shoulder damage, your orthopaedic surgeon can recommend a variety of treatments, including oral medications or injections for pain and inflammation, physical therapy, and various types of surgery. But if those treatments have failed, or you aren't a candidate for them, your doctor can help you determine if it's time to consider shoulder replacement surgery.

## Osteoarthritis

In a normal, healthy shoulder joint, the surfaces of the ball and socket bones are smooth and covered with a protective tissue called cartilage. The cartilage prevents direct contact between these bones and allows them to move smoothly over each other, without friction or wear on the bone surfaces.

Osteoarthritis is when the cartilage cushioning the joint is injured or beginning to wear away. Without healthy cartilage, the bones grind against each other causing pain when moving the shoulder/arm. Eventually the friction from bone-on-bone contact causes the bone surfaces to deteriorate.

### Diseased Shoulder



## Diagnosis

Early diagnosis of arthritis\* and tailored treatment are crucial in slowing or preventing damage to your joints. Only a physician can determine if you have arthritis, based on:

- the overall pattern of symptoms
- medical history
- physical exam
- X-rays and other imaging techniques
- lab tests

**The good news about arthritis in the shoulder is that it can be treated. Here are some signs that it might be time to talk to your doctor:**

- Pain persists or recurs over time
- Limited range of motion making it difficult to lift your arm
- Pain with movement of your shoulder
- Pain prevents you from sleeping

\*Arthritis is a disease that typically worsens over time, so it is common for treatment to involve more than one approach and to change over time. For some people, lifestyle changes, medications and medical equipment help alleviate the pain. For others, shoulder replacement surgery may be the only long-term solution. Together, you and your doctor can determine the best treatment options for you.



## What Is shoulder replacement?

In shoulder replacement surgery, the parts of the bones that rub together or have been broken are replaced with metal and plastic parts called implants. The procedure is intended to give you restored motion and reduce painful bone-on-bone contact.

### Total Shoulder Replacement



## What risks are involved?

It is important to understand the risks involved. There are potential complications both during and after surgery. Generally, these include infection, blood clots, pneumonia, implant loosening, nerve damage, bone fracture and implant breakage; any of which can require additional surgery. While joint replacement is generally successful in lowering pain levels and increasing mobility, some patients will continue to experience pain and your doctor may permanently restrict certain activities that could damage and wear your new shoulder parts. Ask your doctor to explain other surgery risks.

## What is it like to have shoulder replacement surgery?

### Before surgery

If you and your surgeon decide that shoulder replacement is right for you, a surgery date will be scheduled. Preparation for total shoulder arthroplasty varies, but it is common to have your primary care physician perform a physical examination.

Before surgery, your doctor may suggest lifestyle changes such as smoking cessation or a healthy diet to promote weight loss. These lifestyle changes may improve surgical outcomes.



## During surgery

On the day of surgery, a small tube (intravenous line) will be inserted into your arm. This tube will be used to administer fluids, antibiotics, and other medication during your surgery. Then you will be taken to the operating room and given anesthesia. After the anesthesia takes effect, your shoulder will be scrubbed and sterilized with a special solution.

The surgery will begin with an incision over your shoulder that will expose the joint. The surgeon will use special precision guides and instruments to remove the damaged parts of the bones and shape the remaining bones to fit the implants.

The implants are then secured to the bones. It might also be necessary to adjust the ligaments that surround the joint, in order to achieve the best possible shoulder function. When the surgeon is satisfied with the fit and function of the implants, the incision will be closed.

A sterile bandage and ice pack will be applied to your shoulder and you will be taken to the recovery room, where you will be closely monitored. Total shoulder replacement typically takes between two and three hours.

## Recovery

As your anesthesia wears off, a nurse will be with you and may encourage you to cough or breathe deeply to help clear your lungs. You also will be given pain medication. When you are fully awake and stable, you will be taken to your hospital room. Your shoulder will remain swollen and tender for a few days and initially may appear bruised.

## What can I expect after surgery?

When you are back in your hospital room, your nurses will check your bandages and give you pain medication as needed. Your arm will likely be in a sling or brace to help protect your shoulder and make you more comfortable. You may be asked to sit on the edge of your bed or even get out of bed and take a few steps.

Soon after your surgery, you will begin a gentle exercise program that will help you regain strength and range of movement in your shoulder. This program will be designed specifically for you and may begin with simple movements of your fingers, wrist, and elbow, building up to movement of your shoulder itself. You can expect to stay in the hospital anywhere from one to three days after surgery. Your bandages may be removed before you leave, but your stitches probably won't be taken out for 10 to 14 days.

Be sure to consider the support system you have at home. You will need someone to drive you to physical therapy and may need assistance for the first several weeks with cooking, housekeeping, errands, etc. You might discuss a home healthcare professional, visiting nurse, or other help. If an adequate support system at home is not available, you may want to consider going to a rehabilitation facility or nursing home during recovery.

At home, you will continue your exercises as prescribed. Your physical therapist will give you detailed instructions and will continue to work with you at home or in their office. Your therapy may continue for several weeks after surgery. Your doctor or therapist will tell you when you can begin to drive and perform other activities.

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## Moving beyond pain.

Zimmer Biomet understands that making the decision to have joint replacement surgery can be stressful and difficult. This guide was designed to help you understand shoulder replacement. Knowing what to expect is not only important for making the best possible decision about shoulder replacement surgery — it's your first step toward recovery.

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