

Patient guide
to shoulder
replacement.



ZIMMER BIOMET

Your progress. Our promise.™

Table of Contents

Section 1	Understanding Shoulder Replacement	7
Section 2	Know the Risks of Shoulder Replacement Surgery ...	9
Section 3	Preparing for Shoulder Replacement Surgery	13
Section 4	Understanding Your Surgery and Hospital Stay ...	19
Section 5	Returning Home	25

CHECKLISTS AND LOGS

Directory of Healthcare Providers	4
Appointment Log	6
Insurance and financial planning	15
Suggestions for preparing your home	17

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 help reduce pain and restore function.

This guide is intended to supplement the information and advice you receive from your doctors; it does not take the place of a discussion with your surgeon. Because every individual is different, your specific experience may vary from what is described here.

For more information, visit zimmerbiomet.com to find a doctor near you.

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.

Directory of Healthcare Providers

Orthopedic Surgeon

Name: _____

Address: _____

Office Phone: _____

Emergency Phone: _____

Primary Care Physician

Name: _____

Address: _____

Office Phone: _____

Emergency Phone: _____

Pharmacy

Name: _____

Address: _____

Phone: _____

Prescription names and dosage:

1. _____

2. _____

3. _____

4. _____

Hospital

Name: _____

Address: _____

Admitting Department Phone: _____

In-home Rehabilitation Support

Name: _____

Address: _____

Phone: _____

Name: _____

Address: _____

Phone: _____

Insurance Company

Name: _____

Address: _____

Phone: _____

Appointment Log

Please be certain to take this book to all appointments.

Date and time of appointment _____

Name of healthcare professional _____

Notes for this appointment _____

Date and time of appointment _____

Name of healthcare professional _____

Notes for this appointment _____

Date and time of appointment _____

Name of healthcare professional _____

Notes for this appointment _____

Date and time of appointment _____

Name of healthcare professional _____

Notes for this appointment _____

Date and time of appointment _____

Name of healthcare professional _____

Notes for this appointment _____

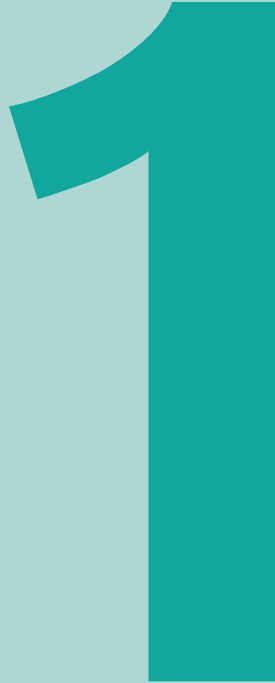
Date and time of appointment _____

Name of healthcare professional _____

Notes for this appointment _____

Understanding Shoulder Replacement

SECTION



SECTION 1

Understanding shoulder replacement surgery

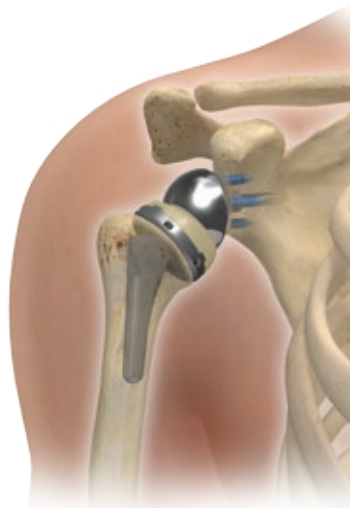
In shoulder replacement surgery, the damaged portions of the shoulder bones are removed, and the shoulder is replaced with metal and plastic implants. The procedure begins with necessary incisions, then precision guides and instruments are used to remove the damaged surfaces and prepare the bone to accept the implant. The new implant is inserted.

If your socket is to be replaced, its damaged surface is smoothed and a new plastic surface is inserted. In some cases, depending on the damage to your bones, your surgeon may recommend a “reverse” shoulder replacement procedure that reverses the ball and socket configuration of your shoulder. In that, the surface is prepared and the implant “ball” is attached.

Once the implant(s) are in place, the ball and socket are checked for fit and function. When the surgeon is satisfied, the incision is closed and covered with dressings.



Diseased Shoulder



Total Shoulder Replacement

Know the Risks of Shoulder Replacement Surgery

SECTION

2

SECTION 2

Know the Risks of Shoulder Replacement Surgery

As with any major surgery, shoulder replacement involves potential complications and risks both during and after the procedure. Your care team takes many precautions to prevent and manage the following possible risks.

1. Reaction to anesthesia

Your anesthesiologist is a specialist in giving the medications that will help relax you and manage your pain during and after surgery. You will meet with your anesthesiologist before your hospital admission or surgical procedure to determine the type of anesthetic that is most appropriate for you. Strictly follow your doctor's guidelines regarding food and drink before surgery. The more common side effects related to anesthesia include nausea, vomiting, and headaches (all of which can usually be relieved with medication).

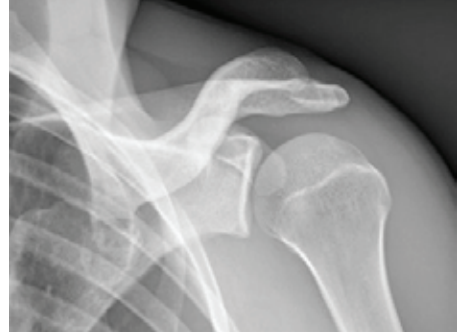
2. Infection

Infection is a risk with any surgical procedure. When these complications occur they can delay full recovery. For the first two years after your shoulder replacement, your doctor may require you to take preventive antibiotics before dental or surgical procedures that could allow bacteria to enter your bloodstream. Before other procedures, speak with your surgeon and your dentist to see if you still need preventive antibiotics.



3. Blood clots

The risk of blood clots in the arm veins is related to alterations in blood flow that occur during shoulder surgery. Blood thinning drugs prescribed by your doctor are typically used to improve blood flow and reduce the risk of clot formation. During your initial exam, your doctor will assess factors such as your weight and cardiovascular history to select the best blood thinner for you. After surgery, you will be encouraged to move and exercise to prevent blood clot formation.



4. Damage to nearby blood vessels, bones or nerves

To help minimize damage that may occur to blood vessels, bones and nerves in and around the incision, surgeons use precision tools, guides and highly refined surgical techniques. Nerve damage, although rare, can cause irritation and pain following your surgery.

5. Persistent Pain

There is no guarantee that shoulder replacement will make you pain-free.

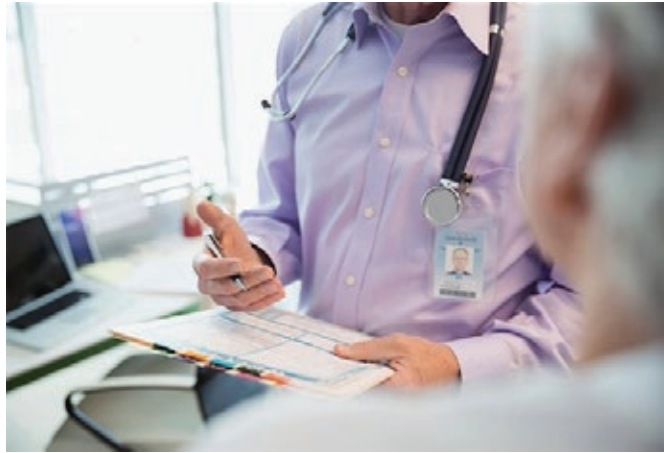
6. Loosening, wear or breakage of the artificial shoulder

The goal of shoulder replacement is to reduce pain and restore function. However, shoulder implants can loosen, parts can wear and rarely, a device does break. Such occurrences are typically accompanied by pain and/or loss of function, and may require additional surgery.

7. Pneumonia

Pneumonia is a risk with major surgery, especially in older patients. Postoperative pneumonia is related to immobility and the tendency of patients to use less of their total lung capacity following surgery. Therefore, respiratory rehabilitation is a key component of your recovery. A respiratory therapist will work with you while you are in the hospital to show you how to cough, perform breathing exercises and use devices such as the incentive spirometer to help keep your lungs clear.

You will be given a consent document to sign before your surgery. This document explains in detail, the known risks, both major and minor. Review the document carefully and discuss any questions or concerns you have with your doctor before signing.



Shoulder replacement surgery is your decision based on the advice of your surgeon, input from family and friends and a careful consideration of the facts, benefits and risks involved.

Preparing for Shoulder Replacement Surgery

SECTION

3

SECTION 3

Preparing for Shoulder Replacement Surgery

Once you have made the decision to have shoulder replacement surgery, there are a number of tasks to complete before surgery day. Your surgeon usually schedules the procedure well in advance, giving you time to make necessary plans and arrangements.

General physical examination

Your surgeon may recommend a physical exam by a primary care physician to verify that your health allows you to proceed with surgery. This will help to ensure that other health problems you may have, such as diabetes or high blood pressure, will be identified and treated before surgery.

Your doctor may suggest that you lose weight and initiate an exercise program. If you smoke, be sure to speak with your doctor about it, as smoking can delay the healing process.

You should also finish any dental work that may be under way to prevent germs in your mouth from entering the bloodstream and infecting the joint.



Review insurance and financial planning

Thoroughly review your insurance benefits and/or alternative plans for payment. Find out what your insurance plan or Medicare covers. **It is advisable to review all your insurance coverage and make a list of your questions before the hospital pre-admission meeting.**

Coverage includes: _____

Do you have Medicare parts A and B? _____

Is a second opinion required? Yes No

If yes, obtain proper forms. _____

Are crutches and other aids reimbursable? _____

Is a rehabilitation facility covered? _____

Are acute rehabilitation services covered? _____

How will you be billed? _____

Is home healthcare covered? _____

What forms are needed for reimbursement? _____

Consider Blood Donation

It is possible that you will need blood during your surgery.

Your main options may be (options vary by hospital):

- Intraoperative and/or postoperative cell salvage, in which any blood lost during surgery is collected, “washed” in a red blood cell saver device, and returned to you.
- Donate your own blood in what is called an autologous preoperative deposit. You deposit your own blood with a blood bank or the hospital’s transfusion service before surgery.
- Directed deposit, in which family members, friends and co-workers deposit blood designated for your use.
- Utilizing blood bank supplies donated by volunteers.

Schedule a hospital pre-admission visit

Two to three weeks before surgery, you may need to visit the hospital to prepare for admission. Hospitals often provide an educational class along with routine preoperative tests and measurements such as blood work, chest X-rays, cardiogram, urine specimen, and weight.

During your pre-admission visit, you may have a chance to meet with some of the members of the medical team that will monitor, coordinate and carry out your care in the hospital. This team may include professionals such as:

- Your surgeon, who performs the operation
- The anesthesiologist, who oversees your anesthetic for surgery and your pain medications after surgery
- Orthopaedic nurses, who attend to all your personal and general health needs during your recovery
- Physical therapist, who provides education and exercise instruction
- Respiratory therapist, who instructs you in breathing exercises to keep your lungs clear following surgery
- Occupational therapist, who is trained in rehabilitation, and will focus on helping you regain functional independence
- Care coordinator, who manages the entire medical team to ensure that your hospital stay is comfortable and satisfactory



Suggestions for preparing your home:

CHECKLIST:

A little time spent getting your home ready before your surgery can make a big difference in your recovery.

- Provide good lighting.
- Place regularly used items such as remote controls, medications, and reading materials in convenient and easy-to-reach locations.
- Stock up on canned and frozen foods and prepare meals ahead of time and freeze them.
- Store food in a cupboard that's at waist level and place frequently used cooking supplies, pots, pans, plates, and utensils on the counter or where they can be easily reached.
- Place loose clothing and pajamas in waist-level drawers or closets.
- Install a nightlight.
- Avoid clothes that you need to pull over your head; loose-fitting clothes that open in the front will make getting dressed easier.

Arrange for home care

Before surgery, be sure to consider the support system you have at home. You will benefit greatly if you have some assistance for the first several weeks with cooking, bathing, housekeeping, shopping, errands, etc. Do you have a caregiver, spouse, companion, friend, or family member who will be able to help?

The hospital discharge planner, occupational therapist, and social worker can help you explore all your options for having assistance at home. 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.



Understanding Your Surgery and Hospital Stay

SECTION

4

SECTION 4

Understanding Your Surgery and Hospital Stay

Prepare for hospital admission

Your doctor will instruct you not to eat or drink anything for a time period before your surgery. You must have an empty stomach going into surgery. Remember to bring all your regular medications to the hospital, even those that you were instructed to discontinue before surgery. You'll be more comfortable if you remember to bring a lightweight robe, a nightshirt, slippers with nonskid soles, toiletries, rubber soled shoes, glasses, etc. For your safety you should not wear make-up, contact lenses, dentures, or a hearing aid into the operating room.

There are a number of forms you will sign upon admission. The details may vary slightly from one hospital to the next, but certain forms are standard. You will sign a condition of admission form that addresses all your insurance and financial information, discusses the nature of your condition, and authorizes a release of all your medical information to the hospital. You will have obtained approval from your primary insurance carrier before your admission; this is generally handled through your primary care physician.

You may need to bring an insurance approval form to verify your coverage. If you have Medicare, there are forms you will need to sign to be eligible for coverage. Both the anesthesiologist and surgeon will have individual release forms for you to sign. If you belong to a PPO or an HMO, they will provide a form that addresses your benefits and coverage. Finally, as described earlier, a consent document will be provided for your review and signature.

The admitting nurse will take you to your room and familiarize you with the hospital surroundings. To verify information about your health that you have already provided, the nurse and admitting staff will ask you several questions that you have probably answered before.



Be ready for surgery day

Report to the hospital admitting office approximately two hours before your scheduled surgery. After you are admitted, you will be prepared for surgery. Using a needle, a small intravenous (IV) tube will be inserted into a vein in your arm. The tube will be used to administer antibiotics, pain medication, and liquid nutrition during and after your surgery.

Your blood pressure and heart will be monitored. Your anesthesiologist will talk with you again about the type of anesthesia you will receive. You may be lightly sedated before being taken to the operating room. Nerve blocks, when used, are usually administered before you go to the operating room.

Be aware that the operating room can be a bright, cold, busy and loud place. A nurse will verify your identity and knowledge of the operation. Once the anesthesia takes effect, your shoulder will be scrubbed and sterilized. The surgery, including the time you will spend in the recovery area, will take approximately two hours,* depending on your individual circumstances.

Your New Shoulder(s)

LEFT Shoulder: Date of Operation _____ / _____ / _____

Standard Shoulder Replacement

Reverse Shoulder Replacement

RIGHT Shoulder: Date of Operation _____ / _____ / _____

Standard Shoulder Replacement

Reverse Shoulder Replacement

Request copies of your peel-and-stick shoulder implant package labels.

Some hospitals are only keeping records for 5-10 years. It is helpful to have all your records regarding your shoulder replacement in one place in case you or your doctor needs access to all the details.

Know what happens after surgery

After your surgery, you will be moved from the operating room to the recovery room. You will have a dressing on your shoulder. A skilled team of nurses and members of the anesthesia team will care for you, checking your vital signs frequently and monitoring your recovery from the anesthetic.

Your operated shoulder will be checked regularly for movement, sensation and temperature. Once you are conscious, you will be encouraged to breathe deeply and cough to clear your lungs. The time spent in the recovery room varies depending on your individual response to the anesthetic. Visitors are often not permitted in the recovery area. Typically, patients are ready to leave the recovery area after one to three hours.

Once you are fully awake, you'll be moved to your room or another location for further recovery until discharge. In your hospital room, your shoulder may be wrapped in a cooling pad to reduce swelling and pain. Your shoulder may be covered with plastic wrappings to promote circulation. Blood thinning drugs will likely be given daily to protect against blood clots and your vital signs will be monitored often. Your respiratory therapist will visit to explain your coughing and breathing exercises, and to instruct you in the use of your incentive spirometer, a device that encourages you to exercise your lungs.

For several days after surgery, your shoulder will remain swollen and tender. Your surgeon may visit you after surgery to check on your recovery.

Ask what you can do about pain control

Pain management is a primary focus for all members of your care team. Following surgery, it is expected and normal that you will have some pain. You will probably receive regular pain medication through the IV line or by mouth for the first 48 hours. If your hospital stay will be shorter, you will be given oral pain medication as the anesthesia begins to wear off. Alternatively, a device called a patient controlled analgesia pump (PCA) may be used, which allows you to control when you receive medication.

Your pain will likely be the greatest the day following surgery, but usually decreases over the next several days. Pain medication taken by mouth will be prescribed for the first few weeks of your rehabilitation once you are discharged.



Rehabilitation

Rehabilitation, or physical therapy, exercises and activities designed to help you recover, can differ from patient to patient depending on surgeon practice. You will go through all the same stages of rehabilitation but you may reach certain goals sooner or later than described here. Depending on your length of stay at the hospital, these activities may be performed at the hospital or in your home. It is important to follow the instructions of your surgeon and your physical therapist carefully and consistently in order to regain movement and strength.

Your hospital stay will typically last from one to three days, depending on the speed of your recovery.



Returning Home

SECTION

5

SECTION 5

Returning Home

At home, you'll need to continue your exercises. Your physical therapist will instruct you about proper home care and may continue to work with you. Your shoulder area may be warm and tender for several weeks. It is important to remember that while you are recovering, you should not lift anything with the operative arm. Please consult with your orthopedic surgeon before you begin lifting anything.

It is very important that you follow your surgeon's instructions. Any questions should always be discussed with your surgeon before your hospital discharge. In general:

- Do not use your surgery arm when getting out of bed or up from a chair. Use the opposite arm.
- You may be advised not to pull anything to you, such as pulling up pants and opening doors, for six weeks after surgery.
- Be certain not to exceed the range of motion restrictions given by your physician.
- Be careful to avoid falls.
- The amount of weight you can lift using your surgery arm will be limited. Your doctor may recommend that you don't lift anything heavier than a cup of coffee for the first four to six weeks. Be sure to consult with your orthopedic surgeon before you begin any lifting.



- Sling use will vary depending upon the situation, but your doctor may request that you wear the sling every night for at least the first month.
- Remember that you will probably tire more easily than usual. You may want to plan a rest period of 30 to 60 minutes mid-morning and mid-afternoon.
- Avoid many household chores, such as raking, sweeping, mopping, and running the vacuum cleaner using your surgery arm. Use long-handled feather dusters for dusting high and low items. Your doctor will tell you when it is okay to do these activities.
- Constipation is a common problem for patients following surgery. This is usually due to your limited activity and any pain medications you may be taking. Discuss your diet with your doctor. It may include fresh fruits and vegetables as well as eight full glasses of liquid each day, unless your doctor tells you otherwise.
- Your doctor will probably give you a prescription for pain pills. Please follow your doctor's instructions concerning these medications.
- Some swelling around the incision is normal. You will find it more comfortable to wear loose clothing to avoid pressure on the incision. Ask your doctor or other qualified health professional about appropriate wound care.
- You may want to place a pillow behind your elbow when seated or lying down to keep the surgery area forward to help decrease pain.
- Your doctor may recommend that you apply ice to your shoulder to help decrease pain. A two-pound bag of frozen peas or other small vegetables works surprisingly well as an ice pack.

Pay attention to signs or symptoms

It is normal for your shoulder to remain warm, swollen and slightly tender for a number of weeks. Applying ice packs regularly should help ease the discomfort.

Call your doctor immediately, if you notice:

- Increased shoulder pain
- Increased redness or swelling
- Incision drainage
- Prolonged nausea or vomiting
- Chest pain or shortness of breath
- Tenderness in the shoulder area
- A continuous or daily fever

Practice infection prevention

Your shoulder implant is susceptible to infection from other parts of the body. Consult your doctor immediately regarding any infection, dental problems or procedures or any contemplated surgery. Any bacterial infection must be treated immediately to prevent infection of the joint. Preventive antibiotics may be required for any invasive medical or dental procedure, including routine dental hygiene at the dentist's office.

Notify your doctor if you notice:

- Skin lesions anywhere on your body
- Urinary tract infection symptoms
- A productive cough
- A fever

Commit to your exercise program

Now is the time to make a renewed commitment to your exercise program. Consistent, appropriate physical activity is essential to maintain your strength and flexibility. Talk to your surgeon about what activities are appropriate for you. Often it helps to identify a coach, someone to help remind you and support you, physically and emotionally, through your daily exercise routine. Get in the habit of doing your exercises during TV commercial breaks or when starting a new chapter in a book. Remember to use ice and compression to reduce swelling and pain.

Once you are home you'll be adapting the skills learned in the hospital to your home environment. Use the techniques and precautions demonstrated by your physical and occupational therapists to protect your shoulder and assist with recovery. Continue to use aids, devices, and methods provided by your occupational therapist to protect your shoulder as you increase your activity at home.

Resuming normal activities

Once you return home, it is recommended you stay active without doing too much too soon. You should increase your activities gradually, according to your surgeon's and physical therapist's instructions. During your recovery, you should notice a gradual improvement over time.

Recovery varies based on individual factors, discuss the following activities with your doctor as needed for guidance:

- Driving
- Sleeping
- Taking a bath or shower
- Brushing your teeth
- Dressing and undressing
- Returning to work

You may have permanent activity restrictions but only your doctor can decide what activities are acceptable for your condition.

What can I do to help my new shoulder replacement last?

Talk with your doctor about the following points and how they might affect the longevity and success of your shoulder replacement.

Understand activities to avoid. (Your doctor can tell you what activities may be resumed throughout your recovery.):

- Avoid repetitive lifting
- Be sure to consult with your orthopedic surgeon before you begin to lift anything with the operated arm
- Avoid “jamming” activities such as hammering
- Stay healthy and active
- Avoid “impact loading” sports such as boxing
- Consult your surgeon before beginning any new sport or activity to find out what type and intensity of sport or activity is appropriate for you
- Think before you move
- Avoid any physical activities involving quick stop-start motion, twisting or impact stresses on the operative shoulder
- Avoid pushing heavy objects



Results may vary. Not all patients are candidates for this product and/or procedure. Only a medical professional can determine the treatment appropriate for your specific condition. Appropriate post-operative activities and restrictions will differ from patient to patient. Talk to your surgeon about whether joint replacement is right for you and the risks of the procedure, including the risk of implant wear, loosening, or failure.

For additional information, visit zimmerbiomet.com to find a doctor near you.

All content herein is protected by copyright, trademarks and other intellectual property rights owned by or licensed to Zimmer Biomet or its affiliates unless otherwise indicated, and must not be redistributed, duplicated or disclosed, in whole or in part, without the express written consent of Zimmer Biomet.

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.

For more information, visit zimmerbiomet.com to find a doctor near you.



ZIMMER BIOMET

Your progress. Our promise.™