

Shoulder Replacement Surgery



Introduction

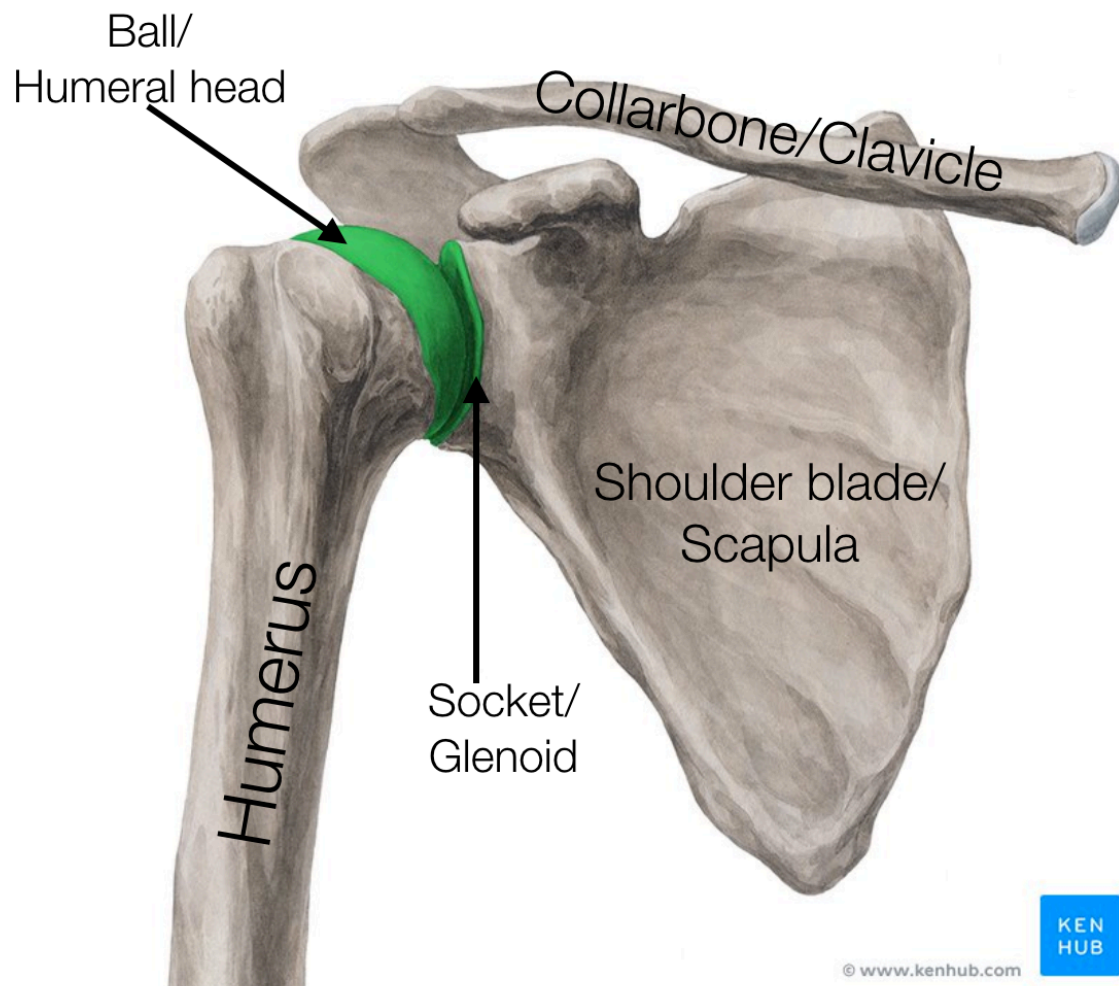


Figure 1: Anatomy of the shoulder. The main bones of the shoulder are shown. The area in green represents the cartilage in the shoulder joint.

What is the shoulder?

The shoulder is a ball-and-socket joint that allows you to raise, twist, bend, and move your arms. This joint consists of the head of the upper arm bone (humerus) with its head/ball and a shallow socket which is the glenoid attaching to the shoulder blade (scapula). Both the head of the upper arm bone and the socket are coated with a smooth, durable covering (cartilage) to make smooth movement of the joint. When this cartilage breaks down and wears out, arthritis of the shoulder happens.

Why would I need to have a shoulder replacement?

There are several reasons why a surgeon may recommend a shoulder replacement. These are:

1. Bad shoulder arthritis with pain that can't be controlled with over-the-counter medications
2. Very large rotator cuff tendon tears that can't be fixed and leave you with a painful and immobile arm
3. A broken humerus at the shoulder joint that will have a better result with a joint replacement than other options
4. Loss of blood supply/nutrition to the ball of the shoulder leading to its disintegration (called Avascular Necrosis in technical terms)

A combination of these situations may also lead to a recommendation for shoulder replacement.

What are shoulder replacements?

There are three main types of shoulder replacements:

1. **Partial shoulder replacement (hemiarthroplasty)** - ball is replaced, socket is not

Partial shoulder replacements are not commonly used, but if you're young (like under 50 or 55) or a heavy labourer, this choice may be recommended for you. It trades a little bit less pain relief for unlimited activity allowances.

2. **Anatomic total shoulder replacement** - ball is replaced with a ball, socket is replaced with a socket

Anatomic replacements are usually chosen when the rotator cuff tendons are healthy and the socket isn't too worn out. A metal ball on a stem or on an anchor is put on the ball/humerus side, while a socket of a special plastic is put on the socket side.

3. **Reverse total shoulder replacement** - ball is replaced with a socket, socket is replaced with a ball

Reverse replacements are usually chosen for situations where the rotator cuff tendons aren't healthy or are torn up, for fixing broken shoulders, for rebuilding sockets that are very worn out, or for repeat shoulder replacements (revisions)

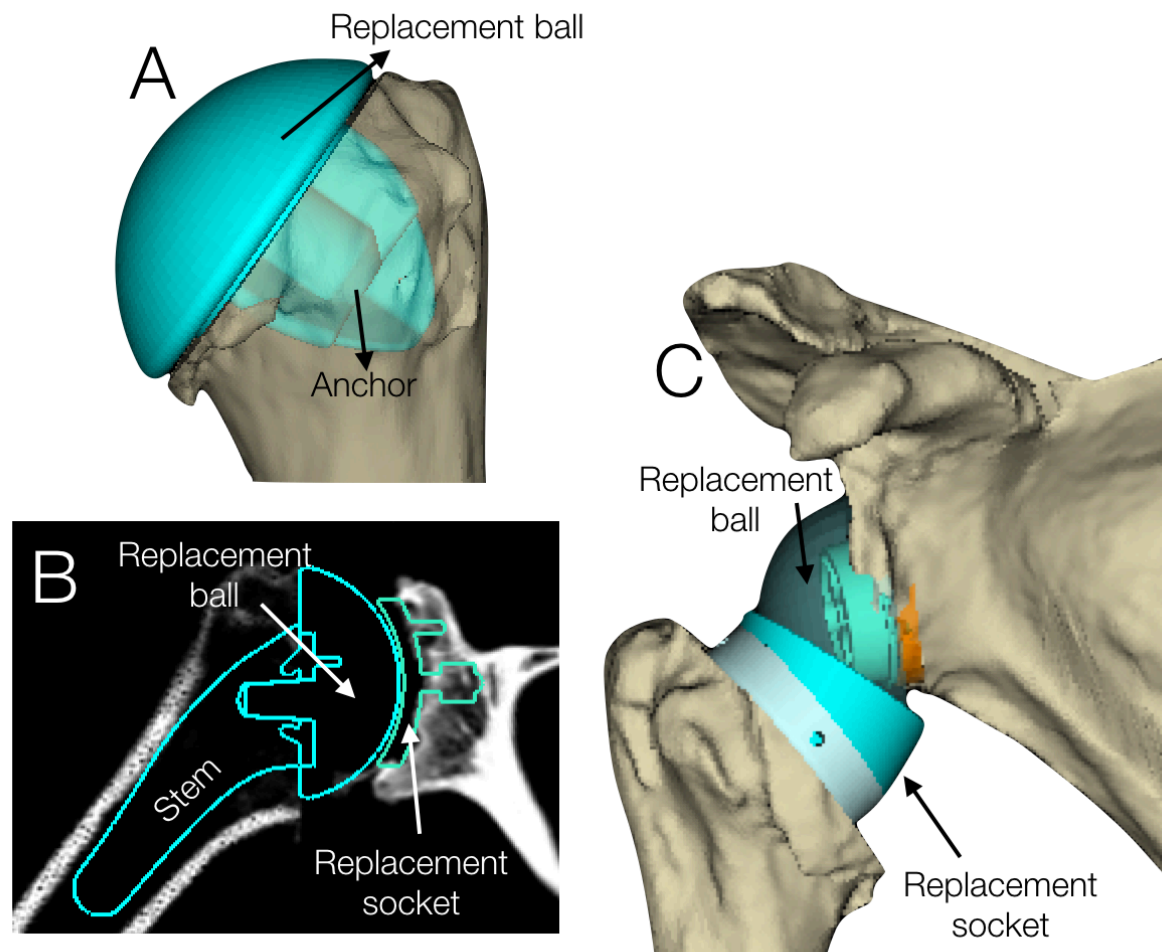


Figure 2: Different kinds of shoulder replacements. A: Partial replacement (hemiarthroplasty). This also shows an anchor, one way of fixing the ball to the arm. **B: Anatomic total replacement.** This shows the stem that is used to fix the ball to the arm. The socket has little pegs that are glued into the bone. **C: Reverse shoulder replacement.** The socket is fixed to the arm bone with a stem similar to the one shown in B. The ball fits on a platform that is fixed with screws in the bone.

What are the results of a shoulder replacement?

Recovery from a shoulder replacement usually takes up to 1 year after surgery to reach the maximum improvement (18 months for partial replacements). The goals of having the surgery include:

1. Improved pain: about 95% of people report much less pain after they have recovered. Some people report no pain, while others have mild pain. A few people have pain when they lie on their new shoulder over the long term.
2. Improved function: people are able to do their activities in greater comfort and may return to doing things that they had to stop before because of their shoulder problem
3. Improved mobility: some people have better mobility (range of motion) after surgery. Some people do not get more mobility, and a few people are more stiff than before surgery.

What can go wrong with a shoulder replacement?

There are risks and complications that happen to the shoulder itself, and then there are risks related to undergoing a surgery in general and having an anesthetic. This is a list of the most worrisome or most commonly encountered. Some of these, like infection, instability, tearing of the rotator cuff, or wearing out of parts can lead to having another surgery.

| Risks to the Shoulder | Risks in General |
|---|--|
| <ol style="list-style-type: none">1. Infection in the joint2. Injury to nerve or blood vessel3. Dislocations or instability of the shoulder4. Tearing of rotator cuff tendons (anatomic and partial replacements)5. Stress fracture of the shoulder blade (reverse shoulder replacements)6. Wearing out or loosening of the new parts7. Pain that doesn't get better8. New pain that wasn't there before | <ol style="list-style-type: none">1. Nausea or vomiting with anaesthetic2. Nerve symptoms3. Heart or lung strain4. Confusion or delirium5. Blood clots in the leg or the lungs6. Other medical risks depending on individual patient health profile |

Preparing for shoulder surgery

Once you and your surgeon decide that shoulder replacement is the right option for you, several steps will help you get ready for surgery. First, you may need to see a Medical Doctor and/or an Anesthesia Doctor to make sure you're ready to have surgery. Second, you might still need to have a CT scan to help your surgeon plan your surgery. Third, a date for your surgery will be scheduled. We typically schedule surgeries about 3 months in advance. Fourth, you may need to get some lab work done right before your surgery.

There are several things **you** can do to help prepare yourself for surgery.

1. Make plans for how you will manage at home after surgery. You will need help with basic things like dressing, cooking, and getting out to stores and appointments. **Alberta Health Services does not provide help for all of these areas.**
2. Improve/maintain your health before surgery by staying healthy, eating a balanced diet, getting enough rest, staying fit through things like walking or pool exercise, and consider cutting down or quitting smoking.
3. Consider renting or purchasing an ice cuff for pain relief after surgery. If you know someone with the tank, you only need to get a sleeve. You can get more information about this from your surgeon's office.
4. You do not need to purchase a sling ahead of time. One will be provided to you at the time of surgery and you'll receive a bill after. If you have a sturdy sling from a previous surgery, you can bring it and we'll try to reuse it for you.

The day before surgery

There are several things to do, and several things not to do:

| DON'T DO | DO |
|---|--|
| <ol style="list-style-type: none">1. No eating any solid food after midnight2. Do not smoke after dinner3. Do not drink alcohol for 2 days before surgery | <ol style="list-style-type: none">1. Drink clear fluids (water) up to 4 hours before surgery2. Have a shower and soap your armpit3. Pack your “go bag”4. Confirm your ride5. Confirm if you are going home same-day or staying overnight after surgery6. Call the information line as directed to find out when to show up for your surgery (usually afternoon) |

Your “Go Bag”

Depending on if you are going home on the day of surgery or if you are staying overnight, you may pack different things. Here are some suggestions:

| SAME DAY SURGERY | OVERNIGHT SURGERY |
|---|--|
| <ol style="list-style-type: none">1. Health card, medication list2. Pants that are easy to pull on3. Loose shirt that buttons or is big enough to pull over easily4. A book or other activity while you wait | <ol style="list-style-type: none">1. Health card, medication list2. Pants that are easy to pull on3. Loose shirt that buttons or is big enough to pull over easily4. A book or other activity while you wait5. Personal toiletries (toothbrush, toothpaste, etc)6. Cooling cuff/ice cuff if you have one7. Slippers, grippy socks, bathrobe, etc |

We recommend that you don't bring anything valuable. This can include jewellery, credit cards, and electronics. The hospital will not be responsible for theft of your stuff. If you must keep a cell phone with you, make sure you have your charging cable as we cannot provide these. Please don't wear perfume or perfumed lotions as we are Scent-Free to protect folks with allergies.

What to expect at the hospital before surgery

Step 1: Arrive on time, be admitted and directed up to Day Surgery Unit (3rd Floor)

Step 2: A Nurse will check you in, weight you, and get you changed into a hospital gown. An intravenous (IV) might be placed at that time. Your medical history and medications will be checked. A member of the anesthesia team may see you in your room in Day Surgery too. Your surgeon may speak to you in Day Surgery too.

Step 3: A Porter will take you on your stretcher over to the Block Area in the Recovery Room (PACU). If you haven't met a member of the anesthesia team, you will at this point. If you don't have an IV yet, one will be placed here. The anesthesia doctors will talk with you about the nerve block and will place it if you wish to have one.

Step 4: If your surgeon didn't speak to you earlier, they will come and place their initials on the correct shoulder. They will also talk with you about the surgery and give you some instructions.

Step 5: A member of the team will take you from the Block Area to the Operating Room. You will still be awake at this point, and we will help get you positioned on the operating table and then the anesthetic will start.

For our day-surgery patients

If you and your surgeon have decided that you don't need to stay overnight, this is what you should expect after surgery:

Step 1: Waking up in the Recovery Room (PACU), now wearing your sling

Step 2: Return to your Day Surgery Room to continue waking up. A Nurse will monitor your status and your pain. Some ice may be placed on your shoulder

Step 3: When you are awake enough, you will go to the Diagnostic Imaging area to get an x-ray of your shoulder. Your surgeon might order a blood test if it's necessary after surgery.

Step 4: You will receive another dose of antibiotics in your IV about 4-6 hours after surgery

Step 5: Your surgeon will visit you to check on how you are doing.

You will be ready to go home if you are comfortable, off supplemental oxygen, up walking, able to hold down fluids and food, and if you've had a pee.

Step 6: Be sure to follow the instructions from the anesthesia doctors and make sure to take pain medications before you go to bed for the night, and again first thing in the morning. The nerve block may wear off about 24 hours after your surgery and you want to have medication inside you when that happens.

Step 7: Make sure you move your hand and wrist right away. You should straighten your elbow every day at least twice. Keep the sling on pretty much all the time.

For our overnight patients

If you and your surgeon have decided that you need to stay overnight, this is what you should expect after surgery:

Step 1: Waking up in the Recovery Room (PACU), now wearing your sling

Step 2: Moving to your hospital room either in the Short Stay Unit or on Unit 78 to continue waking up. A Nurse will monitor your status and your pain. Some ice may be placed on your shoulder.

Step 3: The next morning, you will go to the Diagnostic Imaging department to get your x-ray. The lab will come and collect some blood early in the morning.

Step 4: You should get a visit from your surgeon and also may get a visit from our hospitalist, Dr Schnell, to make sure you are doing well.

Step 5: If needed, a physiotherapist may visit you as well to provide guidance about moving around. If you need home care supports, please ensure that the team knows to contact their planning person to visit.

You will be ready to go home if you are comfortable, off supplemental oxygen, up walking, able to hold down fluids and food, and if you've had a pee. The nerve block typically wears off in the later morning and so it may take a little while to get the pain fully controlled.

Step 6: Make sure you move your hand and wrist right away. You should straighten your elbow every day at least twice. Keep the sling on pretty much all the time.

At Home

Your Incision: Follow instructions from your surgeon about how to care for your dressing. Most of the time, the dressing will not require changing and will be water-resistant. Do not remove the steri-strips until you're told to do so. Don't go into hot-tubs or baths until you ask your surgeon, and ask when you can safely shower. Don't put lotions or creams on your incision until you ask your surgeon.

Activity: Physiotherapy exercise starts about 2 weeks after surgery. Until then, move hand, wrist, and elbow every day. If you are sitting in a chair, take the strap of your sling off your neck and place your hand in your lap for a few minutes, then stretch your neck out. Wear the sling at night.

Driving: **No**. This is both a safety and a liability issue. Ask your surgeon about resuming driving, but general practice is no driving for 6 weeks.

Swelling & Bruising: It is common to have swelling and bruising. This will likely spread down your arm and may affect your hand. Using ice, frozen peas or corn, gel ice packs, or a cooling cuff are all options. Do not place ice on bare skin, use a small cloth.

Medications: Prescription pain medications such as narcotics (Tylenol #3, Tramacet, Percocet, Hydromophone, etc) all have the ability to cause side effects. Constipation is common, so drink fluids and get laxatives at the drug store if you need. Wean off these medications as soon as you are comfortable to avoid long-term problems with them. Ask your surgeon about anti-inflammatory medications such as Ibuprofen, Motrin, Aleve or similar. **Do not mix prescription pain medications with recreational substances such as alcohol or cannabis.**

Follow-Up: Your surgeon will usually want to see you at about 2 weeks after surgery to check your wound and begin your rehabilitation.

You should call your surgeon if:

1. You have chills or fever with a temperature above 38.3°C or 101°F
2. Your incision becomes very red or extra-swollen
3. There is drainage coming from your incision that is green, yellow, or stinky
4. There is blood soaking through your dressing
5. There is increased pain/swelling that is not made better by medication, resting the arm, elevating your arm or putting ice on it.
6. If your fingers, hand, or arm swells suddenly, turns pale or blue, becomes cold or loses feeling, or suddenly gets pins-and-needles numbness.

If it's after 4 pm on a weekday or on a weekend, you can also go to your nearest Urgent Care or Emergency Room if needed.