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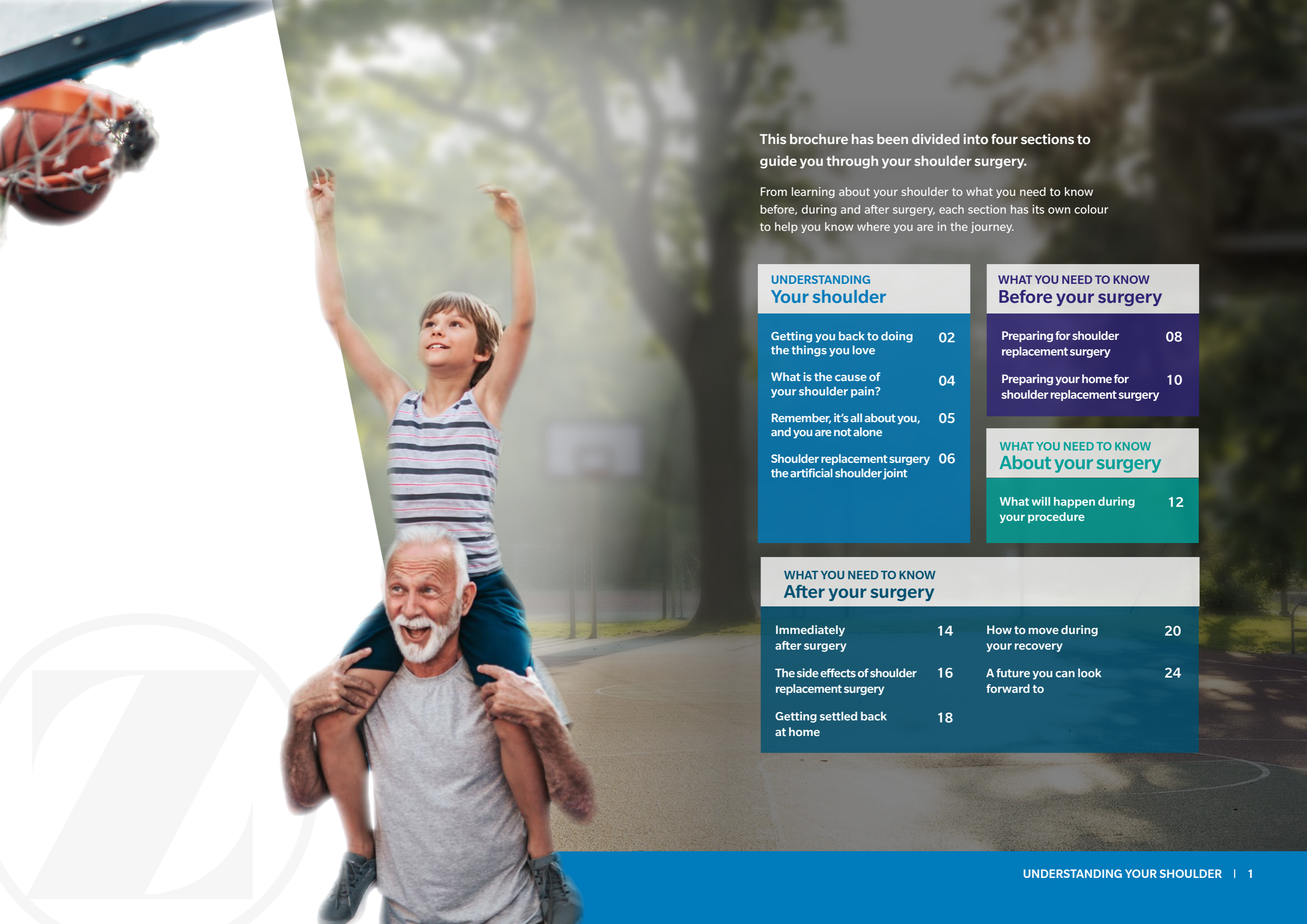
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HERE FOR YOU

Throughout your shoulder replacement journey



Results are not necessarily typical, indicative, or representative of all recipient patients. Results will vary due to health, weight, activity and other variables. 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, infection, loosening, breakage or failure, any of which could require additional surgery.



This brochure has been divided into four sections to guide you through your shoulder surgery.

From learning about your shoulder to what you need to know before, during and after surgery, each section has its own colour to help you know where you are in the journey.

UNDERSTANDING Your shoulder

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GETTING YOU BACK TO DOING The things you love

Persistent shoulder pain can make even the simplest activities of every day life hard. As you consider a shoulder replacement, it's only natural that you'll have questions. We've created this brochure to explain how shoulder replacement surgery can significantly improve your quality of life and get you back to enjoying your favourite activities.

You're not alone on this journey. Every year thousands of people are looking for a treatment for their shoulder pain.

Just like many other surgical procedures, you can do a lot to contribute to your recovery in order to achieve the best possible outcome. This guide will support you when talking to your surgeon, who will advise you on what to expect from your surgery and how best to aid recovery.

Everyone's pathway to surgery and recovery is different, as what works for someone else may not be best for you. We expect that, together with this guide and your healthcare professional, you can find answers to all of your questions.

It's your journey, and we're with you every step of the way.



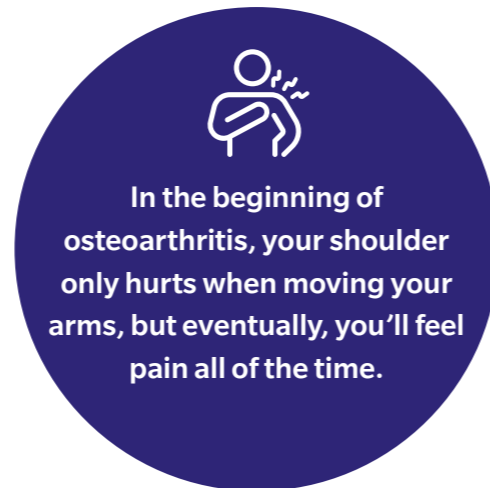
WHAT IS THE CAUSE OF Your shoulder pain?

In a healthy shoulder, the bones forming your joint are cushioned by cartilage and a thin lining that reduces friction and absorbs shock

When osteoarthritis affects your shoulder joint, the cartilage cushioning the bones softens and wears away, which causes the bones to rub against each other. This causes pain and stiffness that can worsen over time.¹

While a certain amount of cartilage wear is expected as we age, your genetics and lifestyle can affect how likely you are to get shoulder arthritis. Rheumatism, repeated dislocation, years of professional sports, frequently carrying heavy loads or sustaining an injury can damage your joint's cartilage and trigger the condition.

¹<https://report.nih.gov/nihfactsheets/ViewFactSheet.aspx?csid=55>



If you suffer from rotator cuff disease, it's usually caused by the fraying of a tendon (the supraspinatus tendon). This tendon sits on your upper arm and rubs along the inside of your shoulder socket when you move your arm, which can cause it to wear away over time.

If you have rotator cuff disease, you'll usually start to notice inflammation around your tendon and pain when raising your arm.

REMEMBER, THIS IS ALL ABOUT YOU, AND You are not alone

When you suffer from advanced osteoarthritis, your shoulder pain may seem to disrupt everything...

Simple day to day things like combing your hair cause discomfort, you find it hard to be your usual self around friends and family because it's hard to focus. When you're feeling shoulder pain constantly it doesn't let you think about anything else.

At Zimmer Biomet, we understand that shoulder pain can be very limiting, but we want you to know that you're not alone in this journey. Osteoarthritis is the most common musculoskeletal condition worldwide, and our solutions have helped millions of people just like you to overcome similar experiences and come out happier and healthier on the other side.

➔ Having exhausted conservative treatments, like physical or medical therapy and shoulder injections, you're now at the stage where your surgeon has suggested you consider surgery.

Our implants are designed to get your life back on track and give you the freedom to live your life how you planned.

Healthy shoulder
At the end of your shoulder blade is the glenoid - a shallow socket. In it sits the ball end of the long arm bone, the humeral head. These two bone surfaces are held together with ligaments, tendons and muscles.

Arthritic shoulder
Cartilage cushioning wear exposes the bone.

SHOULDER REPLACEMENT SURGERY

The artificial shoulder joint

There are different types of shoulder implants, and your medical professional will recommend which one is best for you.

Your implant will depend on your condition. The combination of metal and plastic ensures your new joint will have lower friction than an arthritic shoulder, wear more slowly and move more easily than an arthritic shoulder.^{2, 3}

Types of shoulder replacement:

Hemi Shoulder Replacement

If just the humeral head is affected by severe osteoarthritis, your surgeon can only replace the damaged area.

This is done by either resurfacing with a metal cap or replacing it with a stemmed implant



Total Shoulder Replacement - Anatomic

This is required when both socket and ball head of the joint are affected.

The worn part of your shoulder joint is replaced with an artificial joint made of surgical stainless steel on the humeral side and typically a durable plastic socket on the glenoid.

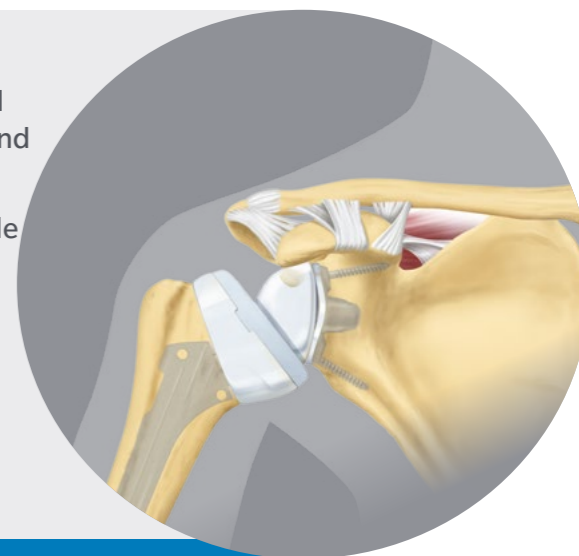


Shoulder Replacement - Reverse

This is required when next to the socket and ball head of the joint, the muscles and tendons around the shoulder (rotator cuff) are also affected.

The artificial joint is made of metal and durable plastic. A reversed shoulder replacement means the ball portion of the shoulder will be placed where the socket used to be and the socket where the ball or humeral head used to be.

This enables the stronger muscles around your shoulder to move your arm with less force and improve the range of movement.



²https://link.springer.com/chapter/10.1007%2F978-3-642-23011-0_1 – low wear

³[https://www.jsesarthroplasty.org/article/S1045-4527\(20\)30052-3/fulltext](https://www.jsesarthroplasty.org/article/S1045-4527(20)30052-3/fulltext) - general implant properties

PREPARING FOR Shoulder replacement surgery

Here are some tips on how to prepare for surgery:

Prepare yourself physically

During the check-up, your doctor may look at the medication you currently take and suggest you make changes to your diet or begin exercising.

Tell your doctor if you currently have dental work done. To prevent germs in your mouth from entering your bloodstream and causing an infection, your doctor might ask you to stop or delay any dental works.



If you are a smoker, you should tell your doctor as smoking can delay your recovery.

One of the decisions prior to shoulder replacement surgery is what type of anaesthesia will be administered. Before your surgery is scheduled, your anaesthesiologist will review your past medical history, give you an exam and then discuss the type of anaesthesia recommended for you. Ultimately, the final decision is made jointly between you and your anaesthesiologist.

General anaesthesia involves a complete loss of consciousness, while regional anaesthesia numbs a specific area of the body without altering brain or breathing functions. Occasionally, the anaesthesiologist will strongly recommend one over the other because of your current medical condition or because of the type of procedure.



Prepare yourself physically and mentally, sleep well, relax and try not to worry.

Before surgery, you should remain active and ask your doctor about starting an exercise program.






PREPARING YOUR HOME FOR

Shoulder replacement surgery

Your care team will give you some suggestions and guidance about how best to arrange your home for your recovery. There are many things you can do to aid your independence:

-  Arrange furniture so it's easier to get around your home.
-  Remove trip hazards to prevent falls.
-  Note any uneven floors and steps.
-  Move everyday items to within easy reach particularly items you use often.
-  Be aware of areas that get wet and put non-slip mats down.
-  Do not lift heavy items with outstretched arms.
-  Dressing sticks, sock aids and tight aids.
-  Wear clothes and shoes that you can take on and off easily. Ideally shoes should be slip-on or fastened with velcro.
-  Long shoehorn, to aid you putting on and taking off your shoes.
-  Prepare and freeze some meals, that you will then only need to reheat.
-  Shopping trolley, to ensure that you aren't over-loaded and can focus on your footing.
-  Restrict pets to their own area of the house, so they don't cause you to trip.
-  Wear your sling, as recommended by your healthcare professional, for rest and support.
-  Avoid tasks above your head and many household tasks, such as sweeping, mopping and using a vacuum cleaner with your arm of your operated shoulder.

Things that might be useful to take to the hospital:

-  Pyjamas or nightgown and dressing gown.
-  Toiletries (toothbrush, soap, brush etc).
-  Tracksuit with a wide-cut entrance for your foot.
-  Flat shoes (not sandals) with non-slip soles.
-  Shoehorn with a long handle.

Recommended for your hospital stay and at home:



Support-providing trainers, ideally fastened with Velcro.

WHAT HAPPENS

During your procedure

Your initial preparation, surgery time, and time spent in the recovery area, should take around one to three hours.



You shouldn't wear any jewellery, contact lenses, dentures or hearing aids during the procedure.



Steps of your shoulder replacement surgery



1 You will receive an anaesthetic, to ensure you do not feel any pain. You will be placed in a sitting position so the surgeon can access your shoulder. They'll make a small incision on the front of your shoulder.



2 The surgeon will remove any damaged tissue that stops your shoulder from working properly.



3 The surgeon will then prepare the bone for your new artificial joint.



4 They then use a test implant to check for the correct fit, size, stability, and range of motion.



5 The surgeon then fits your new implant checking the final stability and range of movement of your new artificial joint.



6 Finally, the joint is closed and a dressing is applied. In some cases you may be given a sling to wear.

IMMEDIATELY After surgery

You'll be moved to the recovery room where you'll be monitored by specialised nurses. They'll look after you, and ensure a good recovery from the anaesthetic before you can be transferred to a regular ward.

Know what happens after surgery

For the first few days, your shoulder will be swollen and tender; all of this is normal.

Your first movements

The day after your surgery, you'll be encouraged to move your shoulder. While you will have to wear a sling to protect your joint from unwanted movements for several weeks, you will be encouraged to move your elbow and wrist to increase blood circulation.

Continued movement

To get your shoulder working again, two or three days after surgery you'll begin moving your new joint. Your doctor will tell you the movements to make, and it's critical you follow their instructions to make sure your shoulder heals correctly.

Your pain control

Good pain control will allow you to sleep better, helping your body heal more quickly and enabling you to leave hospital sooner.

Our pain perception is very different from one person to the other, so if you have pain, don't hesitate to ask your medical team, they are there to help you and would not want you to be uncomfortable.



You should wear your sling for several weeks after surgery until your doctor says you can go without it.

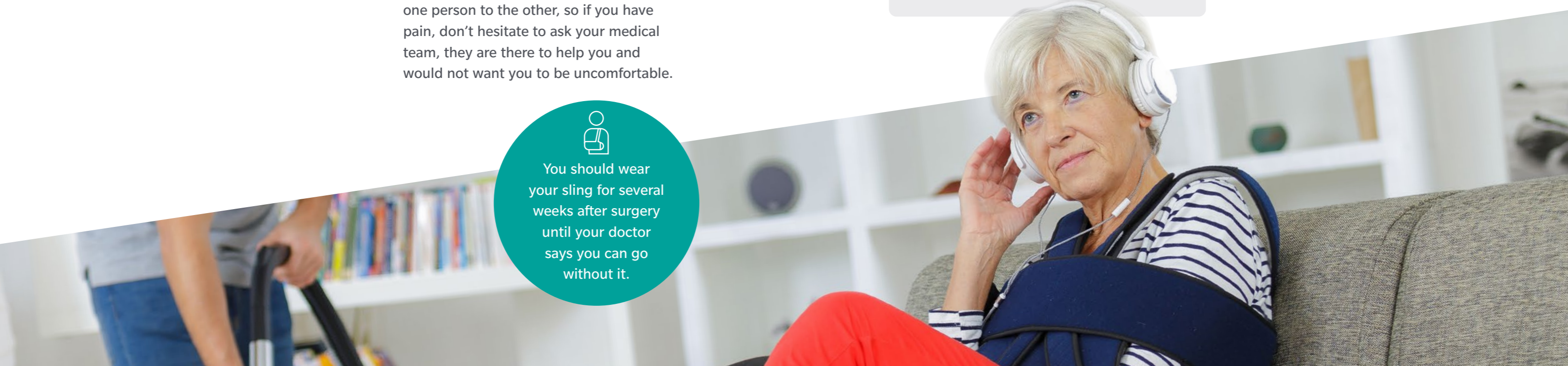
Going home

You'll typically be in the hospital for 2-3 days (but some patients can go home on the same day), and before you're allowed home, you'll need to accomplish discharge goals like:

- ✓ Having a manageable amount of pain
- ✓ Being able to eat, drink, and use the bathroom
- ✓ Being able to perform the prescribed home exercises
- ✓ Understanding any shoulder precautions you may have been given to prevent injury and ensure your shoulder heals

Your recovery

Because everyone is different, the time it takes you to recover will be unique. You'll go through all the usual stages of rehabilitation, but you could reach some goals sooner or later than described.



THE SIDE EFFECTS OF Shoulder replacement surgery

Your care team understands that your body is unique, and they'll be aware of how best to keep you safe during and after surgery. However, it is always good to be aware of any possible side effects and if at all concerned discuss with your surgeon.

Normal effects after your surgery

As part of the usual healing process, you'll probably experience the following:

A certain amount of pain

Any pain you experience will be at its worst for the first 24 hours after your surgery, and then it should begin to ease.

Your care team will manage your pain with medication.

Swelling and bruising

For several weeks after your surgery, the area around your new shoulder might be swollen, but this will reduce.

Feeling numb

You will likely experience some numbness around the surgery site for the first few weeks after surgery, but this should go away over time.

Like with any surgery, joint replacement can have some risks. To fully understand potential risks and how your care team will help you minimise them, please speak to your surgeon.



Shoulder replacements are among the most successful treatments in medical history, lasting around 15 years. A successful implant will improve your mobility and reduce pain.⁴

You should bear in mind that these are all normal stages of the recovery process and indicate that your body is healing well from your procedure.

⁴ <https://pubmed.ncbi.nlm.nih.gov/25306496/>

GETTING SETTLED

Back at home

The following are some suggestions that might make life a little easier once you're back at home:



You may want to place a pillow behind your elbow when seated or lying down to help decrease pain.



You might feel more tired than normal, so plan rests for mid-morning and mid-afternoon.



Ask someone to help with your housework for a while as you won't be able to pull things towards you, or lift anything heavier than a cup of tea, for up to six weeks after surgery.



Follow your doctor's advice about painkillers.



After surgery, you might have to adjust your diet to help with digestion. You might need to eat more fruits and vegetables and drink more water.



Keep ice packs or bags of frozen peas in your freezer, as your doctor may recommend that you apply ice to your shoulder to help decrease pain. Bags of frozen vegetables work surprisingly well as an ice pack.

It is not uncommon to get a slight increase in pain around 6-12 weeks after surgery.

This is usually a result of increased confidence and therefore increased activity. If you experience an increase in pain, make sure you allow enough time for rest after activity.

Be patient with yourself.

For the first six weeks after surgery, your arm will typically be supported by a sling and you will only be able to move it a small amount.

This limited movement allows your muscles and tendons to heal and allow the bone cement to fully affix to your bone.



Which and when you can take up sports again after your surgery will depend on a number of factors.

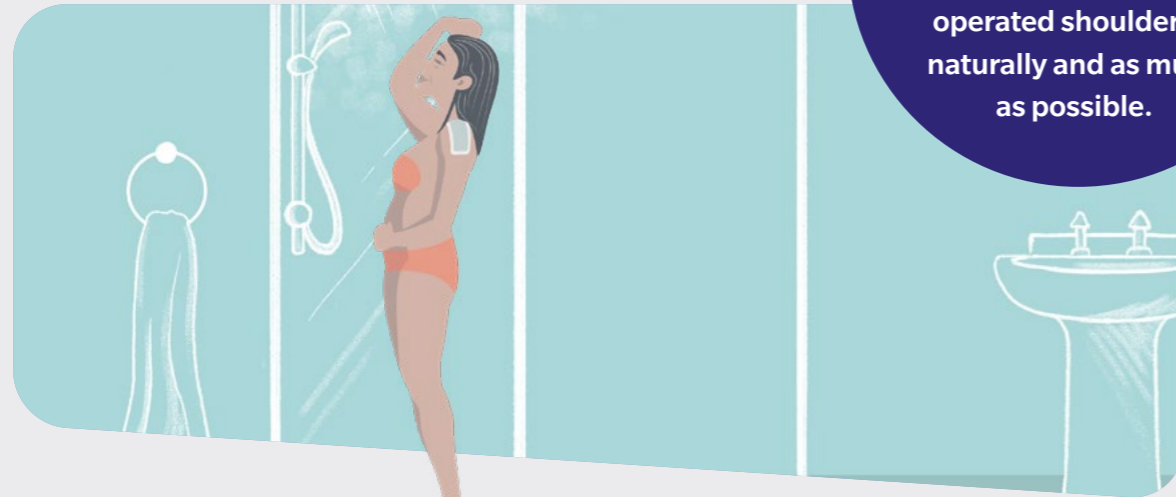
For example how active you were before and how your recovery is progressing. Speak to your care team about what's best for you.



Please make sure to discuss with your healthcare professional first before beginning any physical exercise.

HOW TO MOVE During your recovery

After your surgery, the goal is to be as active as possible and to slowly perform all the tasks of daily life using your operated shoulder as naturally and as much as possible.



Taking a shower or bath

You should keep your wound dry until the sutures have been removed 10-14 days after surgery. You'll be given shower patches to wear in the bath and shower until after your wound has completely healed.



Brushing your teeth

For the first few weeks, you'll have to use your healthy arm to brush your teeth.



Washing, drying and combing your hair

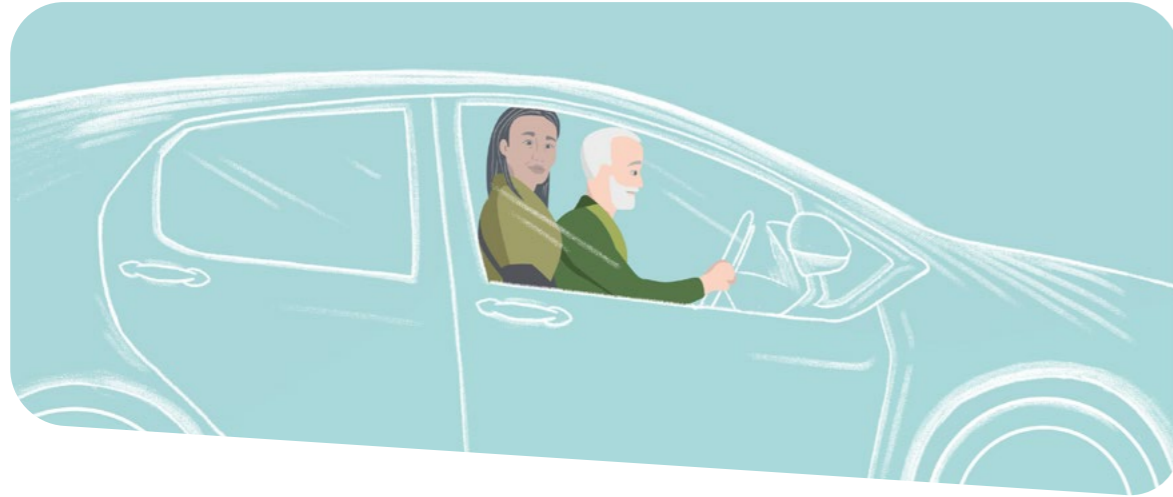
As your shoulder movement will be restricted during the first few weeks, you'll need help brushing or washing your hair. You'll be able to do them on your own typically 8-12 weeks after surgery.



Getting dressed

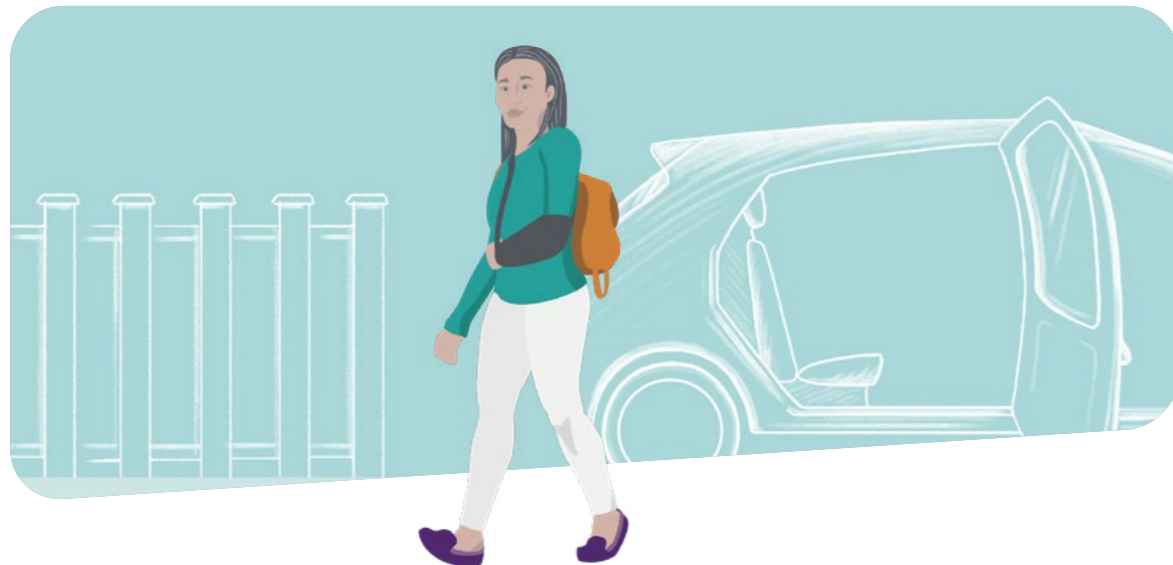
When putting on coats and jackets, always put your operated arm in first, then slip the garment over you with your un-operated arm. When undressing, pull your healthy arm out first and then use it to aid your operated arm.

You should use only your healthy arm to put on pants and socks for the first few weeks. You should also only wear slip-on shoes or those with velcro fastening.



Driving

For the duration of your arm being in a sling, you should not drive a car. In general, you should not drive until the seventh week of your recovery, and only if your doctor tells you it's safe to do so.



Shopping

During the first eight weeks, you shouldn't put extra weight on your operated arm and shouldn't use it to carry shopping bags. To carry things, you should use your healthy arm or a rucksack. After eight weeks, you should carry loads evenly across both of your arms.



Using the toilet

For the first few weeks, you will not be able to reach your buttocks to clean yourself using your operated arm and should use your other arm instead.



Sleeping

During the first six weeks, wear a sling when in bed to protect your implant. Laying on your operated arm will be painful, so you'll naturally avoid it, although it won't harm your new joint.

A FUTURE

You can look forward to

We hope this brochure has answered your questions about your surgery and given you some useful information. If this booklet raises any questions, it may help to write these down and talk them through with your healthcare team at your next hospital appointment.

Your successful shoulder replacement will be the start of you getting back to the activities you love. You'll regain mobility and can look forward to having a better quality of life.

Everyone has their own pathway through shoulder replacement and recovery to life after.

We wish you every success in your journey.

