Revision Total Shoulder Replacement

What is a Revision Total Shoulder Replacement?

A revision total shoulder replacement is a surgical procedure to remove an existing shoulder replacement and implant a new one.

Your surgeon has recommended this operation as a treatment option for you. However, the decision to proceed is entirely yours. This document provides essential information about the benefits and risks of the procedure to help you make an informed choice.

If you have any questions that are not addressed here, it is important to consult your surgeon or healthcare team. Once you feel confident in your understanding and decide to proceed, you will be required to sign an informed consent form. This serves as the final step in confirming your decision.

However, you have the right to change your mind at any stage before the procedure takes place.

What Causes a Shoulder Replacement to Fail?

A shoulder replacement may fail due to several reasons:

- **Wearing out of the artificial joint** – Over time, the artificial joint can wear down, releasing tiny plastic particles that may cause the joint to loosen from the bone.
- **Infection in the shoulder replacement** – An infection can weaken the attachment of the shoulder replacement, making it unstable.
- **Dislocation (joint coming out of place)** – Frequent dislocations may require surgical intervention to prevent recurrence.
- **Fracture (bone break) around the shoulder replacement** – A heavy fall can result in a fracture near the implanted joint.

These issues can cause pain and limit the function of your shoulder. Your surgeon will explain why a revision total shoulder replacement is recommended in your case.

What Are the Benefits of Surgery?

A revision total shoulder replacement aims to restore stability and function to your shoulder. You should experience improved mobility, reduced pain, and an increased ability to perform daily activities.

Are There Any Alternatives to Surgery?

Surgery is the only definitive treatment for a failing shoulder replacement. However, some temporary measures may be considered in specific cases:

- If your **shoulder replacement is wearing out**, delaying surgery may result in further bone damage. Early intervention reduces the risk of complications.
- If you have an **infection**, long-term antibiotics might help manage symptoms but will not cure the infection unless the implant is removed.
- If your **shoulder dislocates frequently**, wearing a brace might help keep it in place, but it is often uncomfortable and restrictive.
- If you have a **fracture around the shoulder replacement**, surgical intervention is usually required for proper healing.

What Will Happen if I Decide Not to Have the Operation?

If your shoulder replacement **loosens due to wear or infection**, pain will likely worsen over time. The surrounding bone may become thin and could eventually break (fracture), requiring a more complex surgery to fix both the fracture and the joint.

If an **infection spreads**, it can affect other artificial joints or vital organs, posing serious health risks. Your surgeon will discuss the potential consequences of not proceeding with surgery.

What Does the Operation Involve?

Before the procedure, the healthcare team will perform multiple checks to ensure the correct surgery is performed on the correct shoulder. You will also be asked to confirm your identity and the operation details.

The surgery involves the following steps:

1. **Anesthesia** – Various anesthesia options are available, and your anesthetist will discuss the best choice for you.
2. **Antibiotics** – You may receive antibiotics during the operation to reduce the risk of infection.
3. **Incision** – The surgeon will make a cut at the front of your shoulder.
4. **Assessment and Joint Repair**
    - If your **shoulder is unstable but the replacement is intact**, your surgeon may repair the surrounding ligaments or replace specific components rather than the entire joint.
    - If your **shoulder replacement is worn or loose**, the surgeon will remove the old implant and any remaining cement. This step can be complex and time-consuming.
5. **Insertion of the New Shoulder Replacement** – A new artificial joint is implanted to restore function and stability.
6. **Closure** – The incision is closed with stitches or clips.

The complexity of the surgery depends on the condition of the bone and the presence of an infection:

- **If the bone is thin or fractured**, additional reinforcement may be needed using a bone graft, metal mesh, cables, or a specialized metal cage.
- **If an infection is present**, a two-stage procedure is often required:

1. **First operation** – The surgeon removes the infected shoulder replacement, any remaining cement, and infected tissue. Antibiotics are placed inside the joint, and intravenous antibiotics are administered for several weeks.
2. **Second operation** – Once the infection has cleared (typically in 2–3 months), a new shoulder replacement is implanted.

Your surgeon will discuss the specific approach suited to your condition and expected recovery process.

What Should I Do About My Medication?

Inform your healthcare team about all the medications you are taking, including:

- Prescription drugs
- Blood-thinning medications
- Herbal and complementary remedies
- Dietary supplements
- Over-the-counter medications

Follow their instructions carefully, as some medications may need to be adjusted or stopped before surgery to reduce the risk of complications.

How Can I Prepare Myself for the Operation?

Taking certain steps before surgery can help reduce the risk of complications and improve your recovery.

- **Stop smoking** – Quitting smoking before surgery lowers the risk of complications and improves long-term health.
- **Maintain a healthy weight** – Being overweight increases the risk of complications. Try to achieve a stable, healthy weight before surgery.
- **Exercise regularly** – Staying active before the operation can aid in recovery and improve your overall health. Consult your GP or healthcare team for suitable exercises.
- **Prevent infections** – Reduce your risk of infection by:
  - Avoiding shaving or waxing the surgical area in the week before surgery.
  - Taking a bath or shower the day before or on the day of the operation.
  - Keeping warm before and after surgery – inform the healthcare team if you feel cold.
  - Maintaining good blood sugar control if you have diabetes.

Speak to the healthcare team about necessary vaccinations to protect against infections during recovery. When admitted to the hospital, practice proper hand hygiene and wear a face covering when required.

What Complications Can Happen?

The healthcare team will take precautions to minimize complications. However, risks vary depending on factors such as age, weight, smoking history, and underlying health conditions like diabetes, heart disease, or lung disease. Some complications can be serious and even life-threatening.

Your anesthetist will discuss the risks related to anesthesia. Speak with your doctor if you need clarification on any concerns.

General Complications of Any Operation

- **Bleeding** – You may experience bleeding during or after surgery, potentially requiring a blood transfusion.
- **Surgical site infection** – While it is usually safe to shower after two days, check with your healthcare team. Keep the wound dry and covered. Contact your doctor if you develop a high

temperature, notice pus in the wound, or experience redness, soreness, or pain. Most infections resolve with antibiotics, but in some cases, additional dressings or another operation may be needed. Do not take antibiotics unless prescribed by your doctor.

- **Allergic reaction** – Some individuals may have allergic reactions to medications, surgical materials, or equipment. Inform your doctor of any known allergies or past reactions to medications, tests, or dressings.
- **Venous thromboembolism (VTE)** – This includes:
    - **Deep-vein thrombosis (DVT)** – A blood clot in the leg, which can cause pain, swelling, redness, or enlarged surface veins.
    - **Pulmonary embolism (PE)** – A clot that travels to the lungs, causing shortness of breath, chest or upper back pain, or coughing up blood. If this occurs, seek emergency medical attention immediately.
    - The healthcare team will assess your risk for VTE and may provide blood-thinning medications, compression stockings, or encourage early mobilization after surgery.
- **Chest infection** – You may require antibiotics and physiotherapy. The risk is reduced if you stop smoking and are free from COVID-19 symptoms for at least seven weeks before surgery.
- **Heart attack** – A heart attack occurs when part of the heart muscle dies, which can sometimes be fatal.
- **Stroke** – A stroke results from an interruption of blood supply to the brain and can lead to severe complications, including death.

Specific Complications of This Operation

Although the healthcare team takes precautions to minimize risks, complications may still occur. The specific risks associated with a revision total shoulder replacement include:

- **Nerve Damage** – Damage to the nerves around your shoulder can lead to weakness, numbness, or pain in your shoulder or arm (**risk: less than 1 in 100**). This often improves over time but may be permanent in some cases.
- **Infection** – If an infection develops, it can lead to loosening and failure of the shoulder replacement (**risk: less than 1 in 100**). Additional surgery is usually required to control the infection.
- **Loosening Without Infection** – Over time, the shoulder replacement may become loose, necessitating another operation to replace it (**risk: 1 in 20 over 8 years**).
- **Rotator Cuff Tears** – The rotator cuff consists of four muscles and tendons that connect the arm to the shoulder blade. Tears in this structure may require surgical repair.
- **Dislocation of the Shoulder Replacement** – The artificial joint can become unstable and dislocate (**risk: less than 1 in 50 in the first 5 years**). If this happens repeatedly, additional surgery may be needed.
- **Stiff Shoulder** – While mobility usually improves after surgery, some patients experience limited movement. The shoulder will never feel exactly like a normal joint.
- **Failure of the Revision Shoulder Replacement** – Over time, the artificial joint may wear out or the original issue may reoccur, requiring further surgery (**risk: 3 in 20 by 15 years after the operation**).

Consequences of This Procedure

- **Pain Management** – Pain is expected after surgery. The healthcare team will provide medication to help control it, and it is crucial to take it as directed to facilitate movement and rehabilitation. A splint or sling may be used to support the shoulder and reduce discomfort.
- **Scarring** – Although revision shoulder replacement wounds usually heal well, some scarring may be visible.

How Soon Will I Recover?

In Hospital

After surgery, you will be moved to the recovery area and then to the ward. An **X-ray** will usually be performed to check the positioning of your shoulder replacement.

- A **physiotherapist** will guide you in starting shoulder movement, typically within 1–2 days.
- If your shoulder is unstable, if ligament repair was required, or if the surgery was complex, you may need to **rest your shoulder for up to 6 weeks** before beginning physiotherapy.
- You should **keep your wound dry** for 4–5 days and use a **waterproof dressing** when bathing or showering.
- The healthcare team will inform you if **stitches or clips** need to be removed and how often dressings should be changed.
- Most patients **go home after 2–3 days**, though some may require a longer hospital stay.

If you experience any concerns while in the hospital or at home, contact the healthcare team for advice and support.

Returning to Normal Activities

To prevent blood clots, follow the healthcare team's instructions regarding **medication and compression stockings** if prescribed.

- **Wear a sling** to minimize tension on your shoulder joint.
- **Recovery from a revision shoulder replacement generally takes longer** than recovery from a first-time shoulder replacement.
- **Regular exercise** is essential for regaining mobility, but consult your GP or physiotherapist before starting any new activity.
- **Driving and cycling** should only be resumed when you can fully control your vehicle, including in an emergency. Always check with your **insurance provider** and the healthcare team before returning to these activities.

The Future

- **Avoid high-risk activities** such as contact sports, using heavy tools like hammers, or engaging in any actions that increase the likelihood of falling.
- **Follow physiotherapy recommendations** to strengthen your shoulder and maintain joint function.
- **An artificial shoulder will never feel exactly like a natural shoulder**, so it is important to take care of it.
- **Long-term durability** – A revision total shoulder replacement can fail over time due to wear or the recurrence of the original problem (**risk: 3 in 20 by 15 years**).

Most patients recover well and experience significant improvements in function and quality of life after surgery.

Summary

If your original shoulder replacement fails, a **revision total shoulder replacement** can usually be performed to restore function and relieve pain. If the revision surgery is **successful**, you should be able to **resume many of your normal activities** with improved shoulder mobility.

Although **surgery is generally safe and effective**, complications can occur. Understanding these potential **risks** will help you make an **informed decision** about whether to proceed with the operation. Awareness of

possible complications also allows for **early detection and treatment** of any issues that may arise during recovery.

Keep this document as a reference. It can be useful if you need to discuss your condition with the healthcare team.

Some of the **risk and complication statistics** provided in this document are based on global studies and clinical databases. Your **surgeon or doctor** can give you more detailed information about the risks **specific to your case** and discuss any **alternative treatment options** that may be suitable for you.

This document is **for informational purposes only** and should not be considered a substitute for **personalized medical advice** from your **healthcare team**. Always consult your surgeon or doctor for guidance tailored to your individual health needs.

Professor M. A. Imam
MD, D.SportMed, PhD, FRCS (Tr and Orth)
Subspecialist in Upper limb and Complex trauma reconstruction
Tel: 020 3384 5588
info@thearmdoc.co.uk
www.thearmdoc.co.uk