

OS41 Revision Total Knee Replacement

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What is a revision total knee replacement?

A revision total knee replacement is an operation to take out parts of your old knee replacement and put in new ones.

Your surgeon has suggested a revision total knee replacement operation. However, it is your decision to go ahead with the operation or not. This document will give you information about the benefits and risks to help you to make an informed decision.

If you have any questions that this document does not answer, it is important that you ask your surgeon or the healthcare team. Once all your questions have been answered and you feel ready to go ahead with the procedure, you will be asked to sign the informed consent form. This is the final step in the decision-making process. However, you can still change your mind at any point.

What causes a knee replacement to fail?

A knee replacement can fail for the following reasons.

- Wearing out of the artificial joint – This releases tiny bits of material that can cause damage to the bone and soft tissues around the joint or cause the joint to come loose from the bone.
- Infection in your knee replacement – Infection can make your knee replacement come loose from the bone.
- Dislocation (coming out of joint) – You may decide to have an operation to try to prevent this from happening again.
- Fracture (break) of the femur or the tibia around your knee replacement – This can happen if you fall heavily on your knee.

These problems can make it difficult for you to walk, and sometimes cause pain. Your surgeon will discuss with you why they have recommended a revision total knee replacement.

What are the benefits of surgery?

You should get less pain and be able to walk more easily.

Are there any alternatives to surgery?

If your knee replacement is wearing out, it may only be happening slowly. If your symptoms are mild, you and your surgeon may decide to watch and wait for a while. You will need to have regular x-rays.

If your knee replacement keeps coming out of joint, you can wear a brace to try to keep your knee in place. A brace is large and may be uncomfortable.

If you have an infection in your knee replacement, using antibiotics over the long term you sometimes prevent your knee replacement from failing. However, it is not usually possible to cure an infection without removing your knee replacement and having a long course of strong antibiotics.

If you have a fracture near your knee but the replacement is still well fixed to the bone, your surgeon may be able to fix the break with plates and screws without changing your knee replacement. Sometimes the break can be treated using a splint or cast. This does not always work and can make your knee replacement stiff.

What will happen if I decide not to have the operation?

If your knee replacement is coming loose because of wear or infection, it will probably get more painful over time. The bone around a loose knee replacement can get thin and it may break (fracture). It is likely that you will need a major operation to fix the fracture and do your knee replacement again.

If you have an infection in your knee replacement, it can spread to other places around your body, including other artificial joints and vital organs.

Your surgeon will discuss with you what is likely to happen.

What does the operation involve?

The healthcare team will carry out a number of checks to make sure you have the operation you

came in for and on the correct side. You can help by confirming to your surgeon and the healthcare team your name and the operation you are having.

Various anaesthetic techniques are possible. Your anaesthetist will discuss the options with you. You may be given antibiotics during the operation to reduce the risk of infection.

Your surgeon will make a cut on the front of your knee. They will remove your knee replacement and any cement. This often takes a long time and can be difficult.

Your surgeon will put in a new knee replacement, which is often larger than your old one.

Your knee replacement is fixed into the bone using acrylic cement or special coatings on your knee replacement that bond directly to the bone. Your surgeon will close your skin with stitches or clips.



A revision total knee replacement

The type of surgery you need can be more complicated if you have an infection, or the bone is thin or broken. Your surgeon will discuss with you what the operation is likely to involve.

- If your bone is thin or has broken, they may need to build it up with a bone graft or with extra metal.
- If you have an infection in your knee replacement, you may need to have two separate operations. In the first, your surgeon will remove your old knee replacement, any cement and all infected material. They will put antibiotics in your knee and you will also need antibiotic injections for several weeks. An infection may take 2 to 3 months to go completely. You will need a second operation to put in the new knee replacement. This operation is not always a success and you may need to have a knee fusion (arthrodesis) to fix the bones in your knee together.

What should I do about my medication?

Make sure your healthcare team knows about all the medication you take and follow their advice. This includes all blood-thinning medication as well as herbal and complementary remedies, dietary supplements, and medication you can buy over the counter.

How can I prepare myself for the operation?

If you smoke, stopping smoking now may reduce your risk of developing complications and will improve your long-term health.

Try to maintain a healthy weight. You have a higher risk of developing complications if you are overweight.

Regular exercise should help to prepare you for the operation, help you to recover and improve your long-term health. Before you start exercising, ask the healthcare team or your GP for advice.

You can reduce your risk of infection in a surgical wound.

- In the week before the operation, do not shave or wax the area where a cut is likely to be made.
- Try to have a bath or shower either the day before or on the day of the operation.
- Keep warm around the time of the operation. Let the healthcare team know if you feel cold.
- If you are diabetic, keep your blood sugar levels under control around the time of your procedure.

Speak to the healthcare team about any vaccinations you might need to reduce your risk of serious illness while you recover. When you come into hospital, practise hand washing and wear a face covering when asked.

What complications can happen?

The healthcare team will try to reduce the risk of complications.

Any numbers which relate to risk are from studies of people who have had this operation. Your doctor may be able to tell you if the risk of a complication is higher or lower for you. Some risks are higher if you are older, obese, you are a smoker or have other health problems. These health problems include diabetes, heart disease or lung disease.

Some complications can be serious and can even cause death (risk: 1 in 150).

You should ask your doctor if there is anything you do not understand.

Your anaesthetist will be able to discuss with you the possible complications of having an anaesthetic.

General complications of any operation

- Bleeding during or after the operation. You may need a blood transfusion.
- Difficulty passing urine. You may need a catheter (tube) in your bladder for 1 to 2 days.
- Infection of the surgical site (wound) (risk: 1 in 200). It is usually safe to shower after 2 days but you should check with the healthcare team. Keep your wound dry and covered. Let the healthcare team know if you get a high temperature, notice pus in your

wound, or if your wound becomes red, sore or painful. An infection usually settles with antibiotics but you may need special dressings and your wound may take some time to heal. In some cases another operation might be needed. Do not take antibiotics unless you are told you need them.

- Allergic reaction to the equipment, materials or medication. The healthcare team is trained to detect and treat any reactions that might happen. Let your doctor know if you have any allergies or if you have reacted to any medication or tests in the past.
- Acute kidney injury. A large drop in your blood pressure during the operation can damage your kidneys. Other risk factors include kidney disease, diabetes, high blood pressure, obesity and some medications. The healthcare team will monitor your condition closely to reduce the chance of this happening. Any kidney damage is usually short lived although some people may need to spend longer in hospital. A small number can go on to develop chronic kidney disease that may require dialysis.
- Blood clot in your leg (deep-vein thrombosis – DVT) (risk: 1 in 200). This can cause pain, swelling or redness in your leg, or the veins near the surface of your leg to appear larger than normal. The healthcare team will assess your risk. They will encourage you to get out of bed soon after the operation and may give you injections, medication, or inflatable boots or special stockings to wear. Let the healthcare team know straight away if you think you might have a DVT.
- Blood clot in your lung (pulmonary embolus), if a blood clot moves through your bloodstream to your lungs (risk: 1 in 200). Let the healthcare team know straight away if you become short of breath, feel pain in your chest or upper back, or if you cough up blood. If you are at home, call an ambulance or go immediately to your nearest Emergency department.
- Chest infection (risk: 1 in 350). You may need antibiotics and physiotherapy. Your risk will be lower if you have stopped smoking and you are free of Covid-19 (coronavirus)

symptoms for at least 7 weeks before the operation.

- Heart attack (where part of the heart muscle dies) (risk: 1 in 1,000). A heart attack can sometimes cause death.
- Stroke (loss of brain function resulting from an interruption of the blood supply to your brain) (risk: 1 in 500). A stroke can sometimes cause death.

Specific complications of this operation

- Split in the bone when your knee replacement is inserted, if the bone is weak (risk: 1 in 75). Your surgeon may need to fix the bone in place or use a different type of knee replacement.
- Damage to ligaments or tendons near your knee. Your surgeon may need to repair the damage using stitches, a piece of tendon from somewhere else in your body, or an artificial material.
- Damage to nerves around your knee, leading to weakness, numbness or pain in your leg or foot (risk: 1 in 1,000). This usually gets better but may be permanent.
- Damage to blood vessels around your knee, leading to loss of circulation to your leg and foot (risk: 1 in 1,000). You will need surgery straight away to restore the blood flow.
- Infection in your knee, which can result in loosening and failure of your knee replacement. The risk is higher if you had an infection in your knee replacement before the operation. You will usually need one or more further operations to control the infection. If you get any kind of infection, including a dental infection, get it treated straight away as the infection could spread to your knee.
- Loosening without infection. You may need another operation to do your knee replacement again.
- Dislocation of your knee replacement. You will usually need another operation, sometimes urgently.
- Continued discomfort in your knee, even though your knee replacement works well.

- Severe pain, stiffness and loss of use of your knee (complex regional pain syndrome - CRPS). The cause is not known. You may need further treatment including painkillers and physiotherapy. Your knee can take months or years to improve. Sometimes there is permanent pain and stiffness.

Consequences of this procedure

- Pain. The healthcare team will give you medication to control the pain and it is important that you take it as you are told so you can move about as advised.
- Unsightly scarring of your skin, although revision knee-replacement wounds usually heal to a neat scar.

How soon will I recover?

In hospital

After the operation you will be transferred to the recovery area and then to the ward. You will usually have an x-ray to check the position of your knee replacement.

The physiotherapist will help you to start walking using crutches or a walking frame, usually on the day of surgery or the next day.

You may need to wear a brace to protect your knee. Follow the advice of the physiotherapist on how to use it. Your surgeon or the physiotherapist will tell you how much weight you can put on your leg.

Keep your wound dry for 4 to 5 days, and use a waterproof dressing when you have a bath or shower.

The healthcare team will tell you if you need to have any stitches or clips removed, or dressings changed.

You can go home when your pain is under control, you can get about safely, and any care you may need has been arranged.

If you are worried about anything, in hospital or at home, contact the healthcare team. They should be able to reassure you or identify and treat any complications.

Returning to normal activities

To reduce the risk of a blood clot, make sure you carefully follow the instructions of the healthcare team if you have been given medication or need to wear special stockings.

The healthcare team will tell you when you can return to normal activities. To reduce the risk of problems, it is important to look after your new knee as you are told.

You will need to use walking aids until you can walk well without them. It often takes longer to recover from a revision knee replacement than your first knee replacement. If your knee replacement does not bend well, your surgeon may need to manipulate it (risk: 1 in 40).

Regular exercise should help you to return to normal activities as soon as possible. Before you start exercising, ask the healthcare team or your GP for advice.

Do not drive until you can control your vehicle, including in an emergency, and always check your insurance policy and with the healthcare team.

The future

Most people make a good recovery and most revision total knee replacements work well. It is important to follow the advice the physiotherapist gives you about exercises to strengthen your knee muscles. It is common for your leg to be swollen after a knee replacement. It can take up to a year for the swelling to go down.

A revision total knee replacement can fail with time, if it wears out, or the original problem comes back. You may need another operation (risk: 1 in 6 by 10 years after the operation).

Summary

If your original knee replacement fails, you can usually have another operation to do your knee replacement again. If this revision operation is successful, you should be able to continue many of your normal activities.

Surgery is usually safe and effective but complications can happen. You need to know about them to help you to make an informed decision about surgery. Knowing about them will also help to detect and treat any problems early.

Keep this information document. Use it to help you if you need to talk to the healthcare team.

Some information, such as risk and complication statistics, is taken from global studies and/or databases. Please ask your surgeon or doctor for more information about the risks that are specific to you, and they may be able to tell you about any other suitable treatments options.

This document is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.

Acknowledgements

Reviewers

Bill Donnelly (MBBS, BMedSci, FRACS)

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