



Nigel Donnachie

Consultant Hip & Knee Surgeon

REVISION KNEE REPLACEMENT

A knee replacement may fail in time. This means that parts of, or the entire knee replacement may become loose or wear out. This causes the artificial joint to become unstable and as a result you may experience pain and / or difficulty in walking. It is therefore necessary to replace the loose or worn parts of your knee replacement and this is what is meant by “revision knee replacement”.

A revision knee replacement may also be required if you have developed an infection in your existing knee replacement which has not responded to other treatments such as antibiotics.

What does the operation involve?

The operation usually takes place under a general anaesthetic or a combined general and spinal anaesthetic.

The complexity of the operation depends largely upon which components of your knee replacement need to be revised. The following are forms of revision knee replacement:

- **Total Revision** - Where all components of the original knee replacement are revised.
- **Polyethylene Exchange** – Where the plastic insert is exchanged but the metal parts of the original knee replacement are left intact

Both of these operations are technically demanding and take considerably longer to perform than a normal knee replacement. The length of the operation often depends upon how difficult it is to remove the original prosthesis and whilst Mr Donnachie will make an assessment of the estimated operating time prior to surgery, it is not always possible to establish exactly how complex the procedure will be until the operation is in progress. However, as a general guide a **Polyethylene Exchange** usually takes less time than a **Total Revision** procedure. In many cases the operative time is approximately 2 - 3 hours.

Removal of the original prosthesis can cause damage to the underlying bone although every attempt is made to preserve as much good bone as possible.

Revising an Infected Knee replacement

When a revision knee replacement is being performed because of infection the operation is usually performed in two stages several weeks or even months apart. This is to ensure the optimum chance of the knee being cleared of infection before the new replacement joint is implanted.



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The first stage involves removal of the existing knee replacement and thorough debridement of the surrounding tissues. A temporary “spacer” made from bone cement and containing antibiotics is then inserted into the space where the knee replacement was. You will be given intravenous antibiotics for a short period following the procedure.

The second stage involves removal of the cement spacer after which the new knee replacement is implanted.

You may be able to go home between stages one and two. Your surgeon will advise you if this is likely to be the case for you.

In some cases, it may be appropriate to perform both of these stages in one operation. This is called a 2 in 1 revision knee replacement. The benefits of this procedure are that you only need one operation and one anaesthetic and you do not need to spend any time without a knee replacement in place. However, this type of procedure carries a slightly higher risk of the infection not being fully cleared. Your surgeon will advise you if it is felt that this type of revision knee replacement is appropriate for you.

What Type of Knee Replacement Will Be Used to Replace the Existing One?

The type of knee replacement used to replace your existing one will depend on a number of factors including the quality of your bone and the previous presence of infection in the joint. Mr Donnachie will make this decision before and sometimes during your operation.

What are the benefits of revision knee replacement?

A successful revision knee replacement will give relief from pain and should allow sufficient movement in the knee joint for you to undertake most normal activities. The overall aims of surgery are:

- Relief of pain in the knee
- Correction of any deformity
- Improved stability in the knee
- Restoration of any loss of function in the knee
- Improvement in your quality of life

What are the possible complications?

Depending on the condition of your knee prior to surgery, a good result can be expected in approximately 90% of cases. However, some patients face a higher complication rate than others, which will reduce the chances of a good result. Mr Donnachie will warn you if this is the case.



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The following risk factors exist for any patient undergoing total knee replacement:

- Medical risks e.g. Heart attack, stroke, clots in the leg (deep vein thrombosis) or lung (pulmonary embolism)
- Infection in the wound, or in the knee joint itself
- Wear / loosening of the artificial knee
- Dislocation of the artificial knee
- Nerve injury
- Excessive bleeding, requiring blood transfusion
- Risk of fracture
- Re-operation
- Amputation
- Death

High risk groups

There are some people who come under the category of high risk and these include people who:

- Have had multiple operations to the affected knee
- Have had previous infection within the knee
- Have inflammatory arthritis, rheumatoid arthritis or psoriasis
- Have major medical problems
- Take certain drugs such as steroids or immunosuppressant medication

What is the alternative to surgery?

Revision knee replacement is required when your existing knee replacement has failed. Mr Donnachie will advise you if it is safe to continue without further surgery. However, in many cases doing so would put you at risk of fracturing the bone around your knee replacement as this can become weak as a result of the knee replacement failing. Not only would this cause you undue distress and pain, it would make a revision knee replacement much more difficult to undertake.

Recovery

Most patients will start to take a few steps on their new knee on the day of or day after the operation. Your physiotherapist will advise you when to do this and will provide you with specific exercises to perform whilst in hospital and when you go home. These exercises may be painful at first but they are an essential part of your post-operative recovery and if they are not performed you face a high probability that your revision knee replacement will not be as successful as you had hoped.



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You will remain in hospital for approximately five days after surgery. You will be walking without assistance before discharge but will require stick for support during the initial stages of rehabilitation.

It is expected that you will be able to manage independently at home although you will not be able to drive for at least six weeks after the operation so it is helpful if you have someone available who can help with activities such as shopping at first.

Most patients report some immediate benefit from surgery but overall recovery can sometimes feel slow and this can be a little frustrating. The first three to four months after discharge involve a lot of hard work on your part in order to get the knee working properly.

You play an important part in your recovery. Whilst the physiotherapy, nursing and medical staff provide important advice and support, only you can get the knee moving. It is therefore important that you are well motivated and committed to working hard both in hospital and following discharge.

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