The National Joint Registry for England, Wales and Northern Ireland is working to improve your experience of joint replacement.

Patient FAQs
Summary of key facts
Hospitals and surgeons
Procedures and implants

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/nationaljointregistry
HQIP Healthcare Quality Improvement Partnership

Health & care information you can trust

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Welcome to this Public and Patient Guide to the NJR Annual Report 2014

As joint replacement patients, we know how important it is to receive good quality information to help you understand more about your options and the treatment that has been recommended for you. That’s why the NJR continues to produce a patient guide alongside its main report.

Joint replacement is a highly successful operation that can bring relief from pain and improve mobility. In fact, looking at patient feedback before and after their operation, a national survey that looked at patient feedback before and after their operation revealed that the majority of patients were more than satisfied after their operation and 70.8% reported they were much better¹. However, going through the process can be baffling and many patients do not always understand their options or the detail of their treatment plan. There are also lots of variables that can affect the final outcome for each individual. We know that access to NJR data – including details of more than 1.85 million operations carried out since 2003 – can be a helpful tool for thought and discussion.

We hope this guide provides information to help you consider questions for your surgeon and healthcare team about the treatment and implant recommended for you. The same is true for friends and family members who might be supporting you at this time.

We hope you seek out support, or share this guide with others in order to get a better sense of how the information and data inside can help you.

Whatever the reason for your knee replacement, there are many others going through the same process, and it may help to know you are not alone. There is additional support out there for you on shared decision-making as well as advice on looking after yourself before and after surgery. We have listed some of the organisations that can help at the back of this guide.

The National Joint Registry, now in its 11th year, doesn’t work in isolation – the information in this document is just one source that we hope will help you feel more confident in asking questions about your surgery, your implant and your recovery.

We will produce this guide each year, as the NJR continues to report on the growing number of joint replacement records it holds. Feedback is welcome at any time and you can contact NJR Communications on 020 7997 7370 or email: communications@hqip.org.uk

We would like to extend thanks as always to our NJR Patient Network, for their helpful thoughts, ideas and comments in ensuring this guide is as useful to patients as it can be.

¹. PROMs are a series of pre- and post-operative questionnaires that ask patients about their experience and perspective of the quality of care and treatment received in England. These results are taken from 98,507 knee replacement patients who filled in both questionnaires between 2009-2012.
What knee replacement patients said about their progress after surgery

2. Overall, patients who filled in both questionnaires tended to be healthier before surgery therefore would be less likely to have potential complications after the operation.
About the NJR

How does the NJR help patients?
We record information about joint replacement operations in England, Wales and Northern Ireland in order to monitor the results of joint replacement surgery and protect patient safety. Using those records, we provide information and evidence to:

- Help surgeons choose the best artificial joints (implants) for patients
- Empower patients by helping them find out more about the implants available to them
- Improve patient safety by showing how well implants, surgeons and hospitals perform and take action where it is needed
- Give hospitals, surgeons and implant manufacturers feedback about their performance to help them improve patient care
- Help surgeons quickly decide whether patients need to return to hospital if implant problems are found

We currently collect information on hip, knee, ankle, elbow and shoulder procedures however elbow and shoulder joint replacements have only been part of the registry since April 2012.

England and Wales have been covered since 2003 and Northern Ireland joined in February 2013. Currently, Scotland has its own joint replacement registry.

What information is collected?
Your hospital will input specific details of your operation into the NJR. This will include the type of implant you received, which surgical technique was used, which side of your body the implant went into as well as your age and gender.

The NJR asks all patients to consent to have their personal details (name, date of birth, address and NHS or national patient number) recorded with their operation details – this allows the NJR to be more effective in its role of monitoring and improving patient care.

Why does the NJR need my personal details?
Your details allow the NJR to link you to the implant(s) you received during surgery. If for instance, you need an operation in the future to replace a first-time implant, the NJR can measure the time between the operations. Adding together this time from all patients’ operations tells us how well different implants, hospitals and surgeons perform.

Also, in the rare event that a problem is found with a particular brand or type of implant, recording your personal details on the NJR can also speed up and support the hospital process of reviewing affected patients.

Please be assured that your personal information is kept confidential at all times and secure protocols are in place to ensure it is kept safe. If you would like more information about this then please see the NJR patient consent form and NJR patient information leaflet. Alternatively, you can find out more on our website at www.njrcentre.org.uk

Giving your consent is voluntary however, 91.8% of patients agreed to have their details added to the NJR last year.

Who else do you share the data with?
There are lots of different ways we share and use the data, ensuring that the evidence we collect is used to inform clinical decisions and improve joint replacement surgery. For example, surgeons, hospital management and manufacturers of implants can all use their own unique online system (via a secure log-in) designed to give them access to information that can inform, influence and improve their work.

Security and confidentiality is always paramount and there are multiple safeguards in place to ensure that patient identities are protected.
Can I access the information recorded about me?

Yes. As a patient, if you gave consent to have your details added to the NJR, you can request to see your records at any time by completing a patient operation request form. This is available to download from www.njrcentre.org.uk.

I’ve heard the data are also used for research?

We are pleased to have an active research policy and make sets of data available for specific research so that more can be learnt about implants, surgery and their results. The release of data for projects are subject to very strict scientific and ethical controls and are only approved where they can prove that the work will enhance the understanding of joint problems and how they can be best treated.

An example here is the NJR’s extended Patient Reported Outcome Measures (PROMS) project (mentioned in the welcome). These are questionnaires sent to patients before and after surgery to collect measurements of pain and physical function. We are following-up with a group of 50,000 patients at the moment and have recorded information at 1 and 3 years and will soon be planning to do this again at 5 years. This research project was approved because it can help build up a very detailed picture of the factors that are most important in ensuring a successful surgical outcome from the patient’s perspective.
About knee replacement

There are many organisations that provide additional general information about joint replacement, including specific guidance before and after surgery as well as online discussion forums. Please see page 19 for their contact details.

What is a knee replacement?

A knee replacement, often referred to as a knee implant (and sometimes simply as a ‘device’), is, in basic terms, an artificial implant that replaces a knee joint that is damaged.

Joint replacements are nearly always carried out because of pain that cannot be controlled by other methods such as painkillers, physiotherapy or other surgery. The most common cause of pain is osteoarthritis or inflammatory arthritis.

What healthcare staff will be involved with my treatment?

Once it has been suggested to you (commonly by your GP) that a knee replacement may be advisable, they may well refer you to a musculoskeletal clinic (MSK) or another GP with a speciality in the area for further assessment.

If you are then referred to hospital you will see an orthopaedic surgeon or a member of his or her team. This may be followed by a pre-surgery assessment clinic(s) where you may be seen by nurse practitioners. Either at this clinic, or on the day of your surgery, you will also see an anaesthetist to discuss options for anaesthesia and pain relief.

These appointments are also the times when you are most likely to receive information about the registry and be asked whether you would like to consent to have your personal details recorded. Your hospital should ask you to consent to your details being entered into NJR, and we recommend that you do. Please ask for the NJR consent form if it is not offered to you.

During your hospital stay, you might also see an occupational therapist or physiotherapist who will advise you on your aftercare and help you prepare for your recovery after the hospital stay.

Together, these healthcare staff make up what is commonly called your healthcare or clinical team.

Do I have to have a knee replacement? What are the alternatives to surgery?

The final decision to have an operation or not remains with you the patient. It will be based on the risks and benefits of having a knee replacement or choosing not to (these choices should be made clear to you). It may be that other options are available including, but not limited to, medication, physiotherapy, weight loss or other lifestyle changes.

Can I choose which hospital and surgeon perform the operation?

In principle, yes — as part of the NHS Choices initiative, you do have the option in England to be referred to a specific hospital or surgical team (options may be more limited elsewhere). Of course each individual case is unique, and the reasons for requesting a specific hospital need to be justified, as do any costs and other implications associated with a request to be treated at a non-local hospital. The NHS is not able to provide a commitment that a specific surgeon will carry out your operation.

Can I get a second opinion?

The appointments you have prior to the operation (referrals to a musculoskeletal clinic and/or hospital-based assessments) are designed to further discuss and analyse your GP’s initial diagnosis.

You could also use services like NJR Surgeon and Hospital Profile at www.njrsurgeonhospitalprofile.org.uk and NHS Choices to find out more about the hospitals and surgeons that provide services in your area. The services currently cover England but may extend to Wales and Northern Ireland in the future.
What are the risks involved with having a joint replacement procedure?

The overall risk involved in joint replacement is very low. With any surgical procedure there is a small risk of medical complications such as heart attack, stroke and developing blood clots (thrombosis). Infection is rare, typically less than 1%.

Other surgical problems are also rare, but include dislocation, fracture, unequal length, nerve damage, pain and stiffness. Your surgeon will go through all of the risks before you sign a surgery consent form.

With time, some implants wear out or become loose and occasionally break, leading to the need for further replacement (revision) surgery. The latest NJR data shows that most patients have less than a 5% chance of needing revision replacement surgery within ten years of having the original operation. In many cases, patients’ implants last for much longer than ten years.

What kind of implant (artificial joint) will be used? Are there options?

There are several types of implant largely described by how they are put together and the materials that they are made out of. As part of your hospital-based assessments, the most suitable device for your individual situation will be established and you will be able to discuss this choice with your surgeon. The most regularly used implants and options are outlined in this guide on page 12. Evidence on the revision rates for different types of implant and for different brands of implant can be found (in part) on page 16 of this guide and in the full NJR Annual Report at www.njrreports.org.uk starting at page 82.

How can I find out how many joint replacement procedures my local hospital carries out and the results of those operations?

For the third time, the NJR has published hospital-level information for hip and knee replacements as part of its full NJR Annual Report. It includes for example, information on the number of procedures reported to the NJR in 2013 as well as the number of Consultants at the hospital and average patient age. This section also includes analysis of hospital data and reports which hospitals were identified as having higher than expected revision or mortality rates.

A summary is included on pages 10 to 11 of this guide.

My local hospital seems to have higher than expected rates for procedures such as revisions, should I be concerned?

Your GP and/or your clinical team should also be able to provide information as to the numbers and results of procedures carried out locally. Statistics such as the numbers of revisions carried out should not on their own be taken as a guide to the standards of a hospital. The fact that your local organisation carries out significant numbers of revisions could be due to a number of reasons, for example, it could be a specialist centre in performing such surgery. If you have any doubts or questions though, speak with your GP or your healthcare/clinical team.

How can I find out how many joint replacement procedures my surgeon carries out?

As part of NHS England’s transparency initiative, the NJR now publishes surgeon performance information along with information about the hospitals where those surgeons work. The information is not contained in the NJR Annual Report but can be found online at www.njrsurgeonhospitalprofile.org.uk

In 2014, more than 2,000 records were available to search for any surgeon who had carried out one or more hip, knee, ankle, elbow or shoulder replacements for the NHS in England. For each surgeon listed, it is possible to access information about their practice including how many procedures they carried out of each type, and information about mortality rates. See page 9 of this guide for more information about this service.
Facts about knee replacements in 2013

Knees

91,703 replacement procedures were recorded 2013
0.9% over 2012 (90,842)

recorded on NJR since April 2003

57%

average ages:

69.1 69.4

Diagnosis

97% osteoarthritis

average BMI

30.85 = ‘obese’

primary operations
revision operations

94%

NHS funded:

90%

*Facts shown relate to primary operations in 2013 – the first time a total joint replacement is carried out on any individual joint in a patient
Information on more than 2,000 joint replacement surgeons carrying out orthopaedic surgery for the NHS in England is available for public access at www.njrsurgeonhospitalprofile.org.uk

The data, published for the second time, are collected and presented by the NJR. Around 500 additional surgeons are covered this year for the first time as surgeons carrying out ankle, elbow and shoulder joint replacement surgery are now included alongside hip and knee surgeons.

The published surgeon profiles cover:
• Hospitals where a Consultant in charge works
• Number of primary and revision joint replacement procedures undertaken and overseen by each Consultant in charge over one and three years
• Mortality rates within 90 days of surgery for hip and knee replacements (2003-2014)
• New Consultant in charge indicator

Your surgeon might not be listed on NJR Surgeon and Hospital Profile website if they have not undertaken NHS-funded joint replacement surgery in England since 2011 as Consultant in charge (a Consultant in charge is responsible for the operation but may not have performed the surgery). Consultant surgeons who only practice in Wales, Northern Ireland or the independent (private) sector are not automatically included.

Remember you can also talk to your surgeon about their experience. If you would like to ask but feel uncomfortable doing so, perhaps consider taking a friend or family member to your appointment.

Find out more: This website service will be updated with additional hospital and surgeon information in 2015, so check back to see how the online profiles have been updated. Share www.njrsurgeonhospitalprofile.co.uk with your friends and family.
The NJR annual report gives performance indicators for NHS and independent hospitals in England, Wales and Northern Ireland for the 2013 calendar year. Participation in the NJR has been mandatory for the NHS since 2011. For the independent sector, it has been mandatory since 2003 (when the registry started).

- In 2013, 154 NHS Trusts and Health Boards (234 hospitals) and 175 independent hospitals reported patients to the NJR
- 77% of NHS Trusts and Health Boards reported 95% or more of the joint replacements they carried out and only 7% of NHS Trusts and Health Boards reported less than 80% of the joint replacements they carried out
- The independent sector do consistently submit their operations to the NJR though the registry currently does not have a way of cross-checking to ensure all of the relevant procedures are submitted. This is the reason why there are no specific facts relating to independent (private) hospitals

Of 409 hospitals that carried out operations:
- There was one outlier hospital for knee mortality rates (Redwood Diagnostic Treatment Centre) but this unit is now closed
- A total of 20 hospitals had higher than expected revision rates for knee surgery

Find out more: This information relates to hospital-level activity in 2013 across England, Wales and Northern Ireland and can be found in the online Annual Report information at www.njrreports.org.uk
Who was identified as an outlier?

**Hospitals a little outside of the expected range**

Eight hospitals returned a result above the 99.8% limit. This indicates ‘unusual differences’ in data indicating the need for further investigation.

Around 1 in 500 hospitals would find themselves in this group by chance.

- Morriston Hospital
- South Tyneside District Hospital
- County Hospital Louth
- Hospital of St Cross
- St Richard’s Hospital
- Care UK Shepton Mallet Treatment Centre (Somerset)
- Spire Bushey Hospital (Hertfordshire)
- Spire Clare Park Hospital (Surrey)

**Hospitals a longer way outside of the expected range**

Twelve hospitals returned a result outside of the upper limit of the expected range. This indicates more significant and ‘unusual differences’ in data suggesting the need for further investigation.

Around 1 in 10,000 hospitals would find themselves in this group by chance.

- Bradford Royal Infirmary
- Llandough Hospital
- Conquest Hospital
- Withybush General Hospital
- James Paget University Hospital
- Southmead Hospital
- St Albans City Hospital
- King Edward VII Hospital Sister Agnes (Greater London)
- Ramsay Horton NHS Treatment Centre (Oxfordshire)
- Ramsay New Hall Hospital (Wiltshire)
- Spire Alexandra Hospital (Kent)
- Spire Southampton Hospital (Hampshire)

Your local hospital should be able to explain why they have been identified as an outlier and what steps they might have taken to look at the reasons why it might be the case.

Also to note when a revision operation is carried out by a hospital that did not do the primary procedure, it is always matched to the hospital who did the first operation.
Introduction to knee implants

To help you digest the data and analysis included in this section, we have included an explanation of knee replacement below.

Almost all total knee replacements use a metal femoral component which is fixed to and curves around the bottom end of the thigh bone (femur). This moves against a hard-wearing plastic (polyethylene) tray.

This tray is normally attached to a metal tibial component at the top of the shin bone (tibia) but can be fixed directly to the shin bone. A tibial component will have a stem going into the shin bone to provide additional stability.

Implants can be cemented (fixed with bone cement) or cementless (without bone cement). In a hybrid fixation, the femoral component is fixed with cement and the tibial component is fixed without cement.

**Implant types**

**Bicondylar or total condylar knee replacement:** an implant attached to both parts of the shin bone and thigh bone. A knee cap replacement (patella) is often used as well.

**Unicondylar:** an implant attached to only one part of the shin bone and one part of the thigh bone, sometimes described as a partial knee replacement.

**Patello-femoral:** a two-piece knee implant that provides a joint between the knee cap (patella) and thigh bone. The patella component is made of hard-wearing plastic.

**Implant stability levels**

With knee replacement procedures, different implant types offer different implant constraints. This is the level of stability offered by the implant and the best option for a patient will be determined by their needs in consultation with the surgeon — instability is a reason for failure of knee implants.

The following types of constraint (stability levels) are analysed by the NJR.

**Unconstrained:** the artificial components making up the knee joint are not linked to each other and have no stability built in. It relies on the patient’s soft tissue, ligaments and muscles for stability.

**Posterior-stabilised:** some stability is built in and in these designs, the cushion of the plastic tray component fixed to the shin bone has a raised surface with an internal post that fits into a special bar (called a cam) in the femoral (thigh bone) component. The pieces work together to provide additional stability to the knee as it bends and straightens.
**Constrained condylar or hinged/linked:** where the components fitted to the thigh and shin bone are attached with a hinge type mechanism. This is used when a patient’s knee is highly unstable and the soft tissue and ligaments would not be able to support other types of replacement for example, in severely damaged knees or where a very elderly patient is undergoing a re-do (revision) replacement. This type of joint will have greater limitations on the range of movement and is not expected to last as long as other types. It requires more invasive surgery to place larger implant stems into the thigh and shin bone and also puts additional stress on the bones.

**Bearing surfaces**

When a knee joint is replaced, the ends of the bones are replaced with metal and a plastic tray is placed between them. Two types of bearing joint are analysed by the NJR.

**Fixed:** the plastic tray component fixed to the shin bone is attached firmly to the metal part beneath. The metal femoral component, attached to the thigh bone, rolls on this cushioned surface. This type of bearing may reduce the level of pain experienced following the procedure but in some cases, excessive activity or weight gain can cause a fixed bearing to wear down more quickly.

**Mobile:** the plastic tray is less fixed to the metal part beneath, it is more mobile and requires support from the soft tissues around the joint. This allows it to rotate short distances. It may allow more movement but there is a possibility of dislocation.
Knee replacement operations in 2013

Operations
A total of 91,703 knee replacement operations were reported to the NJR in 2013. Of these:
- 85,920 were first-time (or primary) procedures – 1% more than in 2012. The average age for men was 69.05 years and the average age for women was 69.45 years. Women were treated in 57% of cases
- 5,783 were re-do (or revision) procedures

First-time knee replacement patients in 2013

How implants were fixed into place
Of the 85,920 first-time knee replacements that took place in 2013, 95% were cemented procedures.

Surgical technique
- The most common surgical approach was the medial parapatellar, used in 93% of procedures
- Minimally-invasive surgery (MIS) was used in only 6% of knee primary procedures, however, it was used in 42% of unicompartmental (or partial) knee replacement procedures
- For cemented knee procedures, 38% had the patella replaced at the time of the first procedure whereas only 6% of patellas were replaced during first-time cementless knee procedures
- Compared with previous years, the surgical techniques used in primary knee replacements have remained largely unchanged

Treatment to prevent blood clots (known as thromboprophylaxis)
- The most common chemical treatment used was low molecular weight heparin, used in 73% of procedures. This was followed by direct thrombin inhibitor at 14%
- TED (anti-embolism) stockings were the most commonly used mechanical method at 71%
- Compared with previous years, there has been an increase in the prescription of a combined chemical and mechanical treatment, from 49% in 2004 to 93% in 2013. There has been a marked decrease over the past few years in the use of aspirin (from 20% in 2009 to 7% in 2011)

Untoward events
- Untoward intra-operative events were rare and reported in less than 1% of knee procedures for example, fracture. There were fewer instances reported in 2013 compared to 2012
About first-time knee replacement types in men and women 2003-2013

### Men: How knee replacement implants were fixed into place by age group

#### Total knee replacements – Cemented

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Unconstrained, Fixed</th>
<th>Unconstrained, Mobile</th>
<th>Posterior-stabilised, Fixed</th>
<th>Posterior-stabilised, Mobile</th>
<th>Constrained, Condylar</th>
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#### Total knee replacements – Uncemented and Hybrid

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#### Partial knee replacement – Unicondylar

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### Women: How total knee replacement implants were fixed into place by age group

#### Total knee replacements – Cemented

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#### Total knee replacements – Uncemented and Hybrid

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Patients who had a partial knee replacement or patello-femoral replacement tended to be aged between 55 and 64 years old. This procedure tends to be used in younger patients where the joint is expected to need revision (re-do) surgery within ten years.
How long knees last and mortality rates

How long knee implants last 2003-2013

Over time, implants will wear and need to be revised, often due to loss of function or pain. These operations are commonly known as revision procedures.

The NJR records operation information and patient details (by consent) so that we can measure the length of time an implant lasts. This is to ensure that any implants that are failing earlier than expected are picked up and the information acted upon.

Key finding

• Most patients have a revision risk of 5% or less at ten years after their first surgery
• Results were slightly higher for younger patients, especially those under the age of 55

Reasons why implants were replaced

• Within the first year, the most common reasons were infection, pain and instability
• After five years, the most common reasons were implant loosening or pain

Risk of revision by fixation

Overall, the risk of revision at 10 years for total knee replacement was:

• 3.33% for all cemented implant types
• 4.49% for all uncemented implant types
• 3.46 for all hybrid implant types

For partial knee replacement (unicompartmental), the risk of revision at 10 years was 12.71%. For patello-femoral replacement only, the risk of revision at 9 years after first surgery was 15.84% – the result at 10 years was less certain as the patient numbers in this group were small.

Total knee replacement implants tend to last longer than partial or patello-femoral replacements. However, partial and patello-femoral knee replacements are generally undertaken for different reasons than total knee replacements. They are used in younger patients where the joint is expected to need revision surgery within ten years.

As the procedure conserves more bone, it allows greater scope for a better outcome for patients later on in life.

Risk of revision by fixation and bearing for total knee replacement

There are relatively small differences between the types of bearing, although some fixation/constraint methods do fare better than others.

Total knee replacements

For cemented fixations, the most favourable revision rates at 10 years were associated with:

• Unconstrained, fixed bearing implants (3.06%) followed by posterior stabilised, fixed replacements (3.63%)
• The rates for unconstrained, mobile and posterior stabilised, mobile implants were slightly higher at 4.26% and 4.74% respectively

For uncemented and hybrid fixations:

Revision rates favoured unconstrained, fixed and unconstrained, mobile implant types. The results for posterior-stabilised, fixed in this category were less certain at 10 years but at 6 years, reported a higher rate of 6.10%.

It is worth noting that this information has not been adjusted to take into account patient age or gender; therefore, there will be some variation in success dependent on these factors. Other factors also have an influence including a patient’s individual diagnosis and health. Please talk to your surgeon if you have questions about the implant and surgical technique proposed for your surgery.
Mortality after surgery

- Mortality in the first 30 or 90 days after surgery remains very low
- A special in-depth study, looking at NJR data over eight years and for those patients with osteoarthritis, found that 45-day mortality almost halved from 0.37% in 2003 to 0.20% in 2011
- The analysis also confirmed that mortality rates for partial knee replacements (unicondylar) were lower than total knee procedures, which was perhaps expected as partial knee replacements are a less invasive procedure

Find out more: These results are taken from implant survivorship analysis carried out in the NJR’s 11th Annual Report. It looked at more than ten years of data kept on the NJR covering 676,082 knee replacement records however it should be noted analysis by implant type, fixation, age and gender presents smaller groups for each of the results. The information included here corresponds to the information found in the Part Three of the full NJR Annual Report, where further detail can be found including analysis of brands (www.njrreports.org.uk). This includes notes about the methodology.

All patients are individuals and many have unique problems that require an operation to be tailored to their specific needs. If you have any questions about the knee type your surgeon is planning to use in your care, he or she would be happy to explain the reasons for choosing a particular implant.
Notes and questions

Please use this page to make notes and questions, either for your surgeon or clinical team at the hospital. Some commonly asked questions are listed below:

Do I need joint replacement surgery?
Are there other options available to me? 

What type of implant are you recommending?
What are the pros and cons?

If I do, how should I prepare for surgery?

What surgical technique would be used?
What are the pros and cons?

What should I know about my aftercare?
Useful contacts and information

**Age UK**
www.ageuk.org.uk  
0800 169 6565

**Alkaptonuria Society**
www.alkaptonuria.info  
01223 322897

**Arthritis Care**
www.arthritiscare.org.uk  
020 7380 6500

**Arthritis and Musculoskeletal Alliance**
www.arma.uk.net  
020 7842 0910/11

**Arthritis Research UK**
www.arthritisresearchuk.org  
0300 790 0400

**British Association for Surgery of the Knee**
www.baskonline.com  
Contact via the website

**British Orthopaedic Association**
www.boa.ac.uk  
020 7405 6507

**Healthcare Quality Improvement Partnership**
www.hqip.org.uk  
020 7987 7370

**National Joint Registry**
www.njrcentre.org.uk  
0845 345 9991

**National Rheumatoid Arthritis Society**
www.nras.org.uk  
0800 298 7650

**NHS Choices**
www.nhs.uk  
www.nhs.uk/mynhs

**NHS Improvement Enhanced Recovery**
www.improvement.nhs.uk/enhancedrecovery  
www.nhsiq.nhs.uk/improvement-programmes/acute-care/seven-day-services/enhanced-recovery

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Our other patient guides?

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To find out more about the NJR:

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- Send an email to enquiries@njrcentre.org.uk
- Write to NJR Centre, Peoplebuilding 2, Peoplebuilding Estate
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