



National Joint Registry

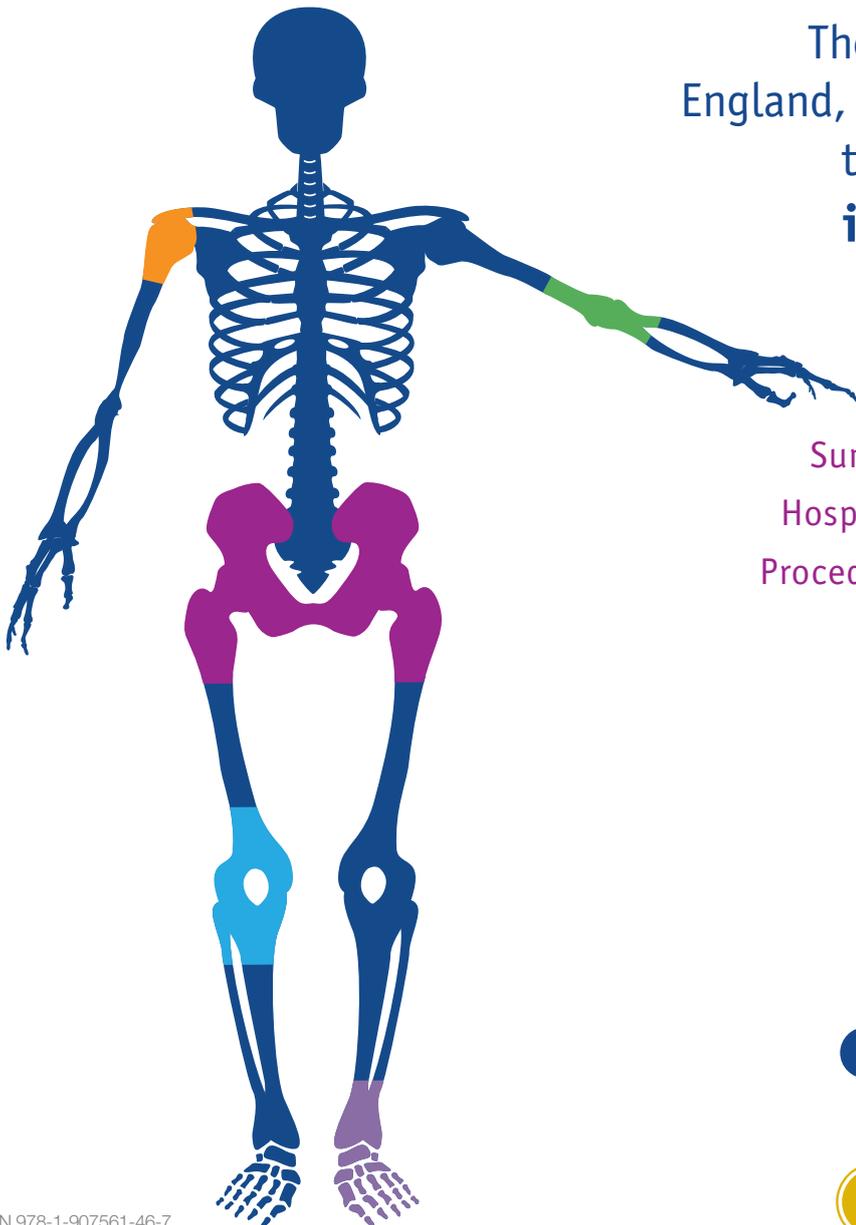
[www.njrcentre.org.uk](http://www.njrcentre.org.uk)

Working for patients, driving forward quality

# PUBLIC AND PATIENT GUIDE

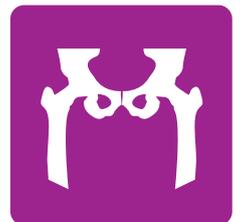
## TO THE NJR'S 14TH ANNUAL REPORT 2017

### Hip replacement edition



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

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



## Welcome to this Public and Patient Guide to the NJR's 14<sup>th</sup> Annual Report

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 revealed that the majority of patients were more than satisfied after their operation and 85.6% reported they were much better<sup>1</sup>. 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 2 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 hip 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 13th 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: [njr@njr.org.uk](mailto:njr@njr.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.



*Sue Musson*

Sue Musson

Post-operative hip replacement patient



*Gillian Coward*

Gillian Coward

Post-operative hip replacement patient also living with rheumatoid arthritis

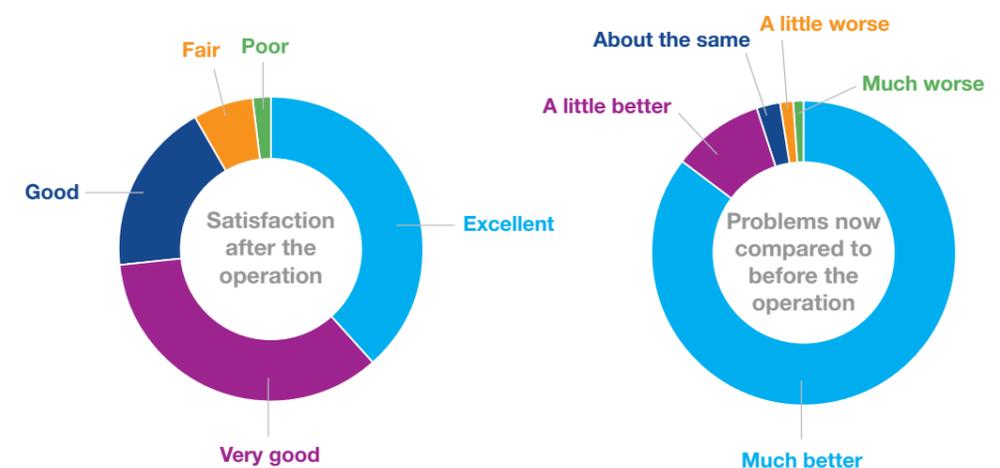
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## Reading this guide

Where words are **highlighted in bold**, there is related information to be found in the right and left hand columns on the page:

Additional information to help you digest the content on hip replacements

### What hip replacement patients said about their progress after surgery<sup>2</sup>



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.

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 93,881 hip replacement patients who filled in both questionnaires between 2009-2012.

**All hospitals should ask patients whether they wish to consent to have their details added to the NJR and ensure the responses are recorded on the NJR database**



## About the NJR

### How does the NJR help patients?

We record information about joint replacement operations in England, Wales, Northern Ireland and the Isle of Man 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, ankle replacements have only been part of the registry since 2010 and elbow and shoulder replacements have only been collected since 2012.

England and Wales have been covered since 2003 and Northern Ireland joined in February 2013. The Isle of Man joined in July 2015 and as a result, their data has not yet been included in the NJR's Annual Report analysis. 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](http://www.njrcentre.org.uk).

Giving your consent is voluntary, however, 92% 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](http://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 is subject to very strict scientific and ethical controls and is only approved where it can be proved 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 one and three years and the five year follow-up is underway. 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.

**1** Steering Committee, supported by expert sub-committees and the **NJR's Patient Network**



**5** Joint replacement procedures recorded

**100s** of research papers and scientific posters using NJR data

**1,000s** of colleagues across the NHS and independent orthopaedic sector

**4** UK territories covered, collaborating internationally

**14** Published Annual Reports since 2004

**2,350,000+** records and growing

The NJR's latest and full Annual Report published in 2017 can be found at **a dedicated website** [www.njrreports.org.uk](http://www.njrreports.org.uk) and shows the data submitted to the NJR up to the end of 2016

You can find out more about the NJR and **how it helps patients** at its main website [www.njrcentre.org.uk](http://www.njrcentre.org.uk)

## About hip 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 hip replacement?

A hip replacement, often referred to as a hip implant (and sometimes simply as a 'device'), is, in basic terms, an artificial implant that replaces a hip 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.

Patients receiving a partial hip replacement following a hip fracture are not recorded on the NJR but are recorded on a separate National Hip Fracture Database. If you are interested in finding out more about this, please visit [www.nhfd.co.uk](http://www.nhfd.co.uk).

### What healthcare staff will be involved with my treatment?

Once it has been suggested to you (commonly by your GP) that a hip replacement may be advisable, you may well be referred 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 staff make up what is commonly called your healthcare or clinical team.

### Do I have to have a hip 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 hip 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. If you are unsatisfied having met with your surgeon, you can return to your GP and ask to see a different surgeon.

You could also use services like NJR Surgeon and Hospital Profile at [www.njrsurgeonhospitalprofile.org.uk](http://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 surgeons and hospitals in Wales and Northern Ireland can opt in to have their data published.

### 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 now shows that most patients have less than a 7% chance of needing hip revision surgery within 13 years of having the original operation. In many cases, patients' implants last for much longer than 13 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 10. 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](http://www.njrreports.org.uk) starting at page 48.

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

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 2016 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.

For more information on this please see pages 8 and 9.

### 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.

Additionally, 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, 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](http://www.njrsurgeonhospitalprofile.org.uk).

In 2016, more than 2,000 surgeon 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 pages 8 and 9 of this guide for more information about this service.

In 2016, osteoarthritis was recorded as the **main indication for surgery in 90% of hip replacement patients**

If you would like to ask about your surgeon's experience, but **feel uncomfortable doing so, consider** asking a friend or family member to accompany you to the appointment. Remember you can **note down any questions or concerns** in the 'Notes' section of this guide

**Did you know that many hospitals run 'Joint Replacement Schools' as part of the NHS Enhanced Recovery Programme?**

This is a chance to meet patients who have had, or will be having, a joint replacement operation

## Why can't I find my surgeon on the website?

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

## ODEP-rated implants

New implants must meet safety guidelines set down by the National Institute for Health and Care Excellence (www.nice.org.uk). The level to which implants comply with these guidelines is assessed independently by the Orthopaedic Data Evaluation Panel (ODEP, www.odep.org.uk).



## Surgeon Information

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](http://www.njrsurgeonhospitalprofile.org.uk).

The data, published for the fifth time, are collected and presented by the NJR. Since 2014, surgeons carrying out ankle, elbow and shoulder joint replacement surgery were included alongside hip and knee surgeons for the first time.



## Using [www.njrsurgeonhospitalprofile.org.uk](http://www.njrsurgeonhospitalprofile.org.uk)

From the home page, you can explore information about your surgeon using the following search criteria:

- Name
- General Medical Council number
- Hospitals where they work, either by the search bar or via the interactive regional map

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 (2003-2016)
- All the surgeons are within the expected range
- New Consultant in charge indicator
- Proportional use of **ODEP-rated implants**

Within the profiles, there are also included statistics for the national averages, so you can compare surgeon information against these figures.



## Hospital Information

Everything you can find for a surgeon is also supplied at a hospital level. In addition to the list on the left, you can also find:

- Patient-reported improvement scores for hip and knee replacements six months after surgery
- Revisions rates for the lifetime of the NJR (2003-2017) and the most recent five-year period (2012-2017) for hip and knee replacement
- Quality of the information submitted by the hospital – this is important so that the NJR can measure how long implants last and look at other areas of surgical performance

## Why is data quality important?

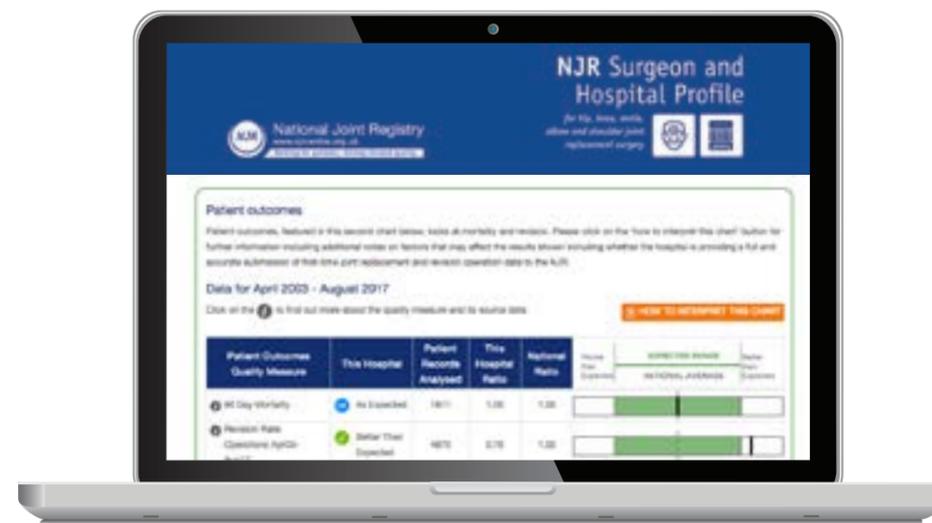
It is important that the NJR presents a full and accurate picture of what is going on in the hospital at any given time. The data

represents procedure details entered by each hospital into the NJR. Whilst the NJR takes steps to prevent errors, by validation at the point of data entry, it is possible for data entry errors to occur.

## What should I do if hospitals report 'worse than expected' results?

If your hospital is showing a '**worse than expected**' result, you should ask for more information. Your hospital should be able to explain why and what steps they might have taken to look at the reasons that such a result is showing. Statistics should not, on their own, be taken as a guide to the standards of a hospital and the care you would receive.

However, if you have any doubts or questions, speak with your GP, your surgeon and healthcare team at the hospital.



**Find out more:** This website service is updated annually with refreshed hospital and surgeon information. Share [www.njrsurgeonhospitalprofile.org.uk](http://www.njrsurgeonhospitalprofile.org.uk) with your friends and family.

## Which hospitals are reporting worse than expected results for hip revision?

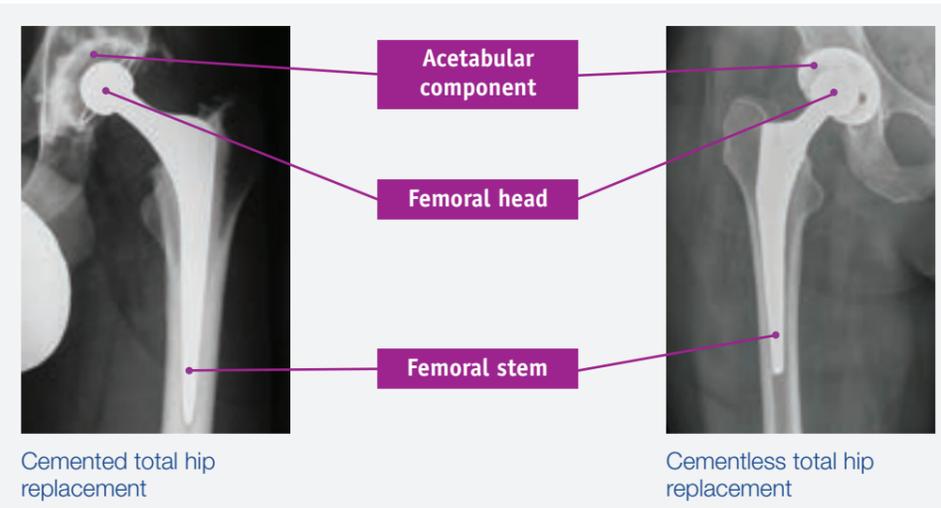
When examined over the life of the registry, a total of 41 hospitals reported higher than expected rates of revision for hip replacement. However, revisions taken only from the last five years of the registry show a drop to five hospitals reporting higher than expected rates. These are:

- Homerton University Hospital
- Southampton General Hospital
- St Richard's Hospital
- Watford General Hospital
- Weston General Hospital

When a hip replacement stem and cup are fixed into place using bone cement, this is known as a **cemented procedure**. When they are fixed into place without any bone cement, this is called an **uncemented procedure**.

Some procedures will use bone cement with just the hip stem and not the cup, this is known as a **hybrid procedure**. Some require the hip cup to be cemented but not the stem and these are referred to as **reverse hybrid procedures**.

To help **you** digest the information and analysis included in this guide, we have included an explanation of hip replacement. Hip replacements are made up of a number of parts (components) which can be made of different materials. As a result, the surgeon can select a number of different combinations to help meet a patient's needs.



The main implant components are described below:

## Femoral stem

This part of the joint replacement is seated in the thigh bone (femur) after removal of the ball at the top of the thigh bone (the patient's existing femoral head). It may be **cemented** in place using bone cement. Alternatively, it may be **uncemented**. This tends to rely on a tight fit into the space in the centre of the thigh bone (known as the shaft of the femur) and in some cases, subsequent bone growth onto the surface of the implant itself. Sometimes a special coating is applied to encourage this.

## Femoral head

This is the artificial ball that fits on the top of the femoral stem and moves in and against the hip socket (the acetabular component or cup). The head can be made of metal or ceramic and comes in a number of different sizes.

Earlier designs of hip replacement used femoral head sizes between 22.25mm and 32mm in diameter. More recently larger head sizes have become widely used, but not for long enough to know if they have any effect on the long-term outcome of total hip replacement.

## Acetabular component

This is the cup or socket of the hip and there are two basic types.

Cemented cups are made of a type of hard-wearing plastic (known as ultra-high molecular weight polyethylene). This type has only undergone minor modification since the 1960s. They are fixed into the prepared hip socket (acetabular) with bone cement.

Cementless cups generally have a metal shell with a back that encourages bone growth into it. They are fitted tightly into the prepared hip socket and the fixation may be reinforced with screws. A liner is then fixed into the shell. The liner may be plastic, ceramic or metal.

## Bearing surfaces

The movement between the femoral head (ball) and acetabular cup (socket) is known as the bearing surface. As with any two surfaces, repeatedly rubbing them together will cause the surfaces to wear and over time this produces minute particles of debris. These particles can spread into the tissues immediately around the hip joint and this has been shown to have a major role in artificial hip joints becoming loose over time.

## Metal-on-plastic

The original hip replacement had a metal head articulating with a plastic cup. This produces minute plastic debris but is still in widespread use and long-term studies suggest that it is suitable for older patients. Efforts to reduce the amount of debris released and make hip replacements last longer have led to efforts to make changes to the bearing surfaces.

A new form of highly cross-linked polyethylene has better wear properties than standard polyethylene in testing. Studies to look at the wear rates of this modified plastic cup in patients are encouraging, but it has not been in use for long enough to know if this will contribute significantly to a longer lasting metal-on-plastic hip replacement.

## Ceramic-on-plastic

The use of a ceramic head, as opposed to a metal one, has also been shown to reduce wear rates when used with plastic cups in testing and clinical studies. The ceramic surface is smoother and more resistant to scratching.

Early results from the NJR are very encouraging and at 10 years this is the bearing with the best reported outcomes. However, again, there are no longer-term studies to confirm that this will mean longer lasting hip replacement when compared to current products and other hip replacement types.

## Ceramic-on-ceramic

In a continued effort to prevent the loosening of artificial hip implants, after years of wear, top alternative bearing surfaces have been used including metal-on-metal and ceramic-on-ceramic. Here, the head and cup are made of the same material.

Ceramic-on-ceramic bearings have been in widespread use for less than 10 years. Although early results are promising it is not yet known if this will result in a longer lasting hip replacement. As the NJR grows, the data will provide more evidence to help answer these questions.

## Special note on resurfacing

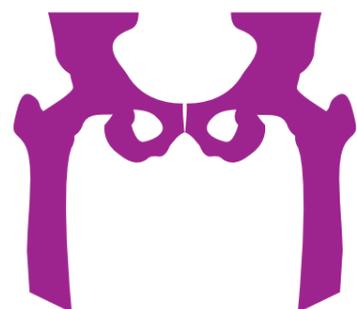
Resurfacing procedures use a conventional uncemented hip acetabular cup, but instead of the femoral head being removed, it is reshaped and a metal cap placed over it. Both components are made of metal. NJR data has confirmed other reports that in most patient groups they have an inferior performance to conventional hip replacement and they are now not recommended in older patients, women or smaller men because of high failure rates.

## Special note on metal-on-metal procedures

Metal-on-metal hip replacements became popular in the mid 2000s, but the NJR identified very poor results for this type of implant. Their use has now largely been abandoned and in less than 0.1% of operations used this bearing type.

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 hip 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**.

## Hips



**101,651**  
replacement  
procedures  
were recorded 2016

**↑ 3.5%**  
(98,211 in 2015)

recorded on the NJR since April 2003

**60%**

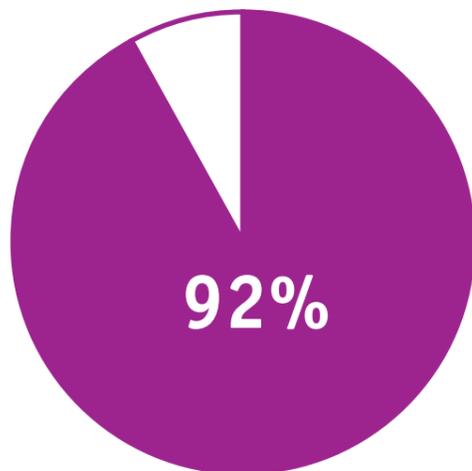


average  
ages:

**67.6**

**69.8**

Diagnosis ▼ \*



○ primary  
operations  
● revision  
operations

average BMI  
**28.8**  
=  
'overweight'

# More facts: hip replacements in 2016

## Hip replacement operations in 2016

### Operations

A total of 101,651 hip replacement operations were reported to the NJR in 2016. Of these:

- 93,234 were first-time (or primary) procedures – 4.4% more than in 2015
- The average age for men was 67.6 and the average age for women was 69.8
- Women were treated in 60% of cases
- 8,417 were re-do (or revision) procedures – around 5.7% less than in 2015

## First-time hip replacement patients in 2016

### How implants were fixed into place

Of all the 93,234 first-time hip replacements that took place in 2016:

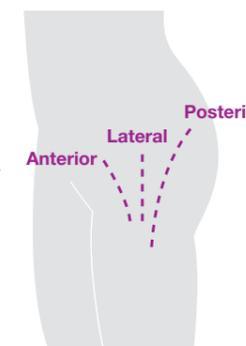
- 29% were cemented procedures – 2% less than 2015
- 38% were cementless procedures – 1% less than 2015
- 32% were hybrid procedures – 3% more than 2015
- 1% were resurfacing procedures and even less were large head metal-on-metal. This decrease is due to proven poor results for these types of metal-on-metal implant

A patient's age and gender, as well as diagnosis, continues to influence the type of hip replacement carried out and some further information and commentary can be seen on pages 14 and 15.

## Surgical technique

Surgical technique is the approach the surgeon uses to make the incision and access the joint in order to carry out the hip replacement. In 2016:

- The posterior approach to surgery (making the incision and accessing the joint for surgery) was the most widely used, in 71% of cases. The lateral approach was also commonly used and featured in 25% of procedures
- Minimally-invasive surgery (including the direct anterior approach) was used in just 5% of cases and less than 1% used image-guided surgery



## Treatment to prevent blood clots (known as thromboprophylaxis)

- The most common chemical treatment used was low molecular weight heparin, used in 78% of procedures
- The most commonly used mechanical treatment was TED (anti-embolism) stockings at 86%, followed by intermittent calf impressions at 60%
- Most patients were recommended both a chemical and mechanical treatment

## Untoward events

- Less than 1% of operations experienced untoward events, the commonest of which were **cracks and fractures in the bone**

**Find out more:** This information relates to the reports on clinical activity in 2016 across England, Wales and Northern Ireland and can be seen in the online Annual Report information at [www.njrreports.org.uk](http://www.njrreports.org.uk). This includes a number of interactive charts where filters can be applied.

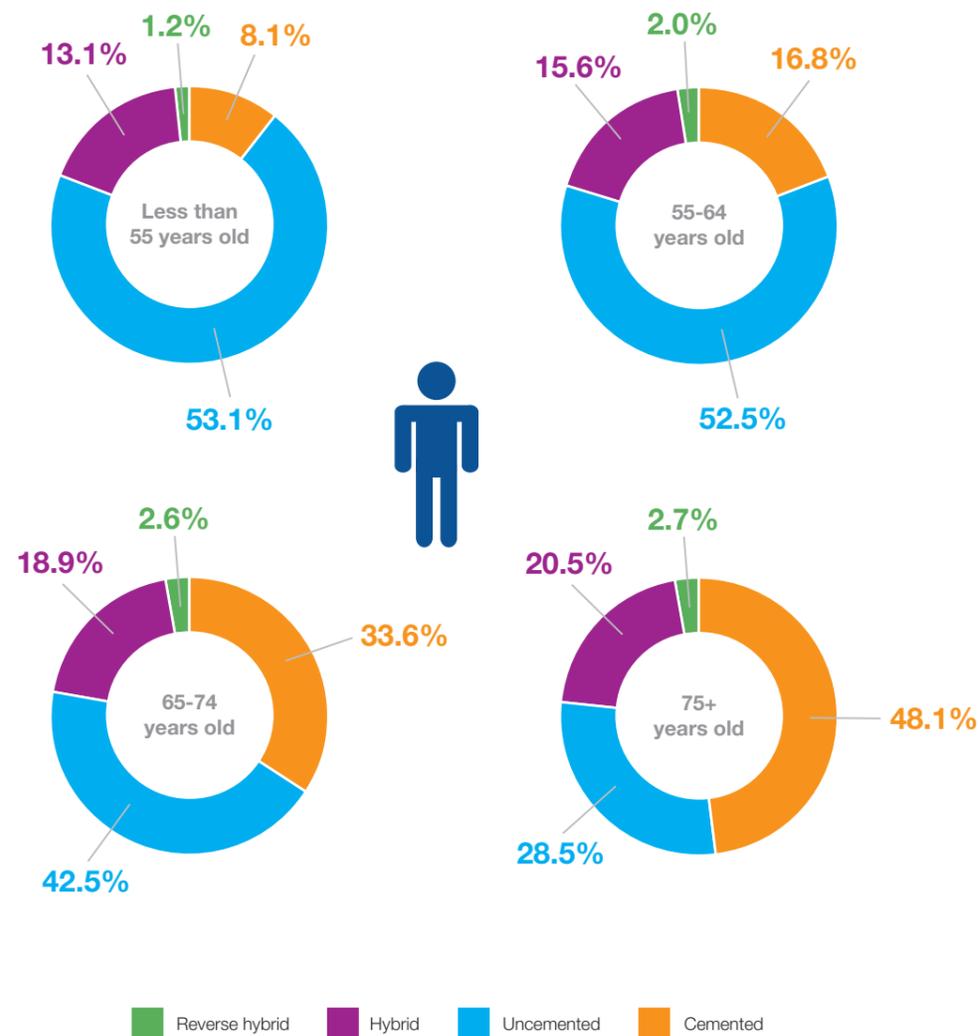
**Surgical problems are rare** but your surgeon will go through all of the risks involved with the procedure at your appointments and **before you sign a surgery consent form**

Please see page 10 for an explanation of **cemented, cementless, hybrid and reverse hybrid procedures**

# Analysis: hip replacements 2003-2016

## About first time hip replacements in men 2003-2016

Men: how implants were fixed into place by age group



Type of implant used by age and how they were fixed into place

### < Patients under the age of 65 years

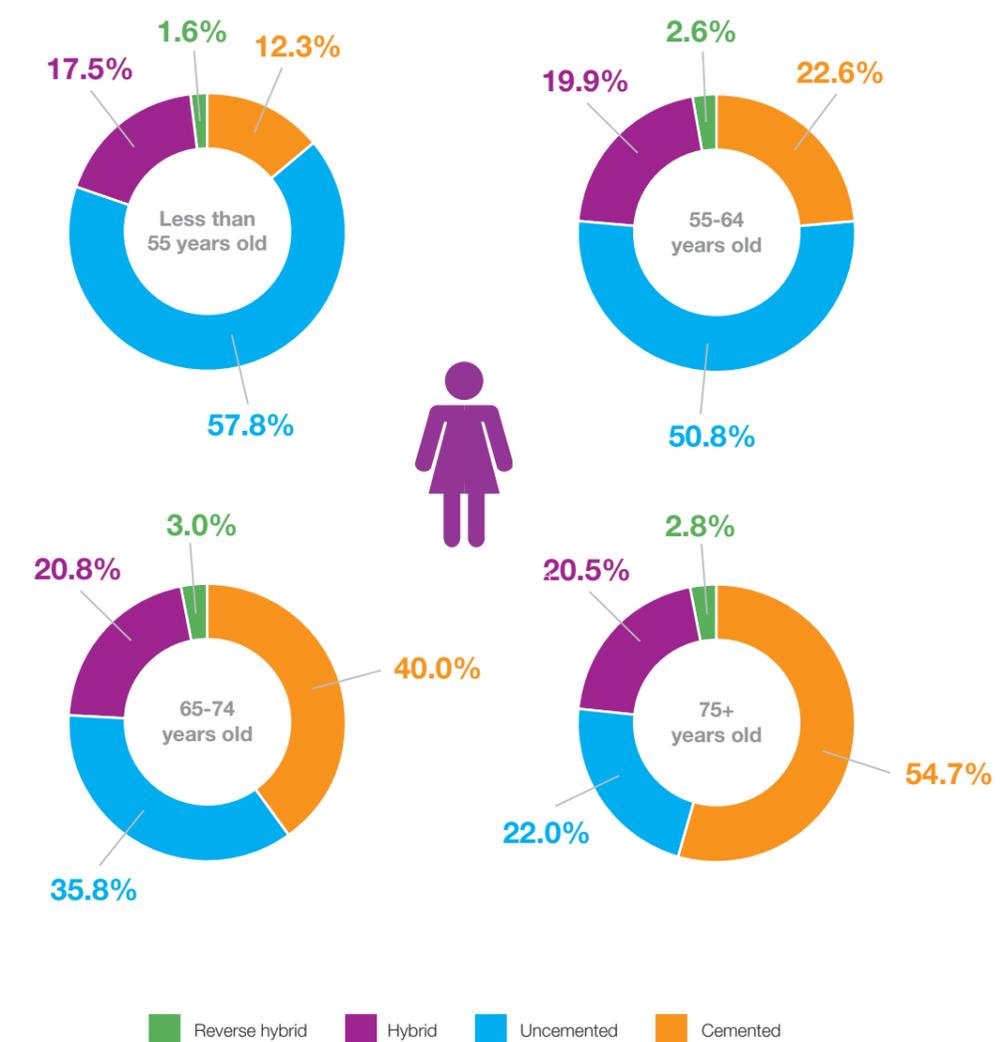
- For cemented procedures, both metal-on-plastic and ceramic-on-plastic implants were used
- For uncemented cases, patients were more likely to have ceramic-on-ceramic implants, however there was also significant use of ceramic- and metal-on-plastic implants

### > Patients who were 65 years or older

- For cemented procedures, patients were more likely to have a metal-on-plastic implant
- For uncemented cases, male patients were more likely to have received a metal-on-plastic implant or ceramic-on-ceramic implant

## About first time hip replacements in women 2003-2016

Women: how implants were fixed into place by age group



Type of implant used by age and how they were fixed into place

### < Patients under the age of 65 years

- For cemented procedures both metal-on-plastic and ceramic-on-plastic were used
- For uncemented, patients were more likely to have a ceramic-on-ceramic implant although there was extensive use of other types of implant including metal- and ceramic-on-plastic devices

### > Patients who were 65 years or older

- For cemented and hybrid cases, female patients were more likely to have a metal-on-plastic implant – more so than men
- For uncemented cases, patients were more likely to have received a metal-on-plastic implant, however both ceramic-on-ceramic and ceramic-on-plastic were also common options

Data from the NJR suggests that cemented implants perform best at 13 years, and these are generally recommended in older patients (over 75 years) as the chances of their becoming loose before the patient dies are small.

In young patients (less than 55 years) the loosening rate of cemented hip cups is known from studies outside the NJR to accelerate after about 11 years. For this reason many surgeons choose to use uncemented cups (and stems) in this age group.

Uncemented procedures are performing well in most cases at 13 years, but many of the uncemented implants currently in use have not been available for more than 13 years and so their long-term performance is not known.

For patients between 55 and 75 years surgeons have to make a judgement for each individual which type of implant to use. There are always circumstances where a surgeon may choose to use a stem and cup of a specific type for individual clinical reasons

Resurfacing procedures are not shown as a group here as their use has fallen to less than 1% of all cases in recent years. NJR data has confirmed, among other studies, that women and the majority of men have a much higher risk of failure with these types of metal-on-metal replacements

## How long hip implants last 2003-2016

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 7% or less at 13 years after their first surgery
- Results were slightly higher for younger patients, especially those under the age of 55
- Results for metal-on-metal and resurfacing procedures were significantly higher for all age groups. Overall, use of metal-on-metal implants has fallen and was less than 0.1% in 2016

### Reasons why implants were replaced

- Within the first year, the most common reasons were dislocation, fracture or infection
- After 5 years, the most common reasons were implant loosening or pain

### Risk of revision by how implants were fixed into place

Overall, the risk of revision at 13 years for:

- All cemented procedures was 4.34%
- All uncemented procedures was 8.66% (it should be noted that the stemmed metal-on-metal articulation was usually fixed into place without cement and its poor performance affects these results)
- All hybrid procedures was 5.05%
- All reverse hybrid procedures was 5.73%
- All resurfacing procedures was 13.98%

### Risk of revision by type of implant and fixation

Within the different fixation categories, the most favourable revision rates at 13 years for:

- Cemented procedures were associated with ceramic-on-plastic (3.81%) or metal-on-plastic (4.25%) implants

- Cementless procedures were associated with ceramic-on-plastic (4.49%), ceramic-on-ceramic (5.69%) and metal-on-plastic (5.90%) implants

For hybrid procedures:

- Favourable revision rates at 13 years were associated with metal-on-plastic (4.94%) implants. However, for ceramic-on-plastic and ceramic-on-ceramic implants in this category, only 11-year revision estimates can be presented and these were 2.64% and 3.13% respectively. This is because of the small number of patients in these groups 11 years after the first surgery means a slightly less reliable statistical result

For reverse hybrid procedures:

- Favourable revision rates were associated with both metal-on-plastic or ceramic-on-plastic implants. Again, owing to small numbers of patients in these groups for follow-up at 13 years, only results at 11 years can be shown – these are 4.37% and 4.20% respectively

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.

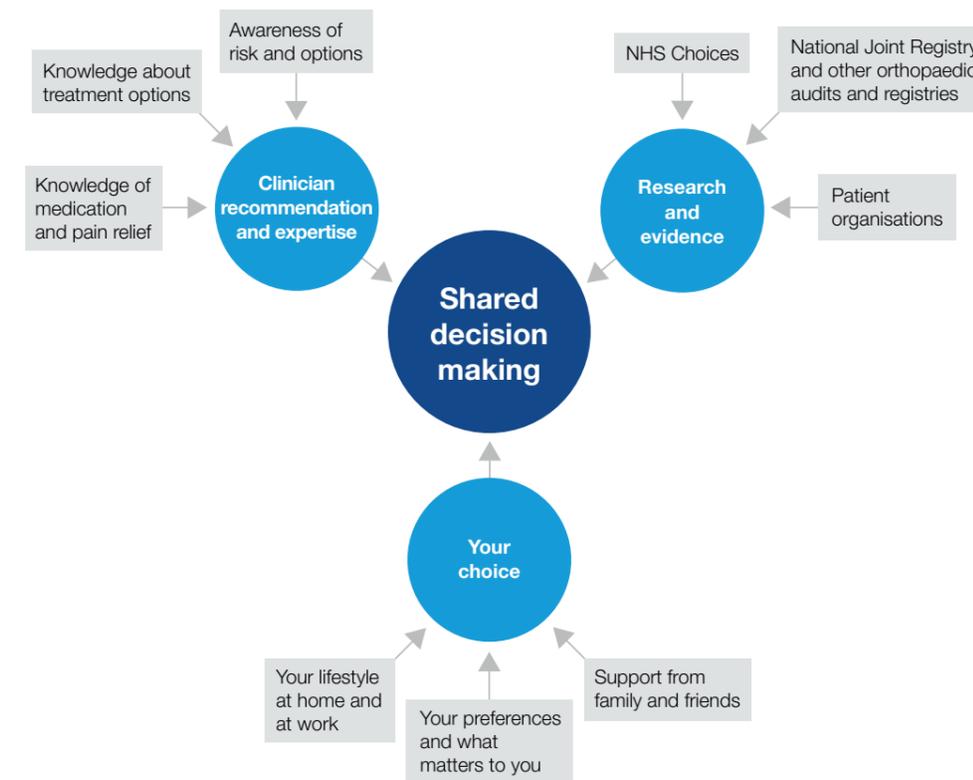
### Mortality after surgery

- Mortality in the first 30 or 90 days after surgery remains very low

**Find out more:** These results are taken from implant survivorship analysis carried out in the NJR's 14th Annual Report. It looked at more than 13 years of data kept on the NJR covering 890,081 hip replacement records however it should be noted that carrying out 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 full NJR Annual Report starting at page 41, where further detail can be found ([www.njrreports.org.uk](http://www.njrreports.org.uk)). This includes notes about the methodology.

Joint replacement is a highly successful operation that can bring relief from pain and improve mobility. However, going through the process can be baffling and many patients do not always understand their options or the

detail of their treatment plan. It is important you feel supported by your surgeon when discussing your available options. Working together with your practitioner is known as **shared decision making**.



**Shared decision making** recognises all the different factors in your life that will lead to better quality decisions, from your surgeon's advice through to the support from your family and friends.

Sources such as this National Joint Registry guide should make you feel confident in asking questions about your surgery, your implant and your recovery. On the reverse are some commonly-asked questions, and some space for you to make notes.

Whatever the reason for your joint 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. See page 19 for a list of useful organisations that can help.

Use the **'Your notes'** section of this guide to **write down the questions or issues** you would like to cover at your next appointment

# 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?** .....

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**If I do, how should I prepare for surgery?** .....

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

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

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**What should I know about my aftercare?** .....

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**What do I need to think about when I return home after my operation?** .....

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# Useful contacts and information

	<p><b>Age UK</b>  <a href="http://www.ageuk.org.uk">www.ageuk.org.uk</a>          0800 169 6565</p>		<p><b>British Hip Society</b>  <a href="http://www.britishhipsociety.com">www.britishhipsociety.com</a>          020 7406 1756</p>
	<p><b>Alkaptonuria Society</b>  <a href="http://www.akusociety.org">www.akusociety.org</a>          01223 322897</p>		<p><b>British Orthopaedic Association</b>  <a href="http://www.boa.ac.uk">www.boa.ac.uk</a>          020 7405 6507</p>
	<p><b>Arthritis Action</b>  <a href="http://www.arthritisaction.org.uk">www.arthritisaction.org.uk</a>          0800 652 3188</p>		<p><b>Healthcare Quality Improvement Partnership</b>  <a href="http://www.hqip.org.uk">www.hqip.org.uk</a>          020 7997 7370</p>
	<p><b>Arthritis Care</b>  <a href="http://www.arthritiscare.org.uk">www.arthritiscare.org.uk</a>          020 7380 6500</p>		<p><b>National Joint Registry</b>  <a href="http://www.njrcentre.org.uk">www.njrcentre.org.uk</a>          0845 345 9991</p>
	<p><b>Arthritis and Musculoskeletal Alliance</b>  <a href="http://www.arma.uk.net">www.arma.uk.net</a>          020 7842 0910/11</p>		<p><b>National Rheumatoid Arthritis Society</b>  <a href="http://www.nras.org.uk">www.nras.org.uk</a>          0800 298 7650</p>
	<p><b>Arthritis Research UK</b>  <a href="http://www.arthritisresearchuk.org">www.arthritisresearchuk.org</a>          0300 790 0400</p>		<p><b>NHS Choices</b>  <a href="http://www.nhs.uk">www.nhs.uk</a>  <a href="http://www.nhs.uk/myhns">www.nhs.uk/myhns</a></p>
	<p><b>BoneSmart</b>  <a href="http://www.bonesmart.org">www.bonesmart.org</a></p>		

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## Have you seen:

Our monthly eBulletins? [www.njrcentre.org.uk](http://www.njrcentre.org.uk)

Our Surgeon and Hospital Profile service? [www.njrsurgeonhospitalprofile.org.uk](http://www.njrsurgeonhospitalprofile.org.uk)

Our online NJR Annual Report information? [www.njrreports.org.uk](http://www.njrreports.org.uk)

Our other patient guides?



All this and more can be found online at [www.njrcentre.org.uk](http://www.njrcentre.org.uk)



To find out more about the NJR:

 Visit our website at [www.njrcentre.org.uk](http://www.njrcentre.org.uk)

 Call the NJR helpline on **0845 345 9991**

 Send an email to [enquiries@njrcentre.org.uk](mailto:enquiries@njrcentre.org.uk)

 Write to **NJR Centre, Peoplebuilding 2, Peoplebuilding Estate  
Maylands Avenue, Hemel Hempstead HP2 4NW**

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About this guide, published February 2018, due for review October 2018: This publication is written and prepared by the Healthcare Quality Improvement Partnership (HQIP), with support from the NJR Patient Network and NJR Editorial Board. The full NJR Annual Report is prepared by a team overseen by the NJR Editorial Board and this detailed national report can be found at [www.njrreports.org.uk](http://www.njrreports.org.uk). Please send any feedback you have on this public and patient guide to [njr@njr.org.uk](mailto:njr@njr.org.uk).