Osteoarthritis of the knee
a decision support tool for patients

This decision support tool provides a summary of the main treatment options for osteoarthritis of the knee.

It can be used by you, and with your doctor or another member of your clinical team (for example physiotherapist or nurse), to help discuss your options, share decisions and plan your care.

This tool is designed for people who:
• have knee osteoarthritis
• are aged 45 years and over
• would like more information about treatment options and their potential risks and benefits, side effects and costs.

You can use this tool when you are first starting to think about treatment options, or if you feel like you need to review or modify your treatment.

The options described in this tool are based on the Osteoarthritis of the Knee Clinical Care Standard. This has been developed to support the delivery of appropriate, evidence-based care for osteoarthritis of the knee.

What is osteoarthritis of the knee?
Osteoarthritis is one of the most common chronic joint conditions in Australia, and can cause joints to become painful and stiff. The knee is a common joint that is affected. Pain and stiffness from knee osteoarthritis can affect some people’s ability to take part in their usual activities.
What matters the most to you?*

The decision you make about which treatment option is best for you will depend on a number of different things, including your reasons for seeking treatment, how severe your symptoms are, if your symptoms are giving you a lot of trouble, your knowledge of the treatment options, your lifestyle and your values.

It is important for you to think about how important the different risks and benefits are to you; and what matters most to you.

Questions you might wish to consider are:

**What symptoms are you finding most difficult?**

It is helpful to understand which symptoms bother you the most, and which are not really important to you. Identifying how your symptoms impact on your everyday life may help you to identify your goals for treatment.

**What expectations do you have about the outcomes of your treatment?**

Think about results that you expect from treatment, such as improvements in pain, function, mobility and your ability to complete specific activities like gardening, walking, playing sport or doing your work.

It may be helpful to talk to your doctor about these expectations, and whether these are achievable with these treatment options.

**Do you have any questions about the benefits and risks of each option?**

Talk to your doctor if you need further information, and ask any questions you may have about the risks and benefits of each option.

To help you prepare and ask questions that matter most to you, you can use the Question Builder, a free web-based tool that helps you build a list of questions that you would like to ask your doctor [https://www.safetyandquality.gov.au/questionbuilder/](https://www.safetyandquality.gov.au/questionbuilder/)

**Do you have enough support and advice to make a choice?**

Discuss your options with someone you trust. This could be your doctor, an appropriate allied health provider such as a physiotherapist, or a family member or a friend.

**How important is cost?**

Different treatment options involve different costs. Think about how the cost of treatment may influence your treatment decisions.

**Which risks and benefits matter most to you?**

People think about risks and benefits in different ways. Which risks and benefits are most important to you when considering your treatment options? Are there particular risks that you are worried about?

Talk to your doctor if you need further information about how likely these risks are to happen to you. It may be helpful to rate each benefit and risk to show how much each one matters to you. If you are unsure, it may be helpful to talk to others who have knee osteoarthritis and have made a decision about treatment.

**Do you feel motivated about participating in activities to support your treatment?**

Your commitment and motivation to your treatment and recovery are important factors. Consider if there are any personal or mental health issues (such as depression or anxiety) that may impact on your ability to participate or benefit from participating in activities to support your treatment. Also consider factors that may affect the timing of you trying to change behaviours.

It may be helpful to speak to your doctor about how you might address these issues and whether you may need support.

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* Adapted from the SURE test © 2008 O’Connor & Legare and Ottawa Personal Decision Guide © 2015 O’Connor, Stacey, Jacobaen, Ottawa Hospital Research Institute & University of Ottawa, Canada.

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What are my treatment options?

Non-surgical management
- Weight loss
- Exercise
- Medicines

Surgery

What does this involve?
What are the possible benefits?
What are the possible risks?
What are the possible costs?
I have osteoarthritis of the knee – what are my treatment options?

To treat your knee osteoarthritis, you may wish to consider the following options. To get the best treatment for you, you may wish to consider a combination of these options.

**Non-surgical management**

<table>
<thead>
<tr>
<th>What does this involve?</th>
<th>Weight loss (if you are overweight)</th>
<th>Exercise</th>
<th>Medicines</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If you are overweight or obese, weight loss is recommended to relieve osteoarthritis symptoms.</td>
<td>Exercise to improve strength and fitness is important for all people with knee osteoarthritis.</td>
<td>If you need a medicine to help you manage your knee pain and other symptoms, several medicines may be helpful. The main medicines that can be used are:</td>
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<td>This will involve making changes to your lifestyle, such as becoming more active through exercise and/or changing your eating or drinking habits.</td>
<td>This will involve undertaking exercise activities to help you strengthen the muscles around your joints and improve your fitness.</td>
<td><strong>Pain relieving ointments (also known as topical analgesics):</strong> are rubbed into the skin to relieve pain. These include non-steroidal anti-inflammatory medicines (NSAIDs, also known as anti-inflammatories) and capsaicin which is made from red peppers.</td>
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<td></td>
<td>To support you to reach your ideal weight, your doctor may refer you to a dietician, weight management program or exercise physiologist.</td>
<td>Exercises that raise your heartbeat and strengthen your lower limb muscles are generally recommended and should be undertaken at least three times per week for at least 30 minutes (moderate intensity). The 30 minutes can be done in sessions of at least 10 minutes. This can include walking, swimming or weight training. Other low-impact exercises such as stretching and balancing are also beneficial to improve flexibility and joint motion.</td>
<td>These can be used for short-term pain relief, or in addition to other treatments.</td>
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<tr>
<td></td>
<td>Overweight is defined as body mass index (BMI) of 25-30 kg/m² and obesity is defined as BMI of 30kg/m² or more.</td>
<td>To help encourage you towards your exercise goals, your doctor may refer you to a physiotherapist or exercise program.</td>
<td><strong>Pain relieving tablets (also known as oral analgesics):</strong> are taken by mouth to relieve pain. These include paracetamol and NSAID tablets.</td>
</tr>
<tr>
<td></td>
<td>Your BMI is your body weight in kilograms, divided by the square of your height in meters. You can calculate your BMI at:</td>
<td></td>
<td><strong>Joint injections (also known as intra-articular injection):</strong> is an injection given in the knee joint for short-term pain relief. There are two types, corticosteroid injections and hyaluronic injections. Clinical guidelines do not recommend hyaluronic injections.</td>
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Non-surgical management

Weight loss
(if you are overweight)

Finding the right level of physical activity is important and you may wish to talk to your doctor, physiotherapist or exercise physiologist about what exercise will best suit your needs and preferences.

Your doctor or allied health provider may also recommend strategies or devices to protect your joints. This can involve restrictions on high-impact activities or the use of walking aids, braces, and appropriate footwear.\(^4,5\)

Exercise

When choosing a medicine, you and your doctor need to take into account current clinical guidelines;\(^2,5\) your symptoms; any other health problems you may have; other medicines that you take (including complementary medicines); costs; and your treatment preferences.

You should receive information about what the medicine is for, when to take it, how long to take it for and any possible side-effects.


It should be noted that prescription-only pain relievers such as codeine, oxycodone, tramadol have a very limited role in managing pain for osteoarthritis, and are not recommended. Taking them provides a modest temporary benefit (if any), and there is a significant risk of harm.\(^5\)

Medicines

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Non-surgical management

**Weight loss** (if you are overweight)

Medical research shows that weight loss (if you are overweight or obese) reduces knee pain and improves function.

The benefits of losing weight increases with the percentage of weight you lose. If you are overweight or obese you should aim to lose more than 5% of your body weight over a 20 week period. For example, if you weigh 100kg, you should try to lose more than 5kg.

Reduced pain and improved function is greater if you combine exercise and weight loss together.

Maintaining a healthy body weight might also help you to avoid or delay the need for medicines or surgery.

If you are overweight or obese, reducing weight also has many other health benefits such as decreasing your risk of type 2 diabetes and maintaining a healthy blood pressure.

**Exercise**

Medical research shows that increased activity such as exercise strategies can reduce knee pain, improve your function and provide many general health benefits, including improvement in mood.

If you need surgery, being physically active beforehand is likely to improve your ability to recover and return to your usual activities after the operation.

**Medicines**

**Pain relieving ointments:**
Topical NSAIDs have been shown to provide a small benefit in pain relief. Topical NSAIDs are safer to use than oral NSAIDs because less medicine is absorbed by the body.

**Pain relieving tablets:**
Paracetamol is safer to use than other pain relieving tablets, particularly for older people. However, oral NSAIDs are more effective than paracetamol for reducing pain.

**Joint injection:**
Corticosteroid injection may provide a moderate improvement in pain and a small improvement in physical function.

Symptom relief from a single corticosteroid injection can last for 4-12 weeks. As corticosteroid provides rapid pain relief, it may be useful if you need to travel or attend an important occasion. Injections to the same joint are usually given no less than 3 months apart.
Non-surgical management

What are the possible risks?

Weight loss (if you are overweight)

You may be frustrated or disappointed if you do not meet your weight loss goals.

Weight loss through diet and no exercise can lead to reduced muscle mass and strength.

Exercise

When exercising, you may experience some increase in knee pain. This does not necessarily mean your osteoarthritis is getting worse.

Talk to your doctor if you do experience any pain that interferes with your ability to exercise. Pain relieving medicines may be required to help you exercise.¹, ¹⁰

Medicines

Pain relieving ointments:

You may have an allergic reaction when you rub the ointment onto your skin. For capsaicin based ointments you may experience a temporary burning sensation or irritation where it is rubbed onto the skin.²

Pain relieving tablets:

Oral NSAIDs can cause problems with your heart, kidneys and gastrointestinal (digestive) system. This can include increase in blood pressure, reduced kidney function and stomach ulcers that can bleed.

There are different types of oral NSAIDs, and the risk of having a problem will depend on the individual factors of the person taking them. Factors that increase your risk are if you have kidney disease, a history of peptic ulcer disease, hypertension or heart failure.¹¹

Talk to your doctor about any other health problems you have, so you and your doctor can choose the right medicine for you.

Joint injection:

You may also experience pain and tenderness at the site of the injection. Infection in the joint is a rare but serious complication.²

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**What are the possible costs?**

If you are making changes to your diet and buying different food or drinks, you may have extra costs. However, you may find that you are saving money if you eat out less often, or drink less alcohol or sugary drinks.

The cost of developing a weight management program with a health professional will vary.

Some public clinics provide free services with a referral. Private fees will apply if you choose to be treated as a private patient however you may be eligible for a rebate from your private health insurer or through Medicare if you have a Team Care Arrangement in place with your GP and other health professionals.

Walking, cycling and swimming can be free, but there may be costs related to gym membership, exercise classes or pool entry.

Strengthening exercises can be performed at home. Ankle cuff weights and/or rubber tubing provide resistance and these can be purchased at sports stores, online or major retailers.

The cost of developing an exercise program with a health professional will vary.

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**Pain relieving ointments:**
These can be purchased from pharmacies without prescription. Prices vary, but range from $15 to $30.

**Pain relieving tablets:**
Some pain relieving tablets, such as paracetamol and low dose oral NSAIDs can be purchased from pharmacies without a prescription. Prices can vary depending on the number of tablets you buy and the brand.

You will need a prescription from your doctor for higher dose oral NSAIDs. Prices vary and can depend on the number of tablets you buy, if it is subsidised by the Pharmaceutical Benefits Scheme (PBS), and if you can get a concession price.

**Joint injection:**
The cost of corticosteroid injections can vary. If you are considering this treatment, ask your doctor to provide you with the cost per corticosteroid injection.

Hyaluronan injections cost considerably more than a corticosteroid injection. Prices are around $500 per injection.

It is important to note that knee injections are easily performed by doctors without the need for radiological or image guidance (e.g. an ultrasound). Radiological or image guidance does not increase the effectiveness of the injection.
My osteoarthritis of the knee is getting worse – should I have surgery?

If you have tried non-surgical treatments, and you still experience severe pain, difficulty with mobility, difficulty with daily activities, or worsening of any other symptoms due to your knee osteoarthritis, you may wish to consider surgery.

Talk to your doctor, or a member of your clinical team, if you are considering this option.

Surgery

Knee surgery aims to relieve severe pain and restricted movement when non-surgical treatments are no longer effective.4

While a physical assessment is generally all that is needed for diagnosis of knee osteoarthritis, if surgery is being considered, your GP or surgeon may request X-Rays or other tests that are helpful in planning the surgery.

There are different types of knee surgery. Knee replacement surgery (also known as total knee replacement or knee arthroplasty) is the most common type of surgery. This involves replacing the damaged knee joint with an artificial joint. There is also joint-conserving surgery, which does not require replacement of your total knee. An example is tibial osteotomy, where a bone near the joint is cut and repositioned. This is to realign the joint to take pressure off the area affected by arthritis.

Arthroscopic procedures, which is keyhole surgery to smooth damaged cartilage and remove loose pieces of tissue, are not effective treatments for knee osteoarthritis, unless you have a particular complication that may benefit from it, such as a locked knee due to a mechanical cause.4

The recovery time from total knee replacement surgery varies from person to person. At three to six months following surgery 93 in 100 people report improved pain, mobility and quality of life, 1 in 100 people report no change, and 6 in 100 people report that their condition worsened.12

It may take 6-12 months to feel the benefits of your new joint. An average knee replacement can last for 10-15 years.4

Joint conserving surgery may be beneficial for younger or active patients. As an artificial joint may wear out over time, joint conserving surgery can enable younger or active patients with osteoarthritis to continue using the healthy portion of their knee. The procedure may also delay the need for a total knee replacement.
There are a range of possible complications from knee surgery. This can include:

- loosening or wearing of the artificial joint (for total knee replacement surgery)
- injury to the nerves and blood vessels
- infection at the site which can spread to other parts of the body
- blood clots in the deep veins of the legs which can travel to the lungs
- persistent pain or stiffness that may require further surgery
- a build-up of fluid in the joint
- failure of the wound to heal
- allergic reaction
- risks associated with anaesthesia
- death.

It has been reported that 32 in 100 people experience one or more post-surgical problems and 68 in 100 people experience no post-surgical problems. Of the people who experienced one or more post-surgical problems, the problems included urinary problems; allergy and/or reactions to drugs; problems with bleeding; and problems with their wound. Talk with your doctor about the possible risks of having surgery, and any concerns or questions you may have.

These risks may increase if you have other conditions, or if you are a smoker or obese.

If you are overweight, younger or more active, the artificial joint can loosen or wear out more quickly. If this occurs you will need further surgery, known as revision surgery.

If you choose to have surgery, being overweight increases the chance of having complications and may reduce your functional improvements. Being physically active and maintaining a healthy weight before surgery may improve your recovery.

The cost of surgery is free under Medicare if you are admitted to a public hospital as a public patient. Waiting times in public hospitals for knee replacement surgery can vary widely, but are among the longest for any type of elective surgery in Australia. The average wait time for a public patient for knee replacement surgery is 190 days. Additionally, as a public patient there may be a significant waiting time to get an initial appointment to see an orthopaedic surgeon prior to being on the surgery waitlist.

If you choose to be treated as a private patient the cost will vary depending on what is covered by Medicare, your private health insurance, your choice of surgeon, the cost of the anaesthetist and hospital charges. If you are considering surgery as a private patient, ask for a full list of the costs that will be charged.
More information


Arthritis Australia: Consumer information sheets on osteoarthritis and management of osteoarthritis, including multicultural information sheets: http://www.arthritisaustralia.com.au/


References


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