Patient Information for Consent

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Osteotomy of the Knee

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What is an osteotomy?

An osteotomy is a procedure to treat arthritis in the knee (osteoarthritis). An osteotomy involves cutting through your shin bone (tibia) or thigh bone (femur) to realign your knee. This relieves pressure on the knee, helping you walk better.

Osteoarthritis is gradual wear and tear of a joint. It is the most common type of arthritis. For some people this is a result of a previous problem or injury but usually it happens without a known cause.

Arthritis wears away the normal cartilage covering the surface of the joint, damaging the bone underneath. This causes pain and stiffness in your knee, which can interfere with normal activities.

Shared decision making and informed consent

Your healthcare team have suggested an osteotomy. However, it is your decision to go ahead with the procedure or not. This document will give you information about the benefits and risks to help you make an informed decision.

Shared decision making happens when you decide on your treatment together with your healthcare team. Giving your 'informed consent' means choosing to go ahead with the procedure having understood the benefits, risks, alternatives and what will happen if you decide not to have it.

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

What are the benefits?

An osteotomy improves the symptoms of early arthritis without needing to replace your natural knee joint. It can also delay the need for a knee replacement in the future.

Once the osteotomy has fully healed you should have less pain and be able to do more of your normal activities.

Are there any alternatives?

Simple painkillers such as paracetamol or anti-inflammatory medications such as ibuprofen can help control the pain of arthritis. Certain dietary supplements may help some people. Check with your doctor before you take any painkillers or supplements.

Wearing a special knee brace fitted by the healthcare team sometimes helps. This will also give you an idea of what your knee will feel like after the procedure.

Regular moderate exercise can help reduce stiffness in your knee.

Physiotherapy may help to strengthen weak muscles. If you are overweight, losing weight will help to reduce the load on your knee.

Some people with arthritis in just one part of their knee can have a partial knee replacement procedure. Your surgeon will tell you if this is an option in your case.

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

Arthritis of your knee usually, though not always, gets worse with time. This is more likely if you have bow legs (your knees bend outwards and your feet and ankles touch) or knock knees (your ankles stay apart even when your knees are touching).

What does the procedure involve?

If you are female, the healthcare team may ask you to take a pregnancy test. Sometimes the test does not show an early-stage pregnancy so tell the healthcare team if you could be pregnant.

The healthcare team will ask you to confirm your name and the procedure you are having.

Different types of anaesthetic are possible. Your anaesthetist will discuss the options with you. You may also have injections of local anaesthetic to help with the pain after the procedure.

You will be given antibiotics at the start of the procedure to reduce the risk of infection. The procedure usually takes around 1 hour.

Your surgeon will make a cut just above or below your knee. Using an x-ray machine to guide them, they will cut the bottom end of your thigh bone or the top end of your shin bone.

They will realign the bone and fix it in place with a metal plate and screws. The plate will need to stay in for at least 12 months and then will be removed in a small procedure. Sometimes the plate must stay in long-term. Your surgeon will discuss this with you before the procedure.

They will then close your skin with stitches or clips and apply a bandage.

Clips, staples, implants, metalwork and any other materials used for the procedure are designed not to react with your body, and some can stay in place for the rest of your life. These may also be used to plan procedures you may need in the future.

What should I do about my medication?

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

How can I prepare myself for the procedure?

If you smoke, stopping now will reduce your risk of developing complications and will improve your long-term health. Smoking increases your risk of the wound or bone not healing properly, infection and other complications.

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

Regular exercise should help you prepare for the procedure, help you recover and improve your long-term health. The healthcare team may give you specific advice if you have certain health problems.

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

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

What complications can happen?

The healthcare team are trained to reduce the risk of complications.

Possible complications of this procedure are shown below.

Any risk rates given are taken from studies of people who have had this procedure. Your doctor may be able to tell you if the risk of a complication is higher or lower for you. Some risks are higher if you are older, obese, have other health problems or you smoke. Health problems include diabetes, heart disease or lung disease.

Some complications can be serious and may even cause death.

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

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

General complications of any procedure

- Bleeding during or after the procedure. This can cause a small lump under your wound that usually settles within a few weeks. You may need another procedure to wash the blood out. This is rare.
- Infection of the surgical wound. It is usually safe to shower after 5 days but you should check with the healthcare team. Keep your wound dry and covered. Tell the healthcare team if you get a high temperature, notice pus (thick, yellowish or whitish fluid) in your wound, or if your wound becomes red, sore or painful. An infection usually settles with

antibiotics but you may need special dressings and your wound may take some time to heal. In some cases, your may need another procedure or series of procedures. Do not take antibiotics unless you are told you need them.

- Allergic reaction to the equipment, materials or medication. The healthcare team are trained to detect and treat any reactions that may happen. Tell them if you have any known allergies or if you have reacted to any medication, tests or dressings in the past.
- Acute kidney injury (risk: 5 in 1,000). During your procedure and recovery your kidneys can become damaged. The healthcare team will monitor you closely. Any kidney damage usually does not last long, but some people may need to spend longer in hospital. A small number can go on to develop chronic kidney disease.
- Venous thromboembolism (VTE). This is a blood clot in your leg (deep-vein thrombosis, or DVT) or one that has moved to your lung (pulmonary embolus, or PE). DVT can cause pain, swelling or redness in your leg, or the veins near the surface of your leg to appear larger than normal. The healthcare team will encourage you to get out of bed soon after the procedure and may give you injections, medication, or special stockings to wear. Tell the healthcare team straight away if you become short of breath, feel pain in your chest or upper back, or if you cough up blood. If you are at home, call an ambulance or go immediately to your nearest emergency department.
- Difficulty passing urine. You may need a tube (catheter) in your bladder for 1 to 2 days.
- Chest infection. Your risk is lower if you do not smoke or have stopped smoking, and have not had a recent cough or cold.

Specific complications of this procedure

- Damage to nerves around your knee, leading to weakness, numbness or pain in your leg or foot. This normally gets better but may be permanent. You may need another procedure.
- Damage to blood vessels behind your knee, leading to loss of circulation to your leg and foot. You will need surgery straight away to restore the blood flow.
- Severe pain, stiffness and loss of the use of your knee (complex regional pain syndrome, or CRPS). The cause is not known. You may need further treatment including painkillers and physiotherapy. Your knee can take months or years to improve. Sometimes there is permanent pain and stiffness. This is rare.
- Difference in leg length. This is normally not noticeable. You may have some pain in your knees and hips but this should settle with time.
- Failure of the procedure. This happens if the osteotomy does not heal. You will need another procedure.
- Pain. This procedure may not fully relieve your pain and there is a small chance you may be in more pain after surgery.
- Difficulty passing urine. This normally gets better after a few days. If it gets worse (bladder retention) you may need to go home with a urinary catheter and come back to hospital to have it removed around 2 weeks later. Your risk is higher if you are male, over the age of 60 or have prostate problems.

Consequences of this procedure

- Scarring of your skin. Knee wounds usually heal to a neat scar.

What happens after the procedure?

In hospital

After the procedure you will be taken to the recovery area and then to the ward.

The physiotherapist will show you some exercises to do at home to help you to move around and improve your muscle strength.

You should be able to go home after 1 to 2 days.

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

Returning to normal activities

Follow any instructions the healthcare team give you to reduce the risk of a blood clot, such as taking medication or wearing special stockings.

You will have a bandage on your knee which you should leave in place for 2 to 3 days. It is common for your leg to be a little swollen for a few weeks.

Keep your wound dry for 14 days and use a waterproof dressing when you have a bath or shower.

Your surgeon or physiotherapist will tell you how much weight you can put on your leg and for how long. You will need to use walking aids until you can walk well without them.

Walking can be uncomfortable, and you may need to take painkillers. Ice packs or a compression device may help relieve your discomfort.

The healthcare team will tell you if you need to have any stitches or clips removed, or dressings changed. You may need to come back to the hospital for check-ups after the surgery.

Regular exercise should help you to return to normal activities as soon as possible. The healthcare team may give you specific advice if you have certain health problems.

Do not drive a car or ride a bike until you can control your vehicle, including in an emergency. Ask the healthcare team about this and always check your insurance policy.

You may need to wait a while before you can fly. Please check the website of your national aviation authority for information about flying after surgery or speak to your airline or a member of the healthcare team.

The future

Most people can return to normal activities within 5 to 6 months. However, it can take up to 18 months to fully recover.

You may need a small procedure up to a year later to remove the metal plate and screws.

Summary

An osteotomy of the knee is a procedure to treat arthritis. Although some people may need a knee replacement in the future, an osteotomy can delay this.

The procedure is usually safe and effective, but complications can happen. Being aware of them will help you make an informed decision about the procedure. This will also help you and the healthcare team to notice and treat any problems after your procedure as quickly as possible.

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

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

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

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