

## Understanding NICE guidance

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Information for people who use NHS services

# Preventing and treating surgical site infections

*NICE 'clinical guidelines' advise the NHS on caring for people with specific conditions or diseases and the treatments they should receive.*

This booklet is about preventing and treating surgical site infections in the NHS in England and Wales. It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence). It is written for people who are having, or have had, an operation but it may also be useful for their families or carers or for anyone with an interest in the condition.

The booklet is to help you understand the care that should be available in the NHS. It does not describe surgical site infections, how to prevent them or tests or treatments for them in detail. A member of your healthcare team should discuss these with you. There are examples of questions you could ask at the end of this booklet to help you with this. You can get more information from the organisations listed on page 8.

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### **The advice in the NICE guideline covers:**

- adults and children who are going to have a cut through the skin for an operation.

### **It does not specifically look at:**

- adults and children who are going to have an operation that does not involve a cut through the skin on the outside of the body
- adults and children who are going to have procedures involving thin tubes (called catheters) placed in blood vessels, tubes (called shunts) inserted into the body to divert fluid, thin flexible telescopes (called endoscopes) to view the inside of the body or metal pins used externally to treat broken bones.

## Your care

Your treatment and care should take into account your personal needs and preferences, and you have the right to be fully informed and to make decisions in partnership with your healthcare team. To help with this, your healthcare team should give you information you can understand and that is relevant to your circumstances. All healthcare professionals should treat you with respect, sensitivity and understanding and explain surgical site infections and how to prevent and treat them simply and clearly.

The information you get from your healthcare team should include details of the possible benefits and risks of particular treatments. You can ask any questions you want to and can always change your mind as your treatment progresses or your condition or circumstances change. Your own preference for a particular treatment is important and your healthcare team should support your choice of treatment wherever possible, but this does depend on your age. If you are over 16, or under 16 and fully understand the treatment, you may be able to give your own agreement. If you are too young, your parents or carers may need to agree to your treatment.

Your treatment and care, and the information you are given about it, should take account of any religious, ethnic or cultural needs you may have. It should also take into account any additional factors, such as physical or learning disabilities, sight or hearing problems, or difficulties with reading or speaking English. Your healthcare team should be able to arrange an interpreter or an advocate (someone who supports you in putting across your views) if needed.

If you agree, your family and carers should have the chance to be involved in decisions about your care. Family members and carers also have the right to the information and support they need in their roles as carers.

If people are unable to understand a particular issue or are not able to make decisions for themselves, healthcare professionals should follow the advice that the Department of Health has produced about this. You can find this by going to the Department of Health website ([www.dh.gov.uk/consent](http://www.dh.gov.uk/consent)). Your healthcare professional should also follow the code of practice for the Mental Capacity Act. For more information about this, visit [www.publicguardian.gov.uk](http://www.publicguardian.gov.uk)

## Surgical site infections

There are many tiny organisms (called microorganisms) living on your skin, in your body and in the environment around you. These microorganisms can only be seen through a microscope. They include bacteria, fungi and viruses. Most microorganisms do not cause you any harm. When you have an operation, microorganisms from your own body or from the environment can enter the body through the cut made by the surgeon (known as a surgical wound) during or after the operation. They can multiply and cause an infection. This is called a surgical site infection (sometimes shortened to SSI or called a surgical wound infection).

Many surgical site infections are not very serious, affecting only the skin. However, some can be more serious if they affect the deeper tissues under the skin.

Surgical site infections can often be prevented if care is taken before, during and after surgery.

### Information and advice from your healthcare team

Your healthcare team should give you and your family or carer clear, consistent information and advice throughout your care about:

- the risks of surgical site infection
- what they will do to help prevent you from getting an infection
- how to care for your wound when you go home
- how to recognise an infection
- who to contact if you are concerned about your wound
- how surgical site infections are treated.

They should show you a plan that helps to describe the care you should receive after your operation.

## Before your operation

Your healthcare team should advise you to have a shower or bath before your operation, using soap, either the day before or on the day of the operation. If you are not able to wash yourself, your healthcare team should help you to have a shower, bath or bed bath.

For most operations, you will not need to have the hair around the site of the operation removed. However, if your healthcare team do need to remove hair (to allow them to see or reach the skin, for example) it should be done on the day of the operation using electric hair clippers with a disposable head.

Your healthcare team will give you a gown to wear for your operation that will allow the surgeon easy access to the area of the body where the operation will be carried out.

All staff who enter areas where operations take place should also wear special clothes. They should keep their movements in and out of the operating area to a minimum to ensure that it is kept as free of microorganisms as possible.

For certain types of operation, where there is a higher risk of infection, you should be given antibiotics before surgery to help prevent infection. Your healthcare team should discuss this with you before your operation, if possible, and tell you afterwards if you have been given antibiotics during your operation.

Antibiotics should be given to you at the same time as you are given your anaesthetic (this may be through a drip or injection), or earlier in some operations where pressure is going to be used to stop blood flow (using a tourniquet).

For many operations, a single dose of antibiotics will be enough, although for long operations you may need another dose.

You may need extra antibiotics to treat infection if your operating team finds an infection or contamination occurs during the operation.

*Some of the care described may not be suitable for you, depending on your exact circumstances. If you have questions about the specific care and options covered in this booklet, please talk to a member of your healthcare team.*

*Your healthcare team will take special precautions during your operation to help prevent surgical site infection.*

## During your operation

The team carrying out your operation should take special precautions to help prevent your wound from becoming infected. These include:

- thoroughly washing their hands and cleaning their nails
- removing any rings or bracelets, nail varnish and false nails
- wearing surgical gowns and gloves that have been cleaned to remove any bacteria or other microorganisms
- wearing two pairs of gloves for extra protection if there is a high risk that a single pair might be damaged
- cleaning your skin with an antiseptic liquid just before it is cut.

To reduce the risk of infection during the operation your healthcare team will make sure that:

- you are receiving enough oxygen
- the fluid balance in your body is correct
- your body stays at the correct temperature.

At the end of the operation, your surgical wound should be covered with a special dressing that helps it to heal and protects it from infection.

*Your healthcare team will take care when changing and removing your wound dressing and cleansing your wound to help prevent surgical site infection.*

## After your operation

Your healthcare team should take special care when changing or removing your wound dressing to prevent infection. In particular, they should wear gloves and avoid touching the wound and the surface of the clean dressing that will be in contact with the wound.

Your healthcare team should use a liquid called sterile saline to cleanse your wound during the first 48 hours after your operation. This is a solution that has been cleaned to remove any bacteria or other microorganisms. If the edges of your wound are open, they may use water to cleanse your wound after 48 hours. Your healthcare team should tell you that it is safe for you to shower after 48 hours if you want to.

If your wound has been left open to heal and does not have stitches, your healthcare team should use a special dressing that helps it to heal and protects it from microorganisms that can cause infection.

Your healthcare team should give you advice on how to care for your wound. If you are unsure, ask your healthcare team for help.

## If a surgical site infection is suspected

If your healthcare team suspect that you have a surgical site infection (such as cellulitis, which is an infection of the deep layer of skin and tissues beneath the skin) due to contamination during the operation or because your wound has failed to heal, they should give you an antibiotic. An antibiotic should be chosen that is effective for the microorganisms most likely to have caused the infection. Your healthcare team should look at the results of tests carried out on samples from your wound. They should also consider which antibiotics are most likely to work in the area of your local hospital, as the effectiveness of antibiotics can vary from place to place.

### Questions you might like to ask your healthcare team

- How likely am I to get an infection?
- Do infections often occur after this type of operation?
- What can I do to help prevent my wound from becoming infected?
- What will happen before my operation to help prevent infection?
- Am I likely to need antibiotics before or during the operation?
- How should I check my wound for infection?
- How often should I check my wound, and for how long after my operation?
- How will I know if my wound becomes infected? What should I look for?
- If my wound does become infected, what should I do?
- Who can I contact for advice?
- What tests will I need if you think I might have a surgical site infection?
- What treatment will I need if I have a surgical site infection?
- Will I need to have another operation?

## More information

The organisation below can provide more information and support for people before and after they have an operation. Please note that NICE is not responsible for the quality or accuracy of any information or advice provided by this organisation.

- MRSA Action UK, 01606 559748, [www.mrsaactionuk.net](http://www.mrsaactionuk.net)

The Health Protection Agency ([www.hpa.org.uk](http://www.hpa.org.uk)) may be a useful source of further information about surgical site infections. It produces an information leaflet for patients, available from its website.

NHS Direct online ([www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk)) may also be a good starting point for finding out more about your operation and surgical site infections. Your local Patient Advice and Liaison Service (PALS) may also be able to give you further information and support.

## About NICE

NICE produces guidance (advice) for the NHS about preventing, diagnosing and treating different medical conditions. The guidance is written by independent experts including healthcare professionals and people representing patients and carers. They consider the evidence on the condition and treatments, the views of patients and carers and the experiences of doctors, nurses and other healthcare professionals working in the field. Staff working in the NHS are expected to follow this guidance.

*To find out more about NICE, its work and how it reaches decisions, see [www.nice.org.uk/aboutguidance](http://www.nice.org.uk/aboutguidance)*

*This booklet and other versions of this guideline aimed at healthcare professionals are available at [www.nice.org.uk/CG074](http://www.nice.org.uk/CG074)*

*You can order printed copies of this booklet from NICE publications (phone 0845 003 7783 or email [publications@nice.org.uk](mailto:publications@nice.org.uk) and quote reference N1702).*

*We encourage NHS and voluntary sector organisations to use text from this booklet in their own information about surgical site infection.*