

## Understanding NICE guidance

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Information for people who use NHS services

# Keeping patients warm before, during and after an operation

*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 the care and treatment of people who are having an operation in hospital, in the NHS in England and Wales, to reduce their risk of getting cold before, during or after their operation. It explains guidance (advice) from NICE (the National Institute for Health and Clinical Excellence). It is written for people who are having an operation but it may also be useful for their families or carers or for anyone with an interest in the topic.

The booklet aims to help you understand the care and treatment options that should be available in the NHS. It does not describe the tests or treatments you should have in detail. A member of your healthcare team should discuss these with you. There are examples of questions you could ask in this booklet to help you with this. Some sources of further information and support are on page 7.

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

- all adults having a planned or emergency operation in hospital under anaesthetic (except where this is a local anaesthetic).

### **It does not apply to:**

- children or young people under 18 years old
- pregnant women
- people who are deliberately kept cold during their operation for medical reasons
- people with severe head injuries.

## 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. They should explain simply and clearly why it is important that you are kept warm and your temperature is recorded when you are having an operation, and how you will be cared for to reduce your risk of getting cold.

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 your own preference for a particular treatment is important. Your healthcare team should support your choices wherever possible.

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 new Mental Capacity Act. For more information about this, visit [www.publicguardian.gov.uk](http://www.publicguardian.gov.uk)

## What is perioperative hypothermia?

The perioperative period is the time surrounding a patient's surgical procedure; this includes the period before surgery on the ward (or in A&E), as well as during the operation and afterwards. Hypothermia means an abnormally low body temperature; that is, a 'core' temperature below 36°C. Your core temperature is the temperature of your organs, such as your heart and liver, and it is normally slightly higher than at the places where your temperature is taken, such as your mouth or ear. For some operations, a person's temperature may be deliberately lowered for medical reasons (known as therapeutic hypothermia). However, if perioperative hypothermia occurs unintentionally, it may cause:

- increased blood loss and a greater risk that you will need a blood transfusion
- a higher chance of wound infection
- a greater chance of heart problems
- an increased risk of bedsores
- a longer recovery period after the operation, which may require a longer stay in hospital.

## How can you avoid getting perioperative hypothermia, and what will happen if you get cold?

The advice from NICE about how to prevent perioperative hypothermia covers the care and treatment you should receive before, during and after your operation.

In general, your healthcare team will try to ensure that you stay comfortably warm all the time. They will do several things to keep you warm, starting before your operation and continuing until you are comfortably warm back on the ward. They will monitor your temperature, and may use a special blanket that is usually placed over you and into which warm air is blown to help stop you getting too cold. This is called 'forced air warming'.

## Before your operation

Staff should encourage you to bring extra clothes (such as slippers, a dressing gown, a vest and other warm clothing) to help you keep comfortably warm in hospital.

To help you keep warm while waiting for your operation, staff on the ward or in A&E should make sure that you have at least a sheet and two blankets, or a duvet.

You should tell staff if you feel cold at any time during your stay in hospital.

Before your operation, a healthcare professional should assess your risk of getting cold during the operation and of associated problems. If you are at higher risk (see the box below), you should be kept warm using a warm-air blanket throughout your operation.

*If you have questions about the treatments and options covered in this booklet, please talk to a member of your healthcare team.*

### Assessing your risk

If any two of the following apply to you, you are at higher risk of getting cold during your operation or of developing one of the health problems associated with perioperative hypothermia.

- You have a condition that affects your general health, such as high blood pressure, asthma, diabetes or angina.
- Your body temperature is below 36°C before your operation.
- You are having a regional anaesthetic (such as an epidural) as well as a general anaesthetic.
- Your operation is not a minor operation.
- The assessment shows that you are at risk of heart problems during or after your operation.

Your temperature should be measured and recorded in the hour before you leave the ward or A&E. If your temperature is below 36°C you should be kept warm using a warm-air blanket (forced air warming). However, there might not be time to use the warm-air blanket if the operation is very urgent.

If your temperature is 36°C or above, you can be taken to the operating theatre. Staff should make sure that you are kept comfortably warm on the way, and should encourage you to walk there if you can because this can help you to keep warm.

## During your operation

When you get to the operating theatre, your temperature should be measured and recorded before you are given the anaesthetic. If your temperature is below 36°C you should not be given the anaesthetic straight away, but a warm-air blanket should be used so that your temperature reaches 36°C. Your temperature should also be measured every 30 minutes during your operation.

If your operation lasts longer than 30 minutes, or if your operation is shorter than this but you are at higher risk of getting cold as described in the 'Assessing your risk' box on page 5, you should be kept warm throughout the operation using a warm-air blanket.

You should be kept covered as much as possible during your operation, and the theatre temperature should be at least 21°C at times when you aren't covered by a warm-air blanket. Any fluids used during the operation should be warmed to normal body temperature.

## After your operation

Your temperature should be measured and recorded when you arrive in the recovery room after your operation, and then every 15 minutes until it is at least 36°C. If your temperature is below 36°C, you should be kept warm with a warm-air blanket. Transfer back to the ward should not be arranged until your temperature is at least 36°C.

Back on the ward, staff should measure and record your temperature when you arrive, and then every 4 hours. Like before your operation, you should be given enough bedclothes so that you are comfortably warm, and you should tell staff if you feel cold at any time.

If staff find that your temperature has dropped below 36°C on the ward, you should be kept warm using a warm-air blanket. Your temperature should be measured and recorded at least every 30 minutes until you are comfortably warm.

## Questions you might like to ask your healthcare team

- What can I do to help prevent myself from getting cold when in hospital?
- What will you do to help me keep warm?
- Who should I tell if I feel cold at any time when I am in hospital?
- When and how often will my temperature be measured?
- Am I at higher risk of getting cold during my operation?
- What will happen if I get cold during my operation?
- If I need to be kept warm, how will this be done?
- Why is it better for me to walk to the operating theatre rather than being taken on a trolley?

*If you think that your care does not match what is described in this booklet, please talk to a member of your healthcare team, or to your local Patient Advice and Liaison Service (PALS). If PALS are not able to help you, they should refer you to your local Independent Complaints Advocacy Service.*

## More information

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

- The Royal College of Surgeons of England Patient Liaison Group, 020 7869 6043, [www.rcseng.ac.uk/patient\\_information/plg](http://www.rcseng.ac.uk/patient_information/plg)

NHS Direct (0845 4647) is another possible source of information. 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 best available 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/CG065](http://www.nice.org.uk/CG065)*

*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 N1558).*

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