

# Keeping patients warm before, during and after an operation

Information for the public

Published: 1 April 2008

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

## About this information

NICE guidelines provide advice on the care and support that should be offered to people who use health and care services.

This information explains the advice about keeping patients warm before, during and after an operation that is set out in NICE guideline CG65.

Information about caring for patients with communication difficulties and keeping patients warm before they have their anaesthetic was added in 2016.

## Does this information apply to me?

Yes, if you are an adult who is having a planned or emergency operation in hospital under anaesthetic (except where this is a local anaesthetic).

No, if you:

- are a child or young person under 18
- are pregnant
- are being deliberately kept cold during your operation for medical reasons
- have severe head injuries.

## 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 the accident and emergency department), 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 usually 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 mean that you need to stay in hospital for longer.

## Your care team

A range of professionals who specialise in different areas of treatment or support may be involved in your care. These could include doctors, nurses and surgeons.

## Working with you

Your care team should talk with you about keeping warm before, during and after your

operation. They should explain any treatments or support you should be offered so that you can decide together what is best for you. Your family or carer can be involved in helping to make decisions, but only if you agree. There is a [list of questions](#) you can use to help you talk with your care team.

You may also like to read NICE's information for the public on [patient experience in adult NHS services](#). This sets out what adults should be able to expect when they use the NHS. We also have more information on the NICE website about [using health and social care services](#).

Some treatments or care described here may not be suitable for you. If you think that your treatment does not match this advice, talk to your care team.

## 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 should try to ensure that you stay comfortably warm all the time. They should do several things to keep you warm, starting before your operation and continuing until you are comfortably warm back on the ward. They should monitor your temperature, and use a special warming blanket or mattress to help stop you getting too cold.

You should be encouraged to tell staff if you feel cold at any time during your stay in hospital. If you have difficulties communicating, staff should check to make sure that you are comfortably warm.

## 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.

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

## Assessing your risk

If any 2 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 accident and emergency department. If your temperature is below 36°C you should be warmed in the ward or accident and emergency department using a special warming blanket or mattress. However, there might not be time for this if the operation is very urgent.

If your temperature is 36°C or above, you can be taken to the operating theatre. You should be encouraged to walk there if you can.

## During your operation

When you get to the operating theatre, your temperature should be measured and recorded before you are given the anaesthetic. You should be kept warm using a special warming blanket or mattress for at least 30 minutes before you are given your anaesthetic,

although there might not be time for this if you are having emergency surgery.

If your temperature is below 36°C you should not be given the anaesthetic straight away (unless you are having emergency surgery). A special warming blanket or mattress should be used so that your temperature reaches 36°C before you have the anaesthetic.

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 in [before your operation](#), you should be kept warm throughout the operation using a special warming blanket or mattress.

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. 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 special warming 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. You should be given enough bedclothes so that you are comfortably warm.

If staff find that your temperature has dropped below 36°C on the ward, you should be kept warm using a special warming 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

These questions may help you discuss keeping warm before, during and after your

operation with 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 it is better for me to walk to the operating theatre rather than being taken on a trolley?

## Sources of advice and support

- The Royal College of Surgeons of England Patient Liaison Group, 0207 869 6052  
[www.rcseng.ac.uk/patient-care/having-surgery/](http://www.rcseng.ac.uk/patient-care/having-surgery/)

You can also go to [NHS Choices](#) for more information.

NICE is not responsible for the quality or accuracy of any information or advice provided by these organisations.

ISBN: 978-1-4731-2215-4