

# heatwave

## PLAN FOR ENGLAND



PROTECTING HEALTH AND  
REDUCING HARM FROM  
EXTREME HEAT AND HEATWAVES



Extreme heat is dangerous to everyone. During a heatwave, when temperatures remain abnormally high over more than a couple of days, it can prove fatal, particularly among certain at-risk groups. In one hot spell in London in August 2003, deaths among people aged over 75 rose by 60 per cent.



## Why this plan is needed

Climate change means heatwaves are likely to become more common in England. By the 2080s, it is predicted that an event similar to that experienced in England in 2003 will happen every year.

In Northern France in August 2003, unprecedentedly high day and night-time temperatures for a period of two weeks resulted in 15,000 excess deaths. The vast majority of these were among older people.

Excess deaths are not just deaths of those who would have died anyway in the next few weeks or months due to illness or old age. The evidence is strong that these summer deaths are indeed 'extra' and the result of heat-related conditions.

The risk of a heatwave in England in 2005 as severe as that in France in 2003 is very low, less than 0.1%. However, during relatively mild heatwaves, death rates are significantly, but avoidably, raised in this country. Timely preventive measures can reduce these excess rates. In contrast to deaths associated with cold snaps in winter, the rise in mortality follows very sharply – within one or two days of the temperature rising. This means that:

- by the time a heatwave starts the window of opportunity for effective action is very short indeed; and, therefore;
- proper preparedness is of the essence.



SIR LIAM DONALDSON  
Chief Medical Officer

## The health risks

There are certain groups that are particularly at risk during a heatwave.

These include:

- older people, especially those over 75 years old and/or living on their own, or in a care home;
- people suffering from mental ill health, those with dementia, and those who rely on help from other people to manage day-to-day activities;
- people who are bed-bound;
- people taking certain types of medication; and
- babies and young children, especially those under four years old.

Certain types of environment may exacerbate the risk from extreme heat, such as accommodation in top floor flats, lack of air conditioning, or work places producing heat, such as foundries and bakeries.

During extremely hot weather, there is a risk of developing heat exhaustion and heatstroke. Heatstroke can develop if the symptoms of heat exhaustion are left untreated. It can also occur suddenly and without warning. Heatstroke can result in organ failure, brain damage or death.

Should one occur, this plan sets out what needs to happen before and during a severe heatwave in England. It includes specific measures to protect at-risk groups.

## Plan summary

The arrangements outlined here spell out what needs to be done by health and social care services and other bodies to raise awareness of risks relating to severe hot weather and what preparations both individuals and organisations should make to reduce those risks.

The plan also spells out the responsibilities at national and local level for alerting people once a heatwave has been forecast, and advising them what to do during a heatwave.

The core elements of the plan are:

- A 'Heat-Health watch' system operating from 1 June to 15 September, based on Met Office forecasts, which will trigger levels of response from the Department of Health and other bodies.
- Advice and information issued by the Department of Health direct to the public and to health and social care professionals, particularly those working with at-risk groups, both before a heatwave is forecast and when one is imminent.
- Identification of individuals most at risk by primary care teams and social services. These people will be the first to receive advice on preventive measures. They may be assessed to see if they need extra care and support during a heatwave.
- Extra help, where available, from the voluntary sector, families and others to care for those most at risk, mainly older people and people with a disability. This will be determined locally, as part of individual care plans, and based on existing relationships between statutory and voluntary bodies.
- Using the media to get advice to people quickly, both before and during a heatwave.

## The heatwave plan

### 'Heat-Health watch'

A 'Heat-Health watch' system will operate in England from 1 June to 15 September each year. During this period, the Met Office may forecast severe heatwaves, as defined by day and night-time temperatures and duration.

While 'Heat-Health watch' is in operation, the Health Protection Agency will monitor the number of calls people make to NHS Direct and the amount of visits made to a sample of GP practices. Daily and weekly call and consultation rates will be reported to the Department of Health to assess how people's health seems to be being affected by the weather.

The 'Heat-Health watch' system comprises four levels of response. It is based on threshold day and night-time temperatures as defined by the Met Office. These vary from region to region, but the average threshold temperature is 30°C during the day and 15°C overnight. Details of individual regional thresholds are given at the end of this plan.

**Level 1 Awareness** – This is the minimum state of vigilance. Both before and during this period, preparedness must be enhanced and maintained by the measures set out in the heatwave plan.

**Level 2 Alert** – This is triggered as soon as the Met Office forecasts threshold temperatures for at least three days ahead in any one region, or that there is an 80% chance of temperatures being high enough on at least two consecutive days to have significant effects on health.

**Level 3 Heatwave** – This is triggered as soon as the Met Office confirms that threshold temperatures have been reached in any one region or more.

**Level 4 Emergency** – This is reached when a heatwave is so severe and/or prolonged that its effects extend outside health and social care, such as power or water shortages, and/or where the integrity of health and social care systems is threatened.

## Responsibilities at Level 1: Awareness

Preparations at this level will be the overall responsibility of the Department of Health, in collaboration with the Met Office, the Health Protection Agency, NHS bodies, including NHS Direct and local authorities.

The **Met Office** will develop and publicise the regional threshold temperatures ready for Level 2, and ensure three-day forecasts are disseminated as appropriate to the Department of Health, and via national, regional and local weather forecasts.

The **Department of Health** will issue general advice to the public and health care professionals, including details of what to do at Levels 2 and 3.

- A public information leaflet will be available through GP practices, pharmacies, NHS walk-in centres, Citizens Advice Bureaux, NHS Direct call centres, hospitals, care homes and voluntary sector organisations such as Age Concern and Help the Aged. The same advice will be posted on NHS Direct Online, with links from the Health Protection Agency and Department of Health websites.
- A factsheet is available for health and social care professionals, particularly those who visit people in their homes. This offers advice on practical measures to reduce health risks during a heatwave and encourages identification of at-risk individuals in advance, and assessment of additional care needs.
- A second factsheet is specifically aimed at the managers and staff of residential and nursing care homes, where people are particularly at risk during hot weather.

**Implementation of the practical advice in the leaflet and both factsheets is central to the plan. Copies are attached.**

The **Health Protection Agency**, in collaboration with NHS Direct, will refine mechanisms for the surveillance of increased heat-related illness with the aim of being able to provide daily real-time reports to the Department of Health. These will provide a source of intelligence on (a) how severe the effects are, and (b) how well services are responding.

**Primary care trusts** and **local social services authorities** will support community and primary care staff in:

- identifying individuals who are at particular risk from extreme heat, especially those aged over 75. These people are likely to be already receiving care;
- identifying any changes to individual care plans that might be necessary in the event of a heatwave, including initiating daily visits by formal or informal carers to check on people living on their own;
- working with at-risk individuals' families and informal carers to put simple protective measures in place, such as installing proper ventilation and ensuring fans and fridges are available and in working order; and
- reviewing surge capacity and the need for, and availability of, staff support in the event of a heatwave, especially if it lasts for more than a few days.

**Strategic health authorities** and **primary care trusts** will ensure independent healthcare providers are aware of all the guidance on minimising and coping with heat-related health risks.

**Strategic health authorities** and **local authorities** will raise awareness about heat-related health risks among nursing and residential care home managers and staff, and encourage additional staff training, in line with the Department of Health factsheet.

**NHS trusts** will check the resilience of their estates and equipment, especially medical and IT systems, to ensure that where necessary they can be maintained at working temperatures and there is no risk of system failure through overheating.

### **Responsibilities at Level 2: Alert**

The **Met Office** will notify the Department of Health and other organisations with 'Heat-Health watch' responsibility immediately threshold temperatures are forecast for three days ahead for any one region. A warning will also be broadcast to the public via television and radio weather reports. This warning will resemble the examples given at the end of this plan.



The **Department of Health** will issue specific advice to the public and health and social care professionals in affected regions, in preparation for an imminent heatwave, via NHS Direct Online and the Met Office, Health Protection Agency and Department of Health websites. NHS bulletins will be sent direct to key groups at local level, including chief executives and GPs, and recipients of the National Severe Weather Warning Service, such as local authority emergency planners, the emergency services and weather information providers.

The **Health Protection Agency** will continue surveillance of increased heat-related illness reflected in calls to NHS Direct and GP consultations to provide daily real-time reports to the Department of Health. These will provide a source of intelligence on (a) how severe the effects are, and (b) how well services are responding.

In collaboration with the **Met Office** and **strategic health authority communications leads**, the **Department of Health** will target the media in affected regions with publicity about Met Office warnings and Department of Health advice to the public.

**In addition, as soon as possible after the Level 2: Alert is announced, and no later than the second day of a heatwave if Level 3 is reached:**

**Primary care trusts** and **local social services authorities** will ensure:

- Distribution of Department of Health advice to all those defined as at-risk living at home, and the initiation of home visits as planned, where appropriate;
- Distribution of Department of Health advice to the managers of local authority-funded residential and nursing care homes.

**Strategic health authorities** and **local authorities** will also ensure that Department of Health advice is distributed to all nursing and residential care home managers, including those with whom the local authority has no contract.

### Responsibilities at Level 3: Heatwave

The **Met Office** will confirm that the high temperature threshold has been reached for any one region or more. The forecast will include the likely duration of the heatwave, the likely temperatures to be expected and the probability of other regions exceeding their threshold. The Met Office will continue to monitor and forecast temperatures in each region.

The **Department of Health** will continue to issue advice to the public and health and social care professionals in affected regions (as Level 2).

The **Health Protection Agency** will continue surveillance of increased heat-related illness reflected in calls to NHS Direct and GP consultations to provide daily real-time reports to the Department of Health. These will provide a source of intelligence on (a) how severe the effects are, and (b) how well services are responding.

In collaboration with the **Met Office** and **strategic health authority communications leads**, the **Department of Health** will target the media in affected regions with publicity about Met Office warnings and Department of Health advice to the public.

**Primary care trusts** and **local social services authorities** will:

- Continue to distribute advice to people at risk and managers and staff of residential and nursing care homes.
- Commission additional care and support, involving at least daily contact, as necessary for at-risk individuals living at home. This may involve informal carers, volunteers and care workers. It will be particularly targeted at people with mobility or mental health problems, or receiving medication likely to give rise to heat-related risks, and those living in accommodation that cannot easily be kept cool. Informal carers should be consulted about additional arrangements wherever possible.

- Ensure Department of Health advice reaches local authority-funded residential and nursing care home managers as soon as a heatwave starts.

**Primary care trusts** and **NHS trusts** will ensure hospital services are in a state of readiness in case there is a rise in admissions. Discharge planning should reflect local and individual circumstances so that people at risk are not discharged to unsuitable accommodation or reduced care during a heatwave.

**Strategic health authorities** and **local authorities** will continue to ensure that Department of Health advice is distributed to all residential and nursing care home managers, particularly those not funded by the local authority.

#### **Responsibilities at Level 4: Emergency**

At this stage, a heatwave is judged so severe and/or prolonged that its effects extend outside the health and social care system. It may be declared locally, regionally or nationally, according to established operating doctrines.

In the event of a 'major incident' being declared, all existing emergency policies and procedures will apply.

All Level 3 responsibilities will also continue.

## Annex 1

Threshold day and night temperatures defined by the Met Office by region

Temperature (degrees Centigrade)

Region	Day	Night
London	32	18
South East	31	16
South West	30	15
Eastern	30	15
West Mids	30	15
East Mids	30	15
North West	30	15
Yorks & Humber	29	15
North East	28	15

## **Annex 2**

Copies of the public information leaflet and factsheets for health and social care professionals and residential and nursing care home managers can be downloaded from: [www.dh.gov.uk/publications](http://www.dh.gov.uk/publications).

## Annex 3

These are the core messages to be broadcast as 'official Department of Health warnings' alongside national and regional weather forecasts. They may be expanded or otherwise refined in discussion with broadcasters and weather presenters.

### Level 1: Awareness

No warning required unless there is a 50% probability of the situation reaching Level 2: Alert somewhere in the UK within the next five days, then something along the lines of:

**If this does turn out to be a heatwave, we'll try and give you as much warning as possible. But in the meantime, if you are worried about what to do, either for yourself or somebody you know who you think might be at risk, go to NHS Direct Online for advice at [www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk). Alternatively ring NHS Direct on 0845 4647.**

## **Level 2: Alert**

'The Met Office in conjunction with the Department of Health is issuing the following heatwave warning for [regions identified]:

**'Heatwaves can be dangerous, especially for the very young or very old or those with chronic disease. Advice on how to reduce the risk either for yourself or somebody you know can be obtained from NHS Direct at [www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk) or on 0845 4647, or from your local chemist.'**

## **Level 3 or 4: Heatwave/Emergency**

The Met Office, in conjunction with the Department of Health, is issuing the following heatwave advice for [regions identified]:

**'Stay out of the sun. Keep your home as cool as possible – shutting windows during the day may help. Open them when it is cooler at night. Keep drinking fluids. If there's anybody you know, for example an older person living on their own, who might be at special risk, make sure they know what to do.'**



© Crown copyright 2004

First published July 2004  
Produced by the Department of Health

This title can also be made available on request in Braille,  
on audio-cassette tape, on disk and in large print.

[www.dh.gov.uk/publications](http://www.dh.gov.uk/publications)