

specific in children under 6-12 months. Any parent who is worried about their child should contact a doctor or NHS Direct straight away. For more information on meningitis, please see the separate BUPA factsheet *Meningitis*.

Further information

NHS Direct

www.nhsdirect.nhs.uk

☎ 0845 46 47

This factsheet is based on reputable sources of medical evidence and has been reviewed by BUPA doctors. For more details of references and sources, please see our website. The content is intended for general information only and does not replace the need for personal advice from a qualified health professional.

Fever in children

Normal body temperature is around 37°C. Fever is an abnormally high body temperature. Children are more likely to have a wider range of normal body temperatures than adults. This means that small temperature increases in children are generally less significant than the same increase in an adult.

What causes a fever?

Fever is not an illness in itself. It is a sign of other problems in the body, and is usually caused by a viral or bacterial infection. It is thought to be the body's natural defence mechanism - the body tries to reach a temperature that the virus or bacteria cannot survive in.

However, fever can also be a symptom of a wide variety of other illnesses. For example, certain blood disorders, respiratory (breathing) problems, and psychological or emotional disorders may cause fever. Fever can also be caused by teething, dehydration and some childhood immunisations.

All these conditions trigger the immune system (the body's defence system) to produce chemicals. These chemicals affect the normal functioning of a part

of the brain called the hypothalamus, the heat-regulating centre in the brain.

Symptoms

Fever means having a body temperature at least 0.5°C above normal on two recordings taken at least two hours apart. As well as a high temperature, children with a fever often have:

- clammy skin
- sweating
- headache
- irritability and crying
- a flushed appearance
- tiredness
- aches and pains

A rapidly rising fever may cause chills - periods of shivering. In some children between six months and six years old,

a high fever (over 39°C) can lead to seizures (fits), which are called febrile convulsions. During a febrile convulsion, part or all of the body may shake and twitch, and the eyes may roll back in the head. Although febrile convulsions can be frightening they are believed to be harmless and usually last less than five minutes.

Taking a child's temperature

A satisfactory temperature reading can usually be obtained by placing a mercury or digital display thermometer in the child's armpit, directly against the skin, and holding the arm gently against the chest. The reading will be 0.5°C lower than it would be if the temperature was measured with a thermometer in the mouth (oral). This should be taken into consideration when assessing the child's fever. The thermometer needs to be held in place for five to ten minutes, so this method may not be suitable for younger children who will not stay still for this length of time.

Oral readings can be taken in older children, but are unsuitable in babies and very young children. To take an oral reading, place the thermometer in the child's mouth under the tongue. Leave it in place for two minutes, checking that the child is not biting on the thermometer.

Remember to clean the thermometer after use. With mercury thermometers, shake down the column before use.

Fever scanners, which can be held on the child's forehead, are not as accurate, but give a general idea of the child's temperature. They can also be useful for children who are resistant to having their temperature recorded by other methods, or are sleeping.

Another option is a digital aural thermometer that measures the temperature in the ear. A clean cover is placed over the thermometer and the tip is placed in the ear. Pressing the button activates the thermometer and gives an immediate reading. These are now used routinely in hospitals and by GPs and give very accurate readings, but they are expensive to buy.

It is best to read children's temperatures before giving any fever-reducing medication.

Treating a fever

In most cases, fever is due to a viral infection and will get better within a day. If the child's temperature is less than 38.8°C, you can help to reduce it.

- Encourage the child to have enough cool drinks or ice-lollies to avoid dehydration. The child should urinate at least every six to eight hours, and the urine should be pale yellow. They will need to drink more if they have diarrhoea or vomiting.
- Dress the child lightly.
- If they need to rest in bed, cover them with a light sheet rather than blankets or a quilt and keep the room

cool (approximately 20°C).

- Sponge the child regularly with lukewarm - not cold - water.
- Only give medication that is suitable for children, such as children's paracetamol (eg Calpol) or ibuprofen (eg Nurofen for children). Follow the guidelines on the container. Never give aspirin to a child under 16 years because, rarely, it can cause a serious illness called Reye's syndrome.

Check the child's temperature regularly to check that the fever is under control. If the fever has not gone within 24 hours, call a healthcare professional for advice. NHS Direct can give advice 24 hours a day.

When to call a doctor

Contact a healthcare professional if fever develops in any child who has recently had an operation, or recently returned from any foreign travel.

Also seek medical advice if:

- fever is accompanied by confusion or disorientation
- temperature rises above 38.9°C in children or 38°C in a baby under one year
- there is any fever in an infant under two months
- fever has no obvious cause
- fever is accompanied by, more than three episodes of diarrhoea in the last 24 hours
- there is blood in the diarrhoea

- fever is accompanied by vomiting and an inability to keep fluids down
- fever lasts longer than 24 hours
- the child is persistently drowsy and difficult to wake
- in babies, less than half the usual amount of feed has been taken in the last day
- in babies, there have been fewer than four wet nappies in the last 24 hours

Could it be meningitis?

Although it's a rare illness, parents should be aware of the signs of meningitis. Fever is one of the symptoms of meningitis, but there are others to look out for. These include:

- neck stiffness - the child is unable to bend his or her neck forwards, and attempts to do so are painful
- photophobia - the child cannot tolerate light because it hurts the eyes
- vomiting
- drowsiness
- rash (in some types of meningitis) - this is patchy and may occur all over the body. The rash of meningitis is called a non-blanching rash, and can be distinguished from other skin conditions by using the 'glass test'. With meningitis, the rash does not fade (blanche) but remains visible through the glass when it's pressed over the skin. Medical advice should be sought immediately.

The symptoms of meningitis are less