

Fever (High Temperature) in Children

Most fevers (high temperatures) in children are not serious and are due to the common infections of childhood such as coughs, colds and other viral infections. However, sometimes a fever is a symptom of a serious infection. If your child has a fever then try to make your child comfortable. For example, by giving them some paracetamol or ibuprofen, and give them lots to drink. Also, check for signs of dehydration and serious illness (details below). Seek medical help if you are concerned.

What causes a fever (high temperature)?

- **Viral infections** are the common cause. Virus infections cause many common illnesses such as colds, coughs, flu, diarrhoea, etc. Sometimes virus infections cause more serious illnesses.
- **Bacterial infections** are less common than viral infections, but also cause fevers. Bacteria are more likely to cause serious illness such as pneumonia, urine and kidney infections, septicaemia and meningitis.
- **Other types of infection** are uncommon causes of a high temperature in the UK.

What can I do if my child has a fever?

- Make your child comfortable - details below.
- Check for signs of dehydration - details below.
- Check for signs of serious infection - details below.
- Keep your child off school or nursery until they are better.
- Seek medical help if you are concerned.

Make your child comfortable

A fever can make a child feel uncomfortable and irritable. The following are things that you can do that may bring the temperature down and make your child feel more comfortable.

- **You can give paracetamol or ibuprofen.** Both of these medicines can lower a temperature. You can buy these medicines in liquid form for children. They come in various brand names. An alternative is to give soluble paracetamol in a drink. The dose for each age is given with the medicine packet.
Note: these medicines do not treat the cause of the fever. They merely help to ease discomfort. You do not need to use these medicines if the child is comfortable and not distressed by the fever.
Note: do not give both paracetamol and ibuprofen at the same time. However, on occasions, if a fever is difficult to control then for each time a medicine dose is given a doctor or nurse may advise alternating one of these medicines with the other. It is best only to do this 'alternating' dose regime after assessment by a doctor or nurse.
Note: do not use ibuprofen for:
 - Children known to react (have hypersensitivity) to ibuprofen or other nonsteroidal anti-inflammatory drugs (NSAIDs).
 - Children in whom attacks of asthma have been triggered by an NSAID.
- **Take the clothes off the child** if the room is normal 'room temperature'. It is wrong to wrap up a feverish child. The aim is to prevent overheating or shivering.
- **Give lots of to drink.** This helps to prevent dehydration. You might find that a child is more willing to have a good drink if they are not so irritable. So, if they are not keen to drink, it may help to give some paracetamol or ibuprofen first. Then, try them with drinks half an hour or so later when their temperature is likely to have come down. If breastfeeding then keep breastfeeding as breastmilk is the best fluid. However, you can offer feeds more often to increase the amount of fluid.

Do not 'cold-sponge' a child who has a fever. This used to be popular, but it is now not advised. This is because the blood vessels under the skin become narrower (constrict) if the water is too cold. This reduces heat loss, and can trap heat in deeper parts of the body. The child may then get worse. Many children also find cold-sponging uncomfortable.

Some people use a fan to cool a child. Again, this may not be a good idea if the fanned air is too cold. However, a gentle flow of air in a room which is 'room temperature' may be helpful. Perhaps just open the window, or use a fan on the other side of the room to keep the air circulating.

Look out for signs of dehydration

A fever caused by any illness may contribute to dehydration (low body fluid). The fever itself can cause more sweating, and some children who become irritable with a fever do not drink as much as they might need. In particular, dehydration can develop more quickly in a child who is vomiting or has a lot of diarrhoea. Encourage your child to have plenty to drink if they have a fever. Signs of dehydration include: a dry mouth, no tears, sunken eyes, drowsiness, and generally becoming more unwell. Seek medical help if you suspect that your child is becoming dehydrated.

Look out for signs of serious illness

A child with a fever may look quite unwell. He or she may be flushed and irritable. However, most bouts of fever are not caused by serious illness, and the temperature often comes down quickly. It is quite common to see a child happily playing an hour or so later when their temperature has come down and they have had a good drink. They will not be entirely back to normal, but it is reassuring if a child improves with the drop in temperature.

If a child has a serious infection they will usually get worse despite efforts to bring their temperature down. In addition, they may have other worrying symptoms. For example, breathing problems, drowsiness, convulsions, pains, or headaches which become worse despite paracetamol or ibuprofen. But - use your instincts. If you think a child is getting worse for any reason, or is developing a serious infection, then get medical help. Note: you should check on your child 2-3 times in the night if they have a fever, to make sure they are not developing a serious infection.

Meningitis and septicaemia - what to look out for

Two of the most serious infections are meningitis and septicaemia (blood infection). These are uncommon, and the vast majority of children with a fever do not have these infections (or other serious infections). However, meningitis and septicaemia need urgent treatment if they develop. Therefore, the following gives a guide as to symptoms to look out for.

Common early warning symptoms of meningitis and/or septicaemia

Many children (and adults) who develop meningitis or septicaemia have 'non-specific' symptoms at first such as just feeling or looking generally unwell. However, three symptoms that commonly develop early on - often before the more classic symptoms listed later - are:

- Leg pains - which can become severe and make it hurt to stand or walk.
- Cold hands or feet - even if there is a fever.
- Pale or mottled skin. In particular, pale, dusky or blue skin colour around the lips.

Rash - may occur with meningitis or septicaemia, but not always

The rash that may occur is red or purple. Small spots develop at first and may occur in groups anywhere on the body. They often grow to become blotchy and look like little bruises. One or two may develop at first but many may then appear in different parts of the body. The spots / blotches do not fade when pressed (unlike many other rashes). To check for this do the tumbler test. Place a clear glass (tumbler) firmly on one of the spots or blotches. If the spot / blotch does not fade and you can still see it through the glass, get medical help immediately. (Note: a rash does not occur in all cases of meningitis and septicaemia but can be quite characteristic when it does occur.)

Other symptoms that may occur in babies with meningitis or septicaemia

- Excessive crying - often high pitched or moaning and different to their usual cry.
- Fast breathing, or unusual patterns of breathing.
- Fever - but the baby may not look hot and the skin may look pale or blotchy, or turn blue. The hands and feet may feel cold. The baby may shiver.
- Will not take feeds - sometimes repeated vomiting.
- Being irritable - especially when picked up and handled. Normally a baby will be happier when picked up and held.
- Drowsiness or sleepiness - does not wake easily.
- The 'soft spot' on the baby's head may bulge out, instead of being indented. This is called a 'bulging fontanelle'.
- Jerky movements may occur and the body may appear stiff. Sometimes the opposite occurs and the body appears floppy. Convulsions (fits) sometimes develop.

Other possible symptoms in older children or adults with meningitis or septicaemia

- Fever and shivering - however, the hands and feet often feel cold.
- Stiff neck - cannot bend the neck forward.
- Headache - which can become severe.
- Fast breathing.
- Aches and pains in muscles or joints - the pains can become quite severe.
- Dislike of bright lights - will shut eyes and turn away from the light.
- Drowsiness, confusion or odd behaviour - may appear 'vacant'.
- Repeated vomiting. Sometimes abdominal pain and diarrhoea.

The course of symptoms of meningitis or septicaemia

The symptoms often develop quickly, over a few hours or so. They can occur in any order, and not all may occur. Sometimes symptoms develop more slowly, over a few days. The symptoms may suggest a less serious illness at first such as flu. But, even if you think it was flu to start with, if symptoms become worse then it may be meningitis or septicaemia.

In summary

Most fevers are due to infections that are not serious and do not last long. But, see a doctor if a child does not improve within a few days, or has any worrying symptom.

For further help and advice

Call NHS direct - Tel: 0845 4647 (24 hours) or NHS 24 (Scotland) Tel: 0845 4 24 24 24

References

- Feverish children - management, Clinical Knowledge Summaries (December 2008)
- Feverish children - risk assessment, Clinical Knowledge Summaries (September 2008)
- Feverish illness in children - Assessment and initial management in children younger than 5 years, NICE Clinical Guideline (2007)
- Thompson MJ, Ninis N, Perera R, et al; Clinical recognition of meningococcal disease in children and adolescents. *Lancet*. 2006 Feb 4;367(9508):397-403. [abstract]

Disclaimer: This article is for information only and should not be used for the diagnosis or treatment of medical conditions. EMIS has used all reasonable care in compiling the information but make no warranty as to its accuracy. Consult a doctor or other health care professional for diagnosis and treatment of medical conditions. For details see our conditions.
© EMIS 2009 Reviewed: 14 May 2009 DocID: 4343 Version: 39