

Fever

Fetish, Phobia or Fact



Do not be scared of a **fever**. It is a warning sign of an **infection**.

What is a normal **body temperature**?

A normal body temperature is 36.8°C - 37.3°C but this value changes depending on where the temperature is measured. A temperature measured in the ear or rectum or mouth will be up to a full one degree higher than a temperature measured under the arm. So the body temperature taken under the arm can vary between 35.8°C to 36.3°C. The temperature also varies according to the time of day with evening and night time temperatures being up to one degree higher than during the day. So a normal body temperature fits into a range rather than a specific single figure.

Range of normal body Temperatures:

- Armpit: 34.7 - 37.3°C
- Oral: 35.5 - 37.5°C
- Rectal: 36.6 - 38.0°C
- Ear: 35.8 - 38.0°C

What is a **fever**?

A fever is a measured body temperature higher than the normal range. So a temperature higher than 38°C measured in the ear is a fever or higher than 37.3°C measured under the arm is a fever.

Why do we get a **fever**?

A fever is a normal reaction of a healthy immune system. The fever occurs when the immune system reacts to an infection. The infection is caused by a germ, either a bacteria or a virus and these germs can cause ear infections, chest infections, meningitis, gastroenteritis or any other infection in any other area of the body. When these germs cause infection the immune system sends white blood cells to the area of infection.

These white blood cells are the soldiers in our body and they start the processes of defending the body against the infection. The white blood cells cause a number of things to happen. One of these things is a fever. The white blood cells release chemicals into the blood stream that travel to the brain and tell the brain to heat up the body. The temperature set point in the brain (hypothalamus) is changed from around 37°C to around 40.5°C.

The body then starts to heat up and as it does this we automatically do things to help. We start to shiver, this pushes up the temperature and we decrease blood supply to our hands and feet and extremities. This is why the hands and feet look blue and feel cold even though we have a fever. The body temperature will rise up to the point that has been set and then the fever break and that is when we start to

sweat and feel better again. As long as the infection is active, the immune system will continually make the body temperature rise and fall in an attempt to kill the germs. This means that if the infecting virus causes an illness that lasts for 5 days, then the temperature will rise to a fever up and down for 5 days. A fever will always break, whether you give medication or not. The fever will break quicker if you have given medication.

Is a fever **dangerous**?

No a fever is not dangerous. It is true that a fever that rises to high levels very rapidly can cause a fever fit (Febrile convulsion). These fever fits occur in about 8% of children and if the child is completely healthy before the fit, the fit is not harmful at all. Children who have brain injuries or neurological problems will have fever fits more easily. Fever fits in healthy children do not cause brain damage and do not mean that the child will have more fits or epilepsy.

Fever does make children feel unwell and miserable. The child will breathe a little more quickly than usual, drink less than usual, eat less than usual and be less active than usual. Controlling the temperature will make the child feel better and the child will therefore handle the infection more easily.

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It is important to look for other symptoms when your child has a fever.

Symptoms to look out for with a fever:

- Coughing and rapid breathing
- Vomiting
- Diarrhoea
- Skin Rashes
- Headache and stiff neck
- Travel to malaria areas
- Bites on the skin
- Pain anywhere

Why do we control the fever?

We control a fever to make the child feel more comfortable and the child will then breathe less quickly, drink better and cope with the infection better. It is not necessary to control a fever unless it is above 38.5°C. The medication that we use does not bring down the fever it rather sets the fever point at a lower level. So the child will still get a fever but the fever will be less high than without medication. Remember that if the infection is going to last a few days then the fever will come and go for a few days even if you are giving medication for the fever. The fever is a normal immune system reaction and is not something to be feared. The fever should rather be the sign that makes you look carefully at your child for other symptoms. Look at the whole child and don't panic about the fever.

How do we control a fever?

When a child is sick and has a fever it is easiest to respond to the child's needs. If the child is cold and shivering then make them feel comfortable by dressing them warmly but if they are hot and sweaty then don't dress them warmly. You do not want to dress the child to make them sweat it out. You also don't want to plunge the child into cold baths or wrap them in cold wet towels. This practice may even push the temperature higher. It is ok to wipe their forehead with a damp cloth or to have a fan blowing cool air onto them or have the windows in the room open. Be sure not to make the child shiver.

Make sure your child drinks cool liquids because they lose more fluid by evaporation when they have a fever and the cool liquid will help to keep the fever down.

Medication:

Paracetamol is the most well known and safest medication for fever and pain and the two most frequently used brands are Panado

and Calpol. The oral syrup is available in a concentration of 120 mg of Paracetamol, per 5 ml of liquid.

Paracetamol suppositories called Empapad are available in 125 mg and 250 mg strengths.

The suppositories and the syrup are equally effective and safe. Because they are the same type of medication do not give both together at the same dose.

The dose of Paracetamol is 15mg per kilogram per dose and this can be given every 4 hours. This means for example that an 8 kg child will get 5 ml of syrup every 4 hours.

Ibuprofen is also safe and effective for controlling fevers and this is available in a syrup at a concentration of 100 mg per 5 ml and the dose is 5 mg per kilogram every 8 hours. The common brands are Neurofen and Brufen.

This means for example that an 8 kg child will get 2 ml of syrup every 8 hours.

Mefenamic Acid (Ponstan) is also available to control the fever. This is available in a suspension at a concentration of 50mg /5 ml and the dose is 25mg/kg per day in divided doses. This means that an 8 kg child should get 5 ml 6 hourly. Ponstan suppositories (125 mg) are given to an 8 kg child 1 suppository 8 hourly.

Please be aware that Ibuprofen and Mefenamic acid belong to the same group of medication and this group can cause tummy upsets, ulcers and kidney problems if used frequently and if used in children with diarrhoea and vomiting who are possibly dehydrated.

When do I go to the doctor?

- If your child is <6 months old and has a fever above 38.5°C
- If your child is any age with a fever > 38.5°C and;
 - The fever has been present for more than 48 hours
 - There are other symptoms as mentioned above
 - Your child is not drinking or sucking well

Ask for help when ever you are unsure about what to do.

Important to Remember

- If you think there is a fever then measure the body temperature.
- Fevers are not harmful but are rather a normal reaction to an infection.
- Look at the whole child when a fever is present and take note of the other symptoms.
- Keep the child comfortable and make ensure food fluid intake.
- Use Paracetamol, Ibuprofen and Mefenamic Acid at the recommended doses.

This information provides a general overview on Fever and may not apply to everyone. Talk to your family doctor to find out if this information applies to you and to get more information on this subject.

