

Fever

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What is Fever

Body temperature is tightly controlled to allow the body to function normally. It is regulated by a part of the brain called the hypothalamus, which acts like a thermostat. Normal body temperature ranges from 36oC to 37.3oC and varies slightly with the time of day. In the evening, the temperature may be up to half a degree higher than it is in the morning.

Fever is defined as an increase in body temperature above the normal range (greater than 37.3oC in the morning or 37.8oC in the evening). There are two main ways in which the body may increase its temperature; by increasing the amount of heat it produces (for example, by shivering) and by decreasing the amount of heat it loses to the surroundings (for example, 'goose bumps' and reducing the blood flow to the hands and feet).

Common Causes

There are a number of reasons why someone may develop a fever.

- infection
- infectious microorganisms (such as bacteria and viruses) and their toxins may stimulate the body's immune system to produce substances (called cytokines) which act on the hypothalamus to induce a fever
- inflammatory conditions
- rheumatoid arthritis
- systemic lupus erythematosus
- inflammatory bowel disease
- heat stroke
- malignancy
- drug side effect
- allopurinol
- antihistamines
- certain antibiotics

Signs and Symptoms:

Signs and symptoms may vary depending on the reason why you developed a fever. Some of the more common associated symptoms and signs include:

- sweats
- rigors and chills
- chattering teeth
- headache
- nausea.

Ongoing management:

Fever itself is not dangerous; it is part of the body's normal response to infection/inflammation, is beneficial and supports the immune system. However fevers can be a sign of serious illness so it is important to consult a doctor if you are concerned.

A temperature greater than 41.5oC is called hyperthermia. Hyperthermia is not fever it is caused by drugs, heat stroke or damage to the brain and is a medical emergency.

Other reasons to seek a doctor's opinion include:

- failure to improve after three days
- worsening symptoms
- febrile convulsion/seizure
- confusion, lethargy, drowsiness
- temperature greater than 40oC (>38oC for 0-3 months olds and >39oC for 3-6 month olds)
- severe headache
- vomiting, neck stiffness, skin rash
- recent overseas travel.

While fever does not require treatment routinely, in symptomatic fevers, home treatment may be appropriate. Anti-inflammatory drugs (NSAIDs) such as ibuprofen (eg. Nurofen) may be used to reduce body temperature, by inhibiting the production of some of the substances (called prostaglandins) responsible for generating the fever. Paracetamol taken as directed by your doctor or pharmacist is another alternative. It should be noted that antipyretic medications do not prevent febrile convulsions and should not be used specifically for this purpose.

URL: <http://conditions.health.qld.gov.au/HealthCondition/condition/8/121/317/fever>

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Supportive treatment is also an important part of managing a fever. This includes maintaining hydration by drinking water regularly; as well as using physical aids such as a wet sponge, or cool fan to reduce the body temperature. However, it is important not to become too cold, as this will cause the body to trap more heat.

Health outcome:

Whilst most fevers resolve of their own accord, in some cases your doctor may wish to perform some tests to determine the specific cause. This may include taking some blood or urine samples, swabbing any wounds to look for infection or performing some imaging tests such as X-ray. This will allow appropriate treatment to be started. For example, an infection caused by bacteria may respond to antibiotics, whilst viral infections or non-infectious cases of fever such as malignancy, will not.

Other resources:

[Royal Australian College of General Practice](http://www.racgp.org.au/) (<http://www.racgp.org.au/>)

[Fever](http://www.cyh.com/HealthTopics/HealthTopicDetails.aspx?p=114&np=304&id=1798) (<http://www.cyh.com/HealthTopics/HealthTopicDetails.aspx?p=114&np=304&id=1798>): Child and Youth Health, Women's and Children's Health Network

Help and assistance:

If you have concerns about a fever please contact one of our Registered Nurses at 13 HEALTH by phoning 13 43 25 84 or consult your usual doctor.

Health Insite:

[Fever](https://www.healthdirect.gov.au/fever) (<https://www.healthdirect.gov.au/fever>)