

MANAGING FEVER IN CHILDREN



Fever is common in children and is a symptom seen in many conditions, including COVID-19^{1,2}. Potential therapy concerns, alongside a general anxiety from parents when medicating children, may lead to fever being untreated or mismanaged³.

This resource outlines guideline-based recommendations for the management of children and young people with fever, including the appropriate use of over-the-counter analgesics, and should be used to support pharmacists and their teams in providing effective counselling to parents or carers of children with fever.

Understanding fever



A rise in body temperature of 38°C or above in infants or children is considered a fever

The National Institute for Health and Care Excellence (NICE) Clinical Knowledge Summary (CKS) outlines that taking a temperature is not always warranted when diagnosing fever and that measured and reported parental perception of fever should be accepted as a valid indicator^{4,5}.

However, sometimes it is necessary to take an accurate internal body temperature reading. This can be obtained by placing a thermometer under the armpit — oral and rectal thermometers should not be routinely used⁶.



Fever is typically seen in infection

The presence of an invading microorganism causes the body to produce pyrogens. These substances lead to a higher set body temperature that aims to destroy or inactivate the pathogen⁶.



Fever can be bacterial or viral in origin

Chickenpox is an example of a viral infection where fever is present alongside a distinct rash, whereas a urinary tract infection is an example of a bacterial infection where fever is typically coupled with irritation and abdominal pain^{7,8}.



Fever typically lasts a few days

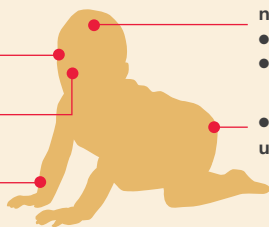
Duration of fever should not be a sole indicator for serious illness.



Fever can lead to dehydration

Signs in infants and young children include¹⁷:

- Sunken eyes
- No/little tears when crying
- Dry mucous membranes
- Reduced skin turgor
- May not respond to normal social cues
- Rapid breathing
- Pale appearance
- Dry nappies/reduced urine output



Likely causes of fever

Cold, flu and COVID-19 are all possible viral causes of fever. Consider other presenting symptoms, such as cough, fatigue, aches and pains, to help with differential diagnosis (see bit.ly/PJcovid19)⁹.



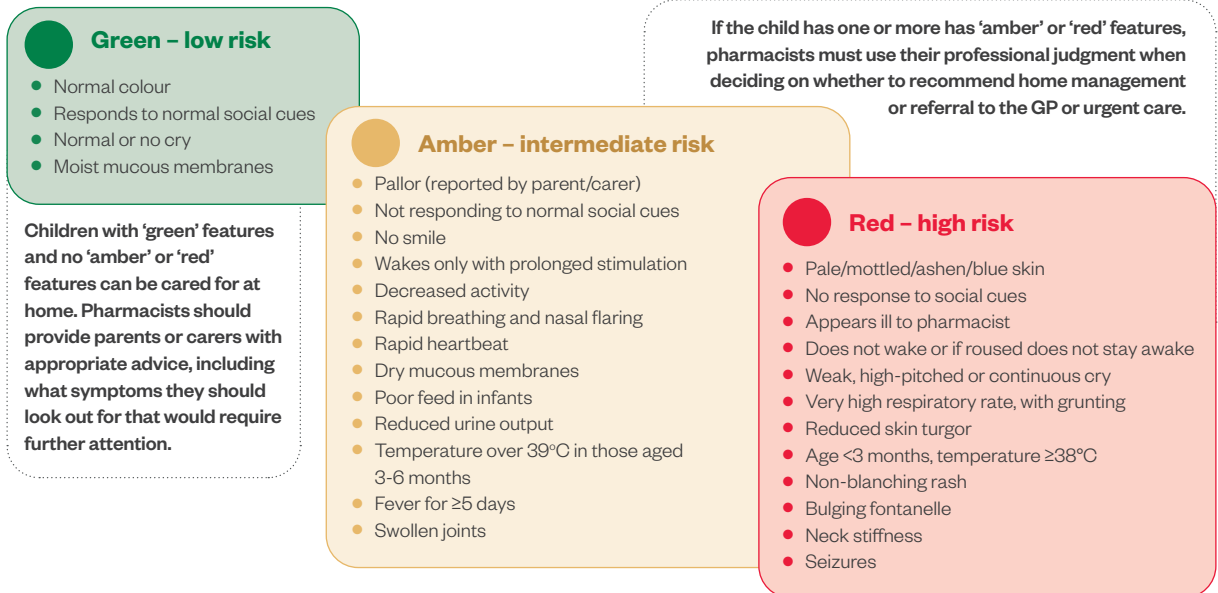
Unlikely causes of fever

Some medicines (e.g. penicillins, macrolides, tricyclic antidepressants) raise body temperature. Other infective causes, such as meningitis or glandular fever, are rare and are associated with non-blanching rash and long-standing fatigue, respectively^{7,10,11}.

Initial assessment and when to refer

The NICE 'traffic light' system for identifying risk of serious illness in those aged under 5 years may be used and considered for all children to help determine the risk of serious illness⁵ (see quick reference version below; for more detailed information, see bit.ly/NICE_traffic_light).

TRAFFIC LIGHT SYSTEM FOR IDENTIFYING RISK OF SERIOUS ILLNESS



Management

Ensure the parent or carer is fully involved in decisions on how to best treat the child's fever and associated symptoms. This will help improve compliance with the dosage regime, which can be up to four times per day¹².

Antipyretic agents should not be recommended with the sole aim of reducing body temperature in children with fever⁵.

As per the NICE CKS, explain to the patient that:

- **Either ibuprofen or paracetamol may be used to manage fever, but should only be used when the patient is symptomatic;**
- **If one analgesic is ineffective, then the other may be trialled;**
- **Ibuprofen and paracetamol can be used together if fever symptoms are present before the next scheduled dose of either medicine;**
- **Aspirin should not be used^{4,12,13,14}.**

During the COVID-19 pandemic, parents may be concerned that their child's symptoms should not be treated until a diagnosis has been made. It is important that pharmacists and their teams reassure parents that it is safe to give either ibuprofen or paracetamol in patients with COVID-19 (see 'Managing COVID-19 fever')^{15,16}.

Pharmacy advice

It is important to explain the importance of non-pharmacological actions to parents or carers as part of a management strategy, including:

- Encouraging increased fluid intake, as fever will make the child sweat more;
- An awareness of signs of dehydration (e.g. reduced urine output);
- Dressing the child appropriately (i.e. do not underdress or over-wrap);
- Checking the child regularly, even through the night, to determine severity⁵.

Explain to parents that the use of tepid sponging is not recommended and there may be a need to keep the child out of nursery/school until they have recovered⁵. Some parents may be concerned that ibuprofen can cause gastrointestinal disturbances; reassure them that the formulation is safe for children and does not lead to gastrointestinal side effects¹⁷.



Managing COVID-19 fever

The Medicines and Healthcare products Regulatory Agency and Commission of Human Medicines (CHM) Expert Working Group concluded that there is currently insufficient evidence to establish a link between use of ibuprofen, or other NSAIDs, and susceptibility to contracting COVID-19 or the worsening of its symptoms. The CHM advise that people can take paracetamol or ibuprofen when self-medicating for symptoms of COVID-19 and should follow NHS advice^{15,16}.



For ibuprofen and paracetamol oral suspension dosage tables for children, visit: bit.ly/PLC_acute_pain