

## Guidelines for the management of Fever in under 5s

Indication for use: Children aged 0-5 years presenting with symptoms fever

To be used in conjunction with the Sepsis guidelines and PUO guidelines

Based on NICE guidelines (updated 2017)

<https://www.nice.org.uk/guidance/qs64>

PIP Paediatrics in Partnership 2016-2018 Guidelines

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Date written	Aug 2018
Next Review	Jan 2022

## FEVER IN UNDER 5s (according to NICE CG160)

### Recognition: Key Concepts

- Do not routinely use oral and rectal routes to measure temperature
- In infants under 4 weeks measure the temperature in the axilla
- In children 4 weeks to 5 years measure either with an electronic thermometer in the axilla, infrared tympanic thermometer or chemical dot thermometer
- Parental reported temperatures should be considered valid by healthcare professionals

### Clinical assessment of children with fever

- First, healthcare professionals should identify any immediately life-threatening features, including compromise of the airway, breathing or circulation, and decreased level of consciousness
- Think 'Could this be sepsis?' and refer to the guideline on [sepsis: recognition, diagnosis and early management](#) if a child presents with fever and symptoms or signs that indicate possible sepsis

### Assessment of risk of serious illness

- Assess children with feverish illness for the presence or absence of symptoms and signs that can be used to predict the risk of serious illness using the traffic light system ([see table 1](#), below)
- When assessing children with learning disabilities, take the individual child's learning disability into account when interpreting the traffic light table
- Recognise that children with any of the following symptoms or signs are in a high-risk group for serious illness:
  - pale/mottled/ashen/blue skin, lips or tongue
  - no response to social cues
  - appearing ill to a healthcare professional
  - does not wake or if roused does not stay awake
  - weak, high-pitched or continuous cry
  - grunting
  - respiratory rate greater than 60 breaths per minute
  - moderate or severe chest indrawing
  - reduced skin turgor
  - bulging fontanelle

Table 1 NICE Fever Traffic light system

**NICE** National Institute for Health and Care Excellence

**Traffic light system for identifying risk of serious illness**

	Green – low risk	Amber – intermediate risk	Red – high risk
Colour (of skin, lips or tongue)	<ul style="list-style-type: none"> <li>Normal colour</li> </ul>	<ul style="list-style-type: none"> <li>Pallor reported by parent/carer</li> </ul>	<ul style="list-style-type: none"> <li>Pale/mottled/ashen/blue</li> </ul>
Activity	<ul style="list-style-type: none"> <li>Responds normally to social cues</li> <li>Content/smiles</li> <li>Stays awake or awakens quickly</li> <li>Strong normal cry/not crying</li> </ul>	<ul style="list-style-type: none"> <li>Not responding normally to social cues</li> <li>No smile</li> <li>Wakes only with prolonged stimulation</li> <li>Decreased activity</li> </ul>	<ul style="list-style-type: none"> <li>No response to social cues</li> <li>Appears ill to a healthcare professional</li> <li>Does not wake or if roused does not stay awake</li> <li>Weak, high-pitched or continuous cry</li> </ul>
Respiratory		<ul style="list-style-type: none"> <li>Nasal flaring</li> <li>Tachypnoea:               <ul style="list-style-type: none"> <li>RR &gt;50 breaths/minute, age 6–12 months</li> <li>RR &gt;40 breaths/minute, age &gt;12 months</li> </ul> </li> <li>Oxygen saturation <math>\leq</math>95% in air</li> <li>Crackles in the chest</li> </ul>	<ul style="list-style-type: none"> <li>Grunting</li> <li>Tachypnoea: RR &gt;60 breaths/minute</li> <li>Moderate or severe chest indrawing</li> </ul>
Circulation and hydration	<ul style="list-style-type: none"> <li>Normal skin and eyes</li> <li>Moist mucous membranes</li> </ul>	<ul style="list-style-type: none"> <li>Tachycardia:               <ul style="list-style-type: none"> <li>&gt;160 beats/minute, age &lt;12 months</li> <li>&gt;150 beats/minute, age 12–24 months</li> <li>&gt;140 beats/minute, age 2–5 years</li> </ul> </li> <li>CRT <math>\geq</math>3 seconds</li> <li>Dry mucous membranes</li> <li>Poor feeding in infants</li> <li>Reduced urine output</li> </ul>	<ul style="list-style-type: none"> <li>Reduced skin turgor</li> </ul>
Other	<ul style="list-style-type: none"> <li>None of the amber or red symptoms or signs</li> </ul>	<ul style="list-style-type: none"> <li>Age 3–6 months, temperature <math>\geq</math>39°C</li> <li>Fever for <math>\geq</math>5 days</li> <li>Rigors</li> <li>Swelling of a limb or joint</li> <li>Non-weight bearing limb/not using an extremity</li> </ul>	<ul style="list-style-type: none"> <li>Age &lt;3 months, temperature <math>\geq</math>38°C*</li> <li>Non-blanching rash</li> <li>Bulging fontanelle</li> <li>Neck stiffness</li> <li>Status epilepticus</li> <li>Focal neurological signs</li> <li>Focal seizures</li> </ul>
CRT, capillary refill time; RR, respiratory rate *Some vaccinations have been found to induce fever in children aged under 3 months			
<b>This traffic light table should be used in conjunction with the recommendations in the NICE guideline on Feverish illness in children.</b> See <a href="http://guidance.nice.org.uk/CG160">http://guidance.nice.org.uk/CG160</a>			

- Recognise that children with tachycardia are in at least an intermediate-risk group for serious illness. Use the Advanced Paediatric Life Support (APLS) criteria below to define tachycardia:

Age	Heart rate (bpm)
<12 months	>160
12–24 months	>150
2–5 years	>140

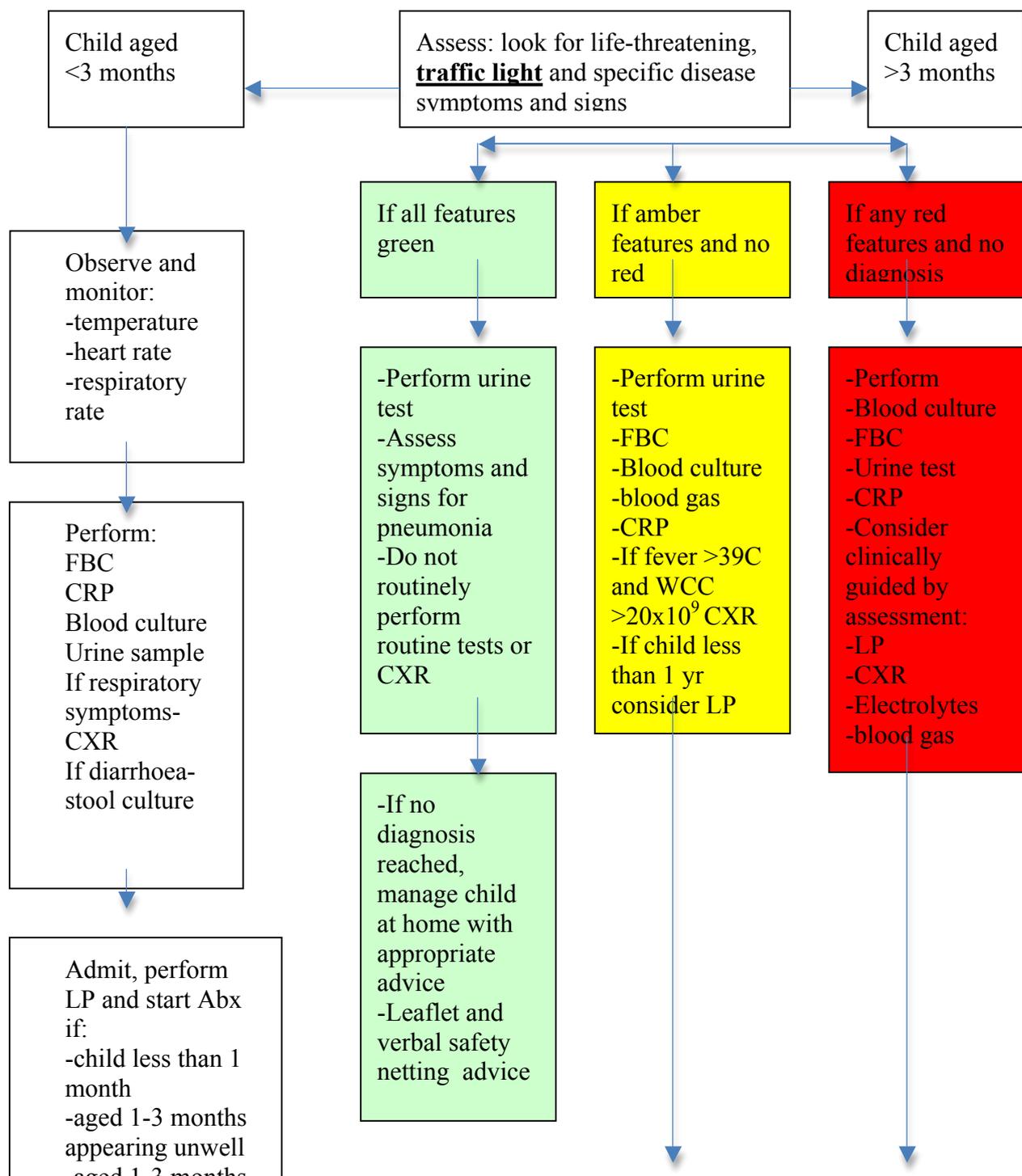
Table 2: Summary of symptoms and signs suggestive of specific diseases

Diagnosis to be considered	Symptoms and signs in conjunction with fever
Meningococcal disease	<ul style="list-style-type: none"> <li>• Non-blanching rash, particularly with 1 or more of the following:               <ul style="list-style-type: none"> <li>• an ill-looking child</li> <li>• lesions larger than 2 mm in diameter (purpura)</li> <li>• capillary refill time of <math>\geq 3</math> seconds</li> <li>• neck stiffness</li> </ul> </li> </ul>
Bacterial meningitis	<ul style="list-style-type: none"> <li>• Neck stiffness</li> <li>• Bulging fontanelle</li> <li>• Decreased level of consciousness</li> <li>• Convulsive status epilepticus</li> </ul>
Herpes simplex encephalitis	<ul style="list-style-type: none"> <li>• Focal neurological signs</li> <li>• Focal seizures</li> <li>• Decreased level of consciousness</li> </ul>
Pneumonia	<ul style="list-style-type: none"> <li>• Tachypnoea (respiratory rate &gt;60 breaths/minute, age 0–5 months; &gt;50 breaths/minute, age 6–12 months; &gt;40 breaths/minute, age &gt;12 months)</li> <li>• Crackles in the chest</li> <li>• Nasal flaring</li> <li>• Chest indrawing</li> <li>• Cyanosis</li> </ul>

	<ul style="list-style-type: none"> <li>• Oxygen saturation <math>\leq 95\%</math></li> </ul>
Urinary tract infection	<ul style="list-style-type: none"> <li>• Vomiting</li> <li>• Poor feeding</li> <li>• Lethargy</li> <li>• Irritability</li> <li>• Abdominal pain or tenderness</li> <li>• Urinary frequency or dysuria</li> </ul>
Septic arthritis	<ul style="list-style-type: none"> <li>• Swelling of a limb or joint</li> <li>• Not using an extremity</li> <li>• Non-weight bearing</li> </ul>
Kawasaki disease (see Kawasaki guidelines)	<ul style="list-style-type: none"> <li>• Fever for more than 5 days and at least 4 of the following: <ul style="list-style-type: none"> <li>○ bilateral conjunctival injection</li> <li>○ change in mucous membranes</li> <li>○ change in the extremities</li> <li>○ polymorphous rash</li> <li>○ cervical lymphadenopathy</li> </ul> </li> </ul>

- Assess children with fever for signs of dehydration. Look for:
  - prolonged capillary refill time
  - abnormal skin turgor
  - abnormal respiratory pattern
  - weak pulse
  - cool extremities

**Management according to risk of serious illness**



Admit, perform LP and start Abx if:  
 -child less than 1 month  
 -aged 1-3 months appearing unwell  
 -aged 1-3 months with WCC<5 or >15x10<sup>9</sup>

Whenever possible perform LP before giving Abx

- Consider admission according to clinical and social circumstances
- Response to antipyretics alone no longer a means to differentiate serious from non-serious infection
- Vaccinations in children under 3 months can induce pyrexia

- Children with any 'red' features but who are not considered to have an immediately life-threatening illness should be urgently assessed by a healthcare professional. Consider SEPSIS and immediate instigation of SEPSIS 6 protocol (see sepsis guidelines)
- Children with 'amber' but no 'red' features should be assessed by a healthcare professional within 30 minutes. The urgency of this assessment should be determined by the clinical judgement of the healthcare professional performing triage.
- Children with 'green' features and none of the 'amber' or 'red' features can be cared for at home with appropriate advice for parents and carers, including advice on when to seek further attention from the healthcare services

#### Tests by the non-paediatric practitioner

- Children with symptoms and signs suggesting pneumonia who are not admitted to hospital should not routinely have a chest X-ray
- Test urine in children with fever as recommended in [urinary tract infection in children](#) (NICE clinical guideline 54)
- When a child has been given antipyretics, do not rely on a decrease or lack of decrease in temperature to differentiate between serious and non-serious illness

#### Use of antibiotics

- Do not prescribe oral antibiotics to children with fever without apparent source
- Give parenteral antibiotics to children with suspected meningococcal disease at the earliest opportunity (as per microguide)

#### Admission to and discharge from hospital

- In addition to the child's clinical condition, consider the following factors when deciding whether to admit a child with fever to hospital:
  - social and family circumstances
  - other illnesses that affect the child or other family members
  - parental anxiety and instinct (based on their knowledge of their child)
  - contacts with other people who have serious infectious diseases
  - recent travel abroad to tropical/subtropical areas, or areas with a high risk of endemic infectious disease
  - when the parent or carer's concern for their child's current illness has caused them to seek healthcare advice repeatedly
  - where the family has experienced a previous serious illness or death due to feverish illness which has increased their anxiety levels
  - when a feverish illness has no obvious cause, but the child remains ill longer than expected for a self-limiting illness

- If it is decided that a child does not need to be admitted to hospital, but no diagnosis has been reached, provide a safety net for parents and carers if any 'red' or 'amber' features are present. The safety net should be 1 or more of the following:
  - providing the parent or carer with verbal and/or written information on warning symptoms and how further healthcare can be accessed
  - giving verbal and written leaflet of where and when to seek further healthcare review
- Children with 'green' features and none of the 'amber' or 'red' features can be cared for at home with appropriate advice for parents and carers, including advice on when to seek further attention from the healthcare services

## RED FEATURES

Referral to paediatric intensive care and early discussion with STRS on 020 7188 5000

- Children with fever who are shocked, unrousable or showing signs of meningococcal disease should be urgently reviewed by an experienced paediatrician and consideration given to referral to paediatric intensive care
- Give parenteral antibiotics to children with suspected meningococcal disease at the earliest opportunity (as per microguide)
- Children admitted to hospital with meningococcal disease should be under paediatric care, supervised by a consultant and have their need for inotropes assessed early STRS discussion as likely to require retrieval

### Advice for home care

#### Care at home

- Advise parents or carers to manage their child's temperature. Advise parents or carers looking after a feverish child at home:
  - to offer the child regular fluids (where a baby or child is breastfed the most appropriate fluid is breast milk)
  - how to detect signs of dehydration by looking for the following features:
    - sunken fontanelle
    - dry mouth
    - sunken eyes
    - absence of tears
    - poor overall appearance
  - to encourage their child to drink more fluids and consider seeking further advice if they detect signs of dehydration
  - how to identify a non-blanching rash
  - to check their child during the night
  - to keep their child away from nursery or school while the child's fever persists but to notify the school or nursery of the illness
- **When to seek further help**
- Following contact with a healthcare professional, parents and carers who are looking after their feverish child at home should seek further advice if:
  - the child has a fit
  - the child develops a non-blanching rash
  - the parent or carer feels that the child is less well than when they previously sought advice
  - the parent or carer is more worried than when they previously sought advice
  - the fever lasts longer than 5 days

- o the parent or carer is distressed, or concerned that they are unable to look after their child

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First included: June 2013. Updated August 2018 LEAFLET to be given to parents on discharge:

**Fever Advice Sheet**  
Advice for parents and carers of children younger than 5 years

December 2016  
Kent, Surrey & Sussex  
Version

Name of Child ..... Age ..... Date / Time advice given.....

Further advice / Follow up .....

Name of Professional ..... Signature of Professional .....

**How is your child? (traffic light advice)**

**Red**

If your child:

- becomes difficult to rouse
- becomes pale and floppy
- is finding it hard to breathe
- has a fit, or is fretful or when touched is irritable
- develops a rash that does not disappear with pressure (see the 'Glass Test' overleaf)
- is under 3 months and has an unexplained fever
- has cold feet and hands with mottled appearance
- no wet nappies or wees for > 18 hours

**You need urgent help**  
please phone 999  
or go to the nearest  
Hospital Emergency  
(A&E) Department

**Amber**

If your child's:

- health gets worse or if you are worried
- seems dehydrated (dry mouth, sunken eyes, no tears, sunken fontanelle / soft spot on baby's head, drowsy, or fewer wet nappies or wees than normal)
- condition fails to respond to Paracetamol or Ibuprofen
- is 3-6 months old and has a fever

**You need to contact a doctor or nurse today**  
Please ring your  
GP surgery or call  
NHS 111 - dial 111

**Green**

- If none of the above features are present, most children with fever can be safely managed at home

**Self Care**  
Using the advice overleaf  
you can provide the care  
your child needs at home

**Some useful phone numbers** (You may want to add some numbers on here too)

**GP Surgery**  
(make a note of number here)

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**NHS 111**  
**dial 111**

(available 24 hrs -  
7 days a week)

**School Nurse /  
Health Visiting Team**  
(make a note of number here)

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For online advice: NHS Choices [www.nhs.uk](http://www.nhs.uk) (available 24 hrs - 7 days a week)  
Family Information Service: All areas have an online service providing useful information for Families set up by local councils

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**Ashford and St. Peter's Hospitals**

NHS Foundation Trust

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