

1 **BNF for Children - Fever**

2 **Description of condition**

3 Feverish illness occurs commonly in children, particularly in those aged under 5 years. Fever can be
4 defined as an elevation of body temperature above the normal daily variation and is usually an
5 indication of an underlying infection. In most cases fever is due to a self-limiting viral infection, but it
6 may also be the presenting feature of a serious bacterial infection, such as meningitis or pneumonia.
7 Fever can also be due to a non-infectious cause such as vaccinations, or caused by conditions such as
8 Kawasaki disease. In some children there may be no obvious cause despite careful assessment; these
9 children are of particular concern because it is difficult to distinguish between simple viral illnesses
10 and life-threatening bacterial infections. A fever with no obvious cause is generally a problem in
11 young children, and the younger the child the more difficult it is to establish a diagnosis and assess
12 the severity of illness.

13 **Children aged under 5 years**

14 The following recommendations provide guidance for the initial assessment and early management
15 of children presenting with a feverish illness.

16 **Assessment**

17 Children presenting with feverish illness should be assessed for any immediate life-threatening
18 features, including compromise of the airway, breathing or circulation, and decreased level of
19 consciousness. In addition, consider sepsis for those with fever and signs or symptoms of possible
20 sepsis, see NICE guideline: **Sepsis: recognition, diagnosis and early management** (available at:
21 <https://www.nice.org.uk/guidance/ng51>).

[A]

22 The NICE traffic light system should be used to assess for the presence or absence of signs or
23 symptoms that can be used to predict the risk of serious illness (with red being high risk, amber
24 being intermediate risk, and green being low risk), and management directed by the level of risk.

[A]

25 The duration of fever should not be used to predict the likelihood of serious illness. However,
26 children with a fever lasting 5 days or longer should be assessed for Kawasaki disease. The child's
27 vaccination status with regards to *Haemophilus influenzae*, *Neisseria meningitidis*, and

[E]

28 *Streptococcus pneumoniae*, should also be established and considered. Assess for signs and
29 symptoms of specific diseases such as meningococcal disease, bacterial meningitis, herpes simplex
30 encephalitis, pneumonia, urinary-tract infection, septic arthritis/osteomyelitis, or Kawasaki
31 disease. In addition, enquire about any recent travel abroad and consider the possibility of imported
32 infections according to the region visited. For further information on the NICE traffic light system,
33 risk assessment for serious illness, referral, and signs and symptoms of specific illnesses, see NICE
34 guideline: **Fever in under 5s** (see *Useful resources*).

[A]

35 If a diagnosis has been made, the child should be managed in accordance to guidance for the
36 management of that condition.

[A]

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37 **Management**

38 Refer children with symptoms or a combination of signs and symptoms suggestive of a life- [A]
39 threatening illness immediately for emergency medical care.

40 Children with suspected meningococcal disease should be given parenteral antibacterials at the [A]
41 earliest opportunity. For those in the community, give parenteral antibacterials prior to urgent
42 transfer to hospital, only if this does not delay transfer. For further information, see NICE
43 guideline: **Meningitis (bacterial) and meningococcal septicaemia in under 16s: recognition,**
44 **diagnosis and management** (available at: <https://www.nice.org.uk/guidance/cg102>).

45 Children assessed as high risk on the NICE traffic light system should be urgently referred to a [A]
46 paediatric specialist. For further information on the management of children with any 'red-high
47 risk' features or for information on the management of children with 'amber-intermediate risk' or
48 'green-low risk' features, see NICE guideline: **Fever in under 5s** (see *Useful resources*).

49 Following initial contact with a healthcare professional, parents and/or carers who are caring for [A]
50 feverish children at home should be advised to seek further advice if:

- 51 • the child has a convulsion, develops a non-blanching rash, or has a fever that has lasted for [A]
52 5 days or more;
- 53 • parents and/or carers are more worried or feel that the child is less well than when they [A]
54 previously sought advice, or are distressed or concerned that they are unable to look after
55 the child.

56 In addition, parents and/or carers should be advised to consider seeking further advice if the child [A]
57 shows signs of becoming dehydrated (such as reduced urine output, dry mouth, sunken fontanelle,
58 absence of tears, sunken eyes, and poor overall appearance), and to offer regular fluids to avoid
59 dehydration (where a child is breastfed, the most appropriate fluid is breast milk). They should also
60 be advised on how to manage the child's temperature.

61 Children should be dressed appropriately to prevent overheating or shivering; tepid sponging is [A]
62 not recommended to reduce body temperature.

63 Antipyretic drugs are not recommended for the sole aim of reducing body temperature in children [A]
64 with fever or for prevention of a febrile convulsion. Consider either paracetamol or ibuprofen for
65 children with fever who appear distressed. If the child's distress is not alleviated with paracetamol,
66 consider switching treatment to ibuprofen, and vice versa. Consider alternating paracetamol and
67 ibuprofen if the child's distress persists or recurs before the next dose is due, but both drugs should
68 not be given simultaneously. Antipyretic drugs should only be continued for as long as the child with
69 fever appears distressed.

70 **Children aged 5 years and over**

71 The following recommendations provide guidance for the initial assessment and early management
72 of children presenting with a feverish illness.

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- 73 **Assessment**
- 74 Children presenting with feverish illness should be assessed for any immediate life-threatening [E]
75 features, including compromise of the airway, breathing or circulation, and decreased level of
76 consciousness. For information on sepsis, see NICE guideline: **Sepsis: recognition, diagnosis and**
77 **early management** (available at: <https://www.nice.org.uk/guidance/ng51>).
- 78 The risk of serious illness should be guided by the history of the child's feverish illness, clinical [E]
79 examination, and the presence or absence of features associated with serious illness. The duration
80 of fever should not be used to predict the likelihood of serious illness. However, children with a
81 fever lasting 5 days or longer should be assessed for Kawasaki disease. The child's vaccination status
82 with regards to *Haemophilus influenzae*, *Neisseria meningitidis*, and *Streptococcus pneumoniae*
83 should also be established and considered. Assess for signs or symptoms of other specific diseases
84 such as meningococcal disease, bacterial meningitis, herpes simplex encephalitis, pneumonia,
85 urinary-tract infection, septic arthritis/osteomyelitis, or Kawasaki disease. In addition, consider the
86 child's medical history, drug history, and any recent travel abroad and the possibility of an imported
87 infection.
- 88 **Management**
- 89 Clinicians should use their clinical judgement on when to refer children with fever for emergency [E]
90 medical care or further assessment.
- 91 Children with suspected meningococcal disease should be given parenteral antibacterials at the [A]
92 earliest opportunity. For those in the community, give parenteral antibacterials prior to urgent
93 transfer to hospital, only if this does not delay transfer. For further information for children aged
94 under 16 years, see NICE guideline: **Meningitis (bacterial) and meningococcal septicaemia in under**
95 **16s: recognition, diagnosis and management** (available at:
96 <https://www.nice.org.uk/guidance/cg102>) and for children aged 16 years or over, see British
97 Infection Association guideline: Diagnosis and management of acute meningitis and meningococcal
98 sepsis (available at: <https://www.britishinfection.org/guidelines-resources/published-guidelines>).
- 99 Following contact with a healthcare professional, children and their parents and/or carers who are [E]
100 managing their fever at home, should be advised to seek further advice if the child has a
101 convulsion, a non-blanching rash develops, their fever has lasted for 5 days or more, or they are
102 less well than when advice was previously sought.
- 103 In addition, children and their parents and/or carers should be advised to consider seeking further [E]
104 advice if they show signs of becoming dehydrated (such as reduced urine output, dry mouth,
105 absence of tears, sunken eyes, and poor overall appearance). They should also be advised about
106 ensuring regular fluid intake to avoid dehydration and how to manage the fever.
- 107 Children should be dressed appropriately to prevent overheating or shivering; tepid sponging is [E]
108 not recommended to reduce body temperature.

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109 Antipyretic drugs are not recommended for the sole aim of reducing body temperature in children
110 with fever or for prevention of a febrile convulsion. Consider either paracetamol or ibuprofen for
111 children with fever who appear distressed. If the child's distress is not alleviated with paracetamol,
112 consider switching treatment to ibuprofen, and vice versa. Consider alternating paracetamol and
113 ibuprofen if the child's distress persists or recurs before the next dose is due, but both drugs should
114 not be given simultaneously. Antipyretic drugs should only be continued for as long as the child with
115 fever appears distressed.

[E]

116 Useful Resources

117 Fever in under 5s: assessment and initial management. National Institute for Health and Care
118 Excellence. NICE guideline 143. November 2019.

119 <https://www.nice.org.uk/guidance/ng143>

BNF Publications Evidence Grading system

Levels of Evidence

Level	Type of study
1++	High quality meta-analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias
1+	Well-conducted meta-analyses, systematic reviews, or RCTs with a low risk of bias
4	Expert advice or clinical experience from respected authorities

Grades of recommendation

Grade	Strength	Evidence type
A	High	NICE-accredited guidelines Other guidelines that pass AGREE II assessment At least one meta-analysis, systematic review, or RCT rated as 1++, and directly applicable to the target population; <i>or</i> A body of evidence consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results
E	Practice point	Evidence level 4

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