



THE PROFESSIONAL ASSISTANT LEARN & ADVISE



MODULE 51: JULY 2019

Children's pain and fever

Pain and fever can cause much distress in children, as well as for their parents and families. But pharmacy teams can be on hand to provide reassurance and expert advice through what can be a worrying time.


OBJECTIVES | After studying this module, assistants will:

- Understand the differences between pain and fever and the causes of both in children
- Spot red flag symptoms and know when to refer to the pharmacist
- Be aware of the treatment options available specifically for children.

Pain

Pain is the body's way of telling us that something somewhere needs attention. It is a complex feeling and can be hard to describe, particularly for young children. So, how do we feel pain? Pain is controlled by the nervous system, and when we are ill or have hurt ourselves, a pathway is set in motion:

When an infant is ill or hurt, nerve endings in their body called nociceptors detect the tissue damage.

Nociceptors send pain signals from the site of injury or pain to the brain via the spinal cord to let it know that something isn't right.

At the same time, the tissues around the damaged area release chemicals called prostaglandins, which help to amplify the pain signals to the brain through inflammation and swelling.

Fever

As a general rule, fever is when a child has a temperature of over 38°C, but this can vary from child to child. Some children may be ill with a lower temperature, while others may have a higher temperature and be fit and well. When a child has a fever, they may have hot, flushed cheeks, feel hotter to the touch than usual or feel clammy.

Fever often accompanies pain and inflammation. Rather than being an illness in itself, a fever is often a sign that an infection is present. This is because the prostaglandins that travel to the brain also act on the temperature-regulating centre of the brain, causing the body's temperature to rise above normal. Children can be affected by a number of different infections as their immune systems are developing, including colds and flu and ear and throat infections. Often, these illnesses are accompanied by pain and a fever.

A child's temperature can be checked using a thermometer, and there are a range of different types available for parents to choose from.

This module is suitable for all members of the pharmacy team who wish to increase their knowledge of common conditions, treatment options and communication skills. This module has been endorsed with the NPA's Training Seal as suitable for use by pharmacy teams as part of their ongoing learning.

This module can also form part of your Team Tuesday training.



Understanding the problem

It can be difficult for young children to describe their pain, but a parent can usually tell if their child is in distress. A variety of factors, including teething, colic, injury or infection may cause pain.

Pain in infants

- 1 Colic:** this may start within weeks of birth and symptoms peak at around two to three months of age. Parents can be reassured that it should resolve by four to six months of age. Babies may have periods of intense crying, often in the early evening, pull up their legs and arch their backs. They should still feed and gain weight. Colic may be linked to trapped wind or having an immature digestive system.
- 2 Teething:** first teeth can start appearing in babies at around six to nine months of age. Symptoms may appear from as early as three months, before teeth are visible. They include pain and discomfort around the gums, swollen gums, excessive saliva production and an increased tendency to chew on objects for relief. The child may also have red, hot cheeks.
- 3 Colds and flu:** caused by a number of different viruses, colds are normally mild and usually resolve in five to seven days. It's normal for a child to have eight or more colds a year. Symptoms include sneezing, a sore throat, runny nose, mild fever and a cough. Flu symptoms may come on more quickly and make the child feel more poorly. They may also complain of aching muscles. Care should be taken when recommending cough and cold products for children, as many ingredients are unsuitable for those under six years of age. Remember to always check the packaging for instructions.
- 4 Ear infection:** often following a cold, children are more susceptible to ear infections than adults. Symptoms include ear pain, fever, vomiting, hearing loss, lethargy, irritability and difficulty feeding. Children may pull or tug at their ear and also have a cough or runny nose. Ear infections should resolve within a few days.
- 5 Sore throat:** often caused by a viral illness, a sore throat can be alleviated with pain relief and should clear up within four days.

Red flags

If a child has symptoms of meningitis or septicaemia (blood poisoning), they need urgent medical attention. Early symptoms of meningitis are similar to flu. Other symptoms include:

- A stiff neck
- A bad headache
- Dislike of bright lights
- Fever
- Vomiting
- Drowsiness/reduced responsiveness
- Convulsions/fits
- A rash

Babies and toddlers may also refuse to eat, not want to be touched or held, have a tense or bulging fontanelle, have a stiff body with jerky movements or be floppy.

Signs of septicaemia include:

- Reduced responsiveness
- Severe pains in arms, legs and joints
- Abnormally cold to touch
- Rapid breathing
- Rash that doesn't fade when you press it
- Vomiting, diarrhoea, stomach cramps
- Fever
- Looks mottled, bluish or pale.

? DID YOU KNOW?

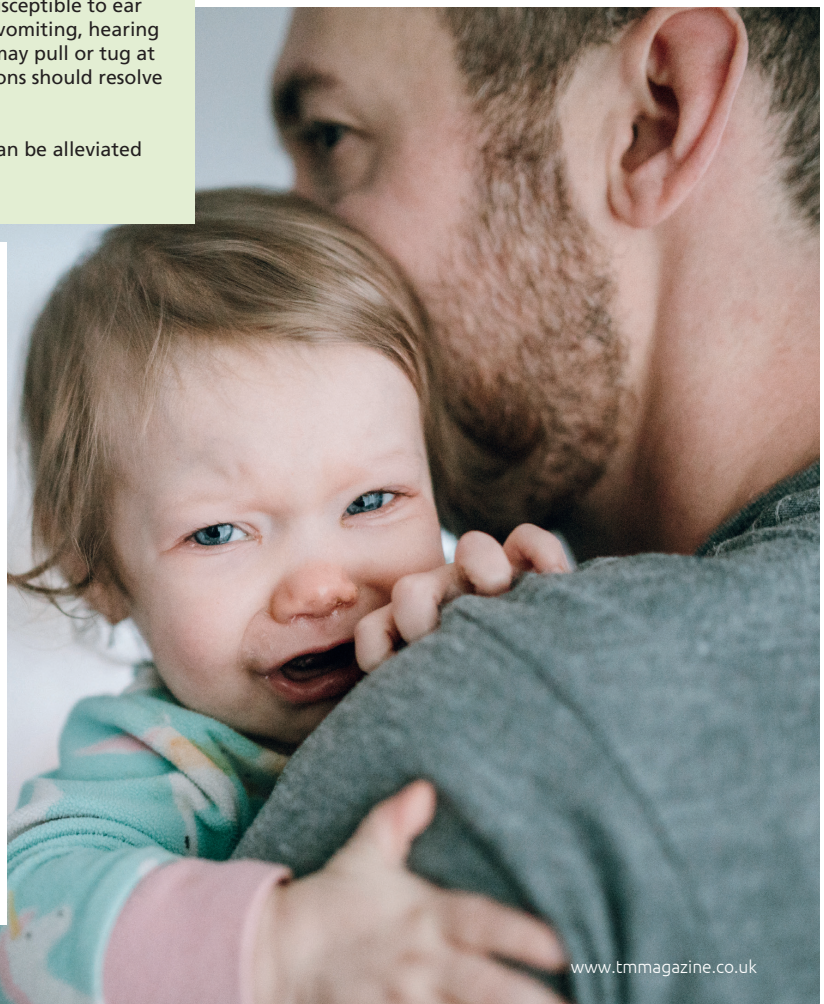
More than 60 per cent of parents with children aged between six months and five years say their child has had a fever.

Immunisations

Some children may develop a fever after their vaccinations. They should be kept cool, offered cold drinks and given an appropriate antipyretic – a drug used to prevent/reduce fever – such as paracetamol or ibuprofen. Parents may also be advised to give paracetamol to prevent fever after the meningitis B (MenB) vaccine, which is usually given at two and four months of age and one year. However paracetamol is not routinely needed at the one year dose.



A total of three doses of 120mg/5ml strength suspension is recommended – 2.5ml as soon as possible after the MenB vaccination and then second and third 2.5ml doses at four to six hour intervals. Parents of babies born prematurely (before 32 weeks) need to check the dose with their GP. Always check packaging for instructions.



**DID YOU KNOW?**

A high temperature usually returns to normal within three or four days.

Treatment options

Painkillers specifically formulated for children include flavoured suspensions containing paracetamol or ibuprofen. Current advice is that paracetamol or ibuprofen can be used for a child with a fever who is also distressed and unwell. These can be given using an oral syringe or a medicine spoon. Some may contain sugar and/or colourings.

1

Paracetamol suspension is indicated for the treatment of mild to moderate pain and to reduce fever in children aged over two months. It is available in different strengths: 120mg/5ml for younger children and 250mg/5ml for children over six years of age. For children over six years of age, melt-in-the-mouth tablets are also available (e.g. Calpol SixPlus Fastmelts). Parents should be advised to leave four to six hours between doses and not to give more than four doses in 24 hours.

2

Ibuprofen 100mg/5ml suspension is available for children aged over three months and weighing at least 5kg to relieve mild to moderate pain, post-immunisation fever and general fever. For children over seven years of age, there are also chewable capsules (e.g. Nurofen for Children Chewable Capsules). Ibuprofen may not be suitable for children with asthma, and should not be taken by children who have chickenpox. Parents should be advised to leave four to six hours between doses and not exceed three doses in 24 hours.

Added advice

Teething:

- A chilled teething ring can help to soothe sore gums
- If babies are being weaned, healthy snacks, such as raw fruit and vegetables, can be given for them to chew on
- Applying petroleum jelly around the mouth and chin can help to prevent a rash from developing, which can happen as a result of excessive dribbling.

Colic:

- Sit the baby upright during feeding and burp after feeds
- Gently massage around the tummy
- Hold or move the baby around.

Fever:

- Check for any rashes or signs of dehydration
- Check on them during the night
- Give fluids regularly.

Infections:

- Ensure they drink enough fluids and get plenty of rest
- A warm drink of lemon and honey (for children over one year of age) may help a cough
- Vapour rubs or saline drops can help to ease nasal congestion
- Cold drinks or ice lollies can help to soothe a sore throat
- A warm towel held against an infected ear may offer some relief
- Everyone in the family should wash their hands regularly to prevent the spread of cold and flu germs.



For children under 16 years of age, paracetamol and ibuprofen should not be given at the same time if one medicine hasn't worked and the child is still distressed, parents can try the other medicine at the next dose. Parents should not keep switching between the two medicines, unless advised to do so by a pharmacist or GP. Advise parents to check pack dosage instructions carefully and to check with the pharmacist if they are unsure.

3

Teething pain may be relieved using oral painkillers and/or teething gels. Teething products containing calming agents such as chamomile (e.g. Nelsons Teething Gel) are also available. Some products for oral pain contain salicylate salts and shouldn't be used by children under the age of 16 (e.g. Bonjela). Every baby is different, so a few different products may need to be tried until parents find something that works for their baby.

4

Colic may be improved by using drops containing simeticone (e.g. Infacol) or lactase (e.g. Colief Infant Drops). These should be tried for a week to see if they are effective. Parents and healthcare professionals can also discuss nutritional solutions such as specialist infant formula milk.

When to refer:

In addition to your pharmacy protocol, you should also refer to the pharmacist any infant who:

- Is under six months and has a fever
- Is not feeding
- Is vomiting green fluid
- Has blood in their faeces
- Has a persistent high temperature despite treatment
- Has any suspected signs of septicaemia or meningitis
- Makes a grunting noise when breathing
- Has a constant, inconsolable or high-pitched cry
- Has pale, blue/grey/ashen/mottled skin
- Has a fit associated with a fever
- Has signs of dehydration, such as fewer wet nappies
- Has symptoms that haven't improved as expected.



SIGNPOSTING

For more information, see:

- Your *Counter Intelligence Plus* training guide
- The NHS website: [nhs.uk/conditions/feverchildren/Pages/Introduction](https://www.nhs.uk/conditions/feverchildren/Pages/Introduction)
- The NHS website: [nhs.uk/conditions/colic/](https://www.nhs.uk/conditions/colic/)
- NICE: [cks.nice.org.uk/teething](https://www.nice.org.uk/teething)
- The NHS website: [nhs.uk/Conditions/vaccinations/Pages/meningitis-B-vaccine](https://www.nhs.uk/Conditions/vaccinations/Pages/meningitis-B-vaccine)
- [Meningitisnow.org](https://www.meningitisnow.org).

TEST YOURSELF ONLINE

GOOD PRACTICE KNOWLEDGE IS IMPORTANT WHEN ADVISING CUSTOMERS



Questions

1) As a general rule, fever is when a child has a temperature over how many degrees?

- a) 26°C
- b) 31°C
- c) 38°C
- d) 42°C

2) Which of the following symptoms can signify an ear infection?

- a) Fever
- b) Vomiting
- c) Lethargy
- d) All of the above

3) Some products for oral pain contain what substance that shouldn't be used by children under the age of 16?

- a) Ibuprofen
- b) Paracetamol
- c) Salicylate salts
- d) Simeticone

4) Which of the following statements is **TRUE** about teething?

- a) A chilled teething ring can help to soothe sore gums
- b) Chin rashes can develop from petroleum jelly
- c) Babies should be given sweets to chew on to help minimise pain
- d) The child may have cold and pale cheeks

5) What is the dosing schedule for paracetamol suspension 120mg/5ml for a four-month-old (not born prematurely) to prevent fever after the meningitis B vaccine?

- a) 2.5ml before the vaccination
- b) 2.5ml after the vaccination, then a further two doses after four to six hourly intervals
- c) 2.5ml after the vaccination
- d) 2.5ml after the vaccination then two further doses at eight to 10 hourly intervals

6) Which of the following babies is showing a symptom that may suggest septicaemia and would therefore need urgent medical attention?

- a) An eight-month-old baby with hearing loss
- b) A 10-week-old baby with a runny nose
- c) A six-month-old baby with reduced responsiveness
- d) A nine-month-old baby with excessive saliva production



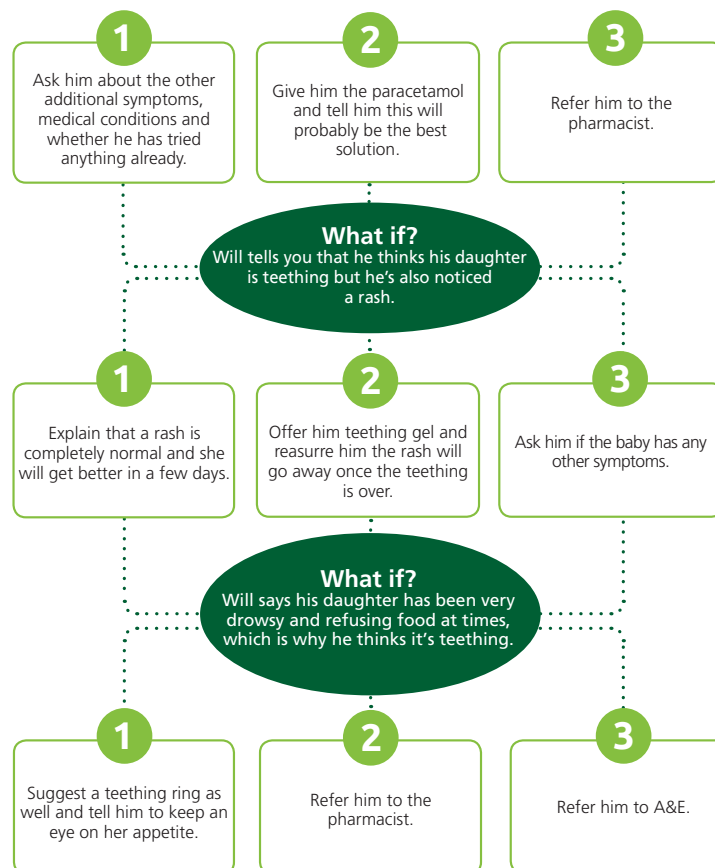
Scenario

Will comes into the pharmacy and asks for some paracetamol for his seven-month-old daughter as she has fever. He asks if there is anything else you could recommend, as the child is showing other signs of illness too.



What would you recommend?

For each part of this scenario, think about the decision you would make and, importantly, why you would choose that option. In addition, for each decision that you make, think about how you would talk to the customer and provide the necessary advice. You can discuss this with your team and your pharmacist.



Go to www.tmmagazine.co.uk to submit your answers to these questions. When you pass, you'll be able to download a certificate to showcase your learning. You can also add this to your online, personalised learning log.

www.tmmagazine.co.uk