Do you know what to do when a child presents with headache?

From this module you will learn:
- How often childhood headaches occur
- The ‘red flag’ referral points to watch out for
- Common triggers of headaches in children
- What effective treatments are available

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There is one common condition that often causes uncertainty amongst even experienced pharmacists – childhood headaches. Most children and teenagers get at least one headache each year and it is seen that around 60% of children are prone to headache, over periods varying from three months to lifetime, and may have attacks of variable frequency. When a pharmacist is consulted about a child with a headache they may consider it a side effect of another condition, e.g. eye strain, dehydration, trauma or an infection.

Although all these conditions can lead to a headache, the headache may not simply be the side effect of another problem, but rather its own complex condition. You need to consider that headache is the most common pain state in children over 7.

Nice has guidelines on the management of headache; however, these recommendations are only for children aged 12 and over. This can leave pharmacists in a difficult position.

Pharmacists are not always aware that headaches are common in children. This module will help you understand the condition and ensure that children get the best possible care when they do present with this condition.

Why pharmacists need to understand headaches in children

Headaches have an impact on the wellbeing of children and adolescents. The consequences may include missing out on social activities, school or their hobbies. When parents were asked what sort of impact headaches had on their child, they highlighted negatively affecting mood (54%) and quality of life (26%), as well as an impact on school work – leading to a negative impact on the child’s education (38%).

Pharmacists need to understand childhood headache, as nearly three quarters (71%) of parents surveyed said they would go to a pharmacy for advice; more than those who would consult their GP (50%).

Parents also indicated that they would trust advice of a pharmacist, with 80% saying they would be likely to follow recommendations made about children’s headache medication.
The headache

Headaches can be described broadly as either:

- **Primary** – having their own aetiology or cause, such as tension-type headaches.
- **Secondary** – occurring as a symptom of another condition, e.g., acute sinusitis.

This module will focus on primary headaches. Common examples of headaches in children include episodic tension type headache (accounting for 12-25% of all headaches) and migraines (around 8%).

Less common types of headache include cluster headaches – distinguished by a severe pain behind the eye – and medication-overuse headaches. The latter can occur when using painkillers on at least 10 days a month over three consecutive months.

These last two are less common in children, and if they are the suspected cause of a headache you should refer the child to their GP.

Tension-type headache: This is the most common type of headache affecting children and adolescents. It is often described as a feeling of tightness or pressure on the forehead, temples or back of the head. They are usually bilateral – affecting both sides of the head – and can last from between 30 minutes to several days.

They are usually not accompanied by other symptoms – such as nausea, dizziness or an aura – that are seen in migraines. Children can sometimes continue as normal with the pain of a tension-type headache, but it may affect their ability to undertake normal activities.

Migraine

This type of headache causes a throbbing, banging, hammering or pulsating sensation in the head. It tends to affect the forehead, and either one or both sides of the child’s head – adults tend to have migraine affecting one side of the head only. The pain can stop the patient from doing some or all normal activities.

Migraines in children are associated with several symptoms, such as:

- Sensitivity to noise and light
- Nausea and vomiting
- Dizziness
- Changes in eyesight
- Abdominal pain – this is a common symptom in some children. This “abdominal migraine” can be hard to identify as a primary headache.

Migraines need to be diagnosed by a doctor. If it is the first time a child presents with symptoms suggestive of a migraine, you should refer them to their GP.

A migraine and its associated symptoms can last between two and 72 hours; however, they tend to be shorter-lived in children.
Headache triggers
The reason why some people – both children and adults – are affected by headaches is poorly understood, but it is believed to have a biological cause. Identifying triggers can be beneficial. Common triggers include:
- Missing a meal
- Dehydration or insufficient fluid intake
- Lack of sleep
- A sedentary lifestyle, for example lack of exercise or excessive screen time
- Stress
- Certain food types, e.g. caffeinated or sugary drinks.

When speaking to a child’s parents or carers, it is important to assess what triggers could be causing the headache so that you can make appropriate recommendations. You can suggest parents or older children keep a symptom diary – this will help them identify triggers and avoid headaches in future.

Red flags
Although every child will experience a headache differently, there are several symptoms which would warrant referral to their GP or to hospital. These flags include:
- worsening headache combined with a fever
- headache that gets worse over a number of days
- recent head injury
- headaches triggered by sneezing, coughing or exercising
- unsteadiness when walking or moving
- seizure
- personality or behavioural changes
- reduction in quality of school work.

A concern for some parents and carers is the risk that the child has a serious neurological disorder, such as a brain tumour. However, brain tumours in children are rare (three to five per 100,000) and only one in 10 of these will present with headache as the only feature.6
**Interviewing children**

One barrier to helping children with their headache is that it can be difficult to speak to them.

Firstly, they are often not accompanying the parent or carer, who may visit the pharmacy on their child’s behalf, so you will be getting the information second-hand.

Secondly, it is sometimes difficult to speak to children as they may be shy, very young, or confused by the questions you ask.

Having the opportunity to initiate a conversation and ask the right questions is key to diagnosing childhood headaches and ensuring the appropriate course of action.

If you have the opportunity to speak to a child about their headache – or any other type of pain – there are ways to do this effectively. For example, if an adult visits your pharmacy with a child who suffers from a headache, you should invite them both into the consultation room to discuss it. Asking the child questions about themselves, such as where they go to school or what they have been doing that day, can encourage them to discuss their symptoms. Although the parent or carer will provide useful information, by questioning the child yourself you may uncover further details which could help you provide appropriate treatment.

When asking questions about headaches, there are several things you will want to find out. For example:

- other associated symptoms (this will help you determine if it is a primary or secondary headache, and what type of headache it is)
- location of the pain
- severity of the pain
- duration of each headache
- frequency of headaches
- the impact it has had on the child
- which relieving factors help them
- any warning signs they have noticed that suggest a headache is coming.

These are a lot of questions when speaking to anyone – let alone children. It is therefore important to pace them and make it a discussion with the patient, and not an interview.
NON-PHARMACOLOGICAL OPTIONS
There are several things you can recommend to patients and carers to help them alleviate pain and discomfort during their headache, for example:
- avoiding aggravating factors/triggers
- apply a cool, moist cloth to the forehead
- resting adequately and setting regular sleep patterns
- eating something at regular times, even if the child isn’t hungry for a full meal
- regular intake of fluid – and avoiding caffeinated drinks.

MEDICAL TREATMENTS
Sometimes parents or carers can be concerned about giving medication to children, so it is your place to explain the benefit of treatment. You can reassure parents on the efficacy of medication, and the benefits of using the right drug, at the right dose, at the right time.

The two medications you can recommend are ibuprofen and paracetamol. Both are effective at reducing headache pain in children.
- **Ibuprofen** – This can be given to children over three months old (and weighing over 5kg). Parents or carers should give doses according to the information on the packaging appropriate to the child’s age.
- **Paracetamol** – This can be used in children over two months, parents should give doses according to the information on the packaging appropriate to the age of the child. Both ibuprofen and paracetamol should only be given as a monotherapy in children suffering from headache.

TYPES OF FORMULATION
Paracetamol and ibuprofen both come in a variety of formats which may be more applicable to certain age groups. For example:
- **Liquids and sachets** – these are usually preferred for infants or young children and can be recommended for those aged up to 12.
- **Chewable tablets or capsules** – these may be the preferred type for children as they get older as they may find them more portable and convenient. In addition, they can be taken without food or water and may ease the anxiety that some children have over swallowing a tablet.
- **Tablets or capsules** – suitable for children over 12.

Stocking a variety of medicinal forms allows the patient to choose their preferred treatment – increasing the likelihood of adherence and satisfactory pain relief.

<table>
<thead>
<tr>
<th>Ibuprofen: fact or fiction?</th>
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<tbody>
<tr>
<td><strong>All formulations of Nurofen for children ibuprofen range act at the same speed – false</strong></td>
</tr>
<tr>
<td>Fast-acting ibuprofen formulations, such as liquid ibuprofen, do enter the circulatory system faster than some solid-dose formulations. This leads to more rapid pain relief.</td>
</tr>
<tr>
<td><strong>Ibuprofen can never be used in patients with asthma – false</strong></td>
</tr>
<tr>
<td>This medication may lead to bronchospasm in some people who have asthma. If a child has had this issue – related to the use of aspirin or any NSAID – then they should not use ibuprofen. However, if they have not had a prior reaction they can use ibuprofen.</td>
</tr>
<tr>
<td><strong>Ibuprofen needs to be taken with food – false</strong></td>
</tr>
<tr>
<td>Some ibuprofen formulations, such as Nurofen for Children, can be given with or without food to babies and children from three months and weighing over 5kg. Nurofen for Children is contradicted for patients who have history of upper GI bleeding or perforation, related to previous NSAIDs therapy. Refer to the SmPC for full product information.</td>
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Nurofen for Children Chewable Capsules Soft

Nurofen for Children 100 mg chewable capsules contain ibuprofen and are available in an easy-to-chew, on-the-go format. They provide relief from headache, fever, symptoms of colds and flu, and mild to moderate pain. Suitable for children 7-12 years.

Product features
- In easy-to-chew format. No need for water
- Contains ibuprofen for anti-inflammatory properties
- Can be taken with or without food
- Pharmacy-only product

Product description
Nurofen for Children has been providing effective pain relief for children for more than 25 years. The key ingredient ibuprofen has anti-inflammatory properties to help reduce a fever, as well as aches and pains. Available in orange flavour and only at pharmacy counters.

NUROFEN FOR CHILDREN 100 MG CHEWABLE CAPSULES SOFT:
100 mg ibuprofen. Indications: Reduction of fever. Relief of symptoms of cold & flu and mild to moderate pain Dosage: every 6-8hrs: Children 7-9 yrs: 2 capsules 3 times in 24 hrs. Children 10-12 yrs: 3 capsules 3 times in 24 hrs. For short term use. Not suitable for children under 7 yrs old.

Contraindications: Allergy to Ibuprofen (or other NSAIDs e.g. aspirin) or any ingredients listed. Current or history of a peptic ulcer, stomach or Upper GI bleeding. Severe hepatic failure, heart failure or renal failure. Last trimester of pregnancy. Precautions and Warnings: Care should be taken in patients with previous history of bronchial asthma; SLE and mixed connective tissue disease; Porphyrin metabolism; impaired renal function; impaired hepatic function or previous gastrointestinal disease. Caution is advised after major surgery or in patients with a history of hypertension or heart failure. The product may have a reversible impact on fertility. Gastrointestinal disease can be exacerbated and GI bleeding and ulceration has been seen in patients with no previous history. Concomitant use with other NSAIDs should be avoided. Side Effects: Most common side effects are gastrointestinal in nature (e.g. abdominal pain, nausea, diarrhoea and very rarely, peptic ulcer and GI bleeding). Very rare/uncommon adverse reactions include severe allergic reactions, renal problems, liver disorder, blood disorders and severe skin reactions. Swelling, high blood pressure and cardiac failure have been associated with NSAID treatment. MAH: RB Healthcare (UK) Ltd., SL1 3UH.


References
4. Survey of 1,003 UK parents of children aged between 7-12 who suffered from headaches at least once every two or three months. UK consumer panel online survey by Redshift Research on behalf of RB in March 2016
Tips for your CPD entry on headache in children and its management

**Reflect**
How common are headaches in children and adolescents? What symptoms are associated with migraine in children? What are common triggers for headaches in children?

**Plan**
This article describes headaches in children such as tension-type headaches and migraines and includes information about how often they occur, red flag referral points to watch out for and common triggers. Effective over the counter treatments available are also discussed.

**Act**
Read more about children’s headaches on the NHS Choices website at tinyurl.com/childheadache1

Find out more about migraines in children from the Migraine Trust website at tinyurl.com/childheadache2

Revise your knowledge of the products containing ibuprofen and paracetamol stocked in your pharmacy, make sure you and your counter staff are familiar with the age groups each product is suitable for and their correct doses.

**Evaluate**
Are you now confident in your knowledge of headaches in children? Could you give advice about non-pharmacological as well as medical treatments to patients and carers?
Take the 5-minute test

To receive your logsheet and certificate by email complete the test below, add your details, then fold and freepost to C+D. Alternatively visit bit.ly/nurofen-children-cpd to complete the test and receive your certificate and logsheet.

1. Most children and teenagers get at least one headache each year.
   □ True or □ false?

2. Headaches are the second most common pain state that a child over seven will have.
   □ True or □ false?

3. Primary headaches, such as tension-type headaches, have their own aetiology or cause.
   □ True or □ false?

4. Tension-type headaches account for 50% of all headaches in children and adolescents.
   □ True or □ false?

5. About 15% of headaches in children are caused by migraines.
   □ True or □ false?

   □ True or □ false?

7. Headache triggers include missing meals, dehydration, lack of sleep, stress and certain food types.
   □ True or □ false?

8. Non-pharmacological treatments for headaches in children include applying a cool, moist cloth to the forehead and eating and drinking at regular times.
   □ True or □ false?

9. Ibuprofen and paracetamol should only be given as a monotherapy in children suffering from headache.
   □ True or □ false?

10. Some ibuprofen formulations can be given with or without food.
    □ True or □ false?

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Last name: ..................................................................................................................................................

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