Pain

Headache

Headache

- The most common types of headache that the community pharmacist is likely to encounter are
  - tension headache,
  - migraine
  - sinusitis.

- Careful questioning can distinguish causes that are potentially more serious

What you need to know

Age
- Adult, child

Duration

Nature and site of pain

Frequency and timing

Previous history
- Fits, faints, blackouts

Associated symptoms
- Nausea, vomiting, photophobia

Precipitating factors
- Foods, alcohol, stress, hormonal

Recent trauma or injury

Falls

Recent eye test

Medication

Age

- The pharmacist would be well advised to refer any child with a headache to the doctor, especially if there is an associated history of injury or trauma to the head, for example, from a fall.

- Children with severe pain across the back of the head and neck rigidity should be referred immediately.

- Elderly patients sometimes suffer a headache a few days after a fall involving a bang to the head. Such cases may be the result of a slow bleed into the brain, causing a subdural haematoma, and require immediate referral.

- It is unusual for patients to present with their first migraine episode over the age of 40 years and such patients should be referred.

Duration

- Any headache that does not respond to over-the-counter (OTC) analgesics within a day requires referral.

Nature and site of pain

- Tension headaches are the most common form.
- The pain is often described as being around the base of the skull and the upper part of the neck.
- Sometimes the pain extends up and over the top of the head to above the eyes.
- It is not associated with any neck stiffness.
- The sub-occipital muscles can feel tender to touch.

- The pain may be described like a band around the head.
- The pain is usually of a dull nature rather than the pounding or throbbing sensation associated with migraines.
- However, the nature of the pain alone is not sufficient evidence on which to decide whether the headache is likely to be from a minor or more serious cause.

- Classic migraine is unilateral, affecting one side of the head, especially over the forehead.

- Rarely, a sudden severe pain that develops at the back of the head may signify a subarachnoid haemorrhage (SAH).
- It may be associated with raised blood pressure.
- Emergency medical referral is essential.

Frequency and timing of symptoms

- Pharmacists should regard a headache that is worse in the morning and improves during the day as particularly serious, since this may be a sign of raised intracranial pressure.

- Cluster headaches (which occur in cyclical patterns or clusters) typically happen daily for 2–3 months and each episode of pain can last up to 3 h.

- A person who has headaches of increasing frequency or severity
- should be referred.

Previous history

- It is always reassuring to know that the headache experienced is the usual type for that person.
- In other words, it has similar characteristics in nature and site but not necessarily in severity to headaches experienced over previous years.
- This fact makes it much less likely to be from a serious cause, whereas new or different headaches (especially in people over 45 years) may be a warning sign of a more serious condition.
- Migraine patients typically suffer from recurrent episodes of headaches. In some cases, the headaches occur in clusters. The pain may be present daily for 2–3 weeks and then be absent for months or years.

Associated symptoms

- Children and adults with unsteadiness and clumsiness associated with
- a headache should be referred immediately.

Migraine

- Migraine affects over 15% of the UK population and two-thirds of sufferers are women.

- There are two common types of migraine:
  - migraine without aura (common migraine), which occurs in 75% cases,
  - migraine with aura (classic migraine).

Classic migraine.

- Classic migraine is often associated with alterations in vision before an attack starts, the so-called prodromal phase.
- Patients may describe seeing flashing lights or zigzag lines.
- During the prodromal phase, patients may experience tingling or numbness on one side of the body, in the lips, fingers, face or hands.
- Migraines are also associated with nausea and sometimes vomiting.
- Patients often get relief from lying in a darkened room
- Classic migraine is three times more common in women than in men.

Common migraine.

- In common migraine, there is no prodromal phase (no aura);
- the headache may be one sided but both sides of the head may be affected and gastrointestinal (GI) symptoms such as nausea and vomiting may occur.

International Headache Society's diagnostic pointers for migraine

- Migraine without aura (common migraine)
  - At least five previous episodes with
    - Attacks lasting 4–72 h
  - At least two of the following headache characteristics
    - Pulsating/throbbing
    - Pain of moderate-to-severe intensity
    - Pain aggravated by movement
    - Unilateral pain
  - At least one associated symptom
    - Nausea and/or vomiting
    - Photophobia and phonophobia
- Migraine with aura (classic migraine)
  - At least three of the following characteristics
    - One or more transient focal neurological aura symptoms
    - Gradual development of aura symptoms up to 5 min or several symptoms in succession
    - Aura symptoms lasting 5–60 min
    - Headache following or accompanying aura within 60 min

Chronic daily headache

- Chronic daily headache (CDH) is defined as headache that is present on most days, that is, more than 15 days a month, typically occurring over a 6-month period or longer, and it can be daily and unremitting.

- In some patients, an episode of chronic headache resolves in a much shorter time; it can occur in children and in the very old.

- Twice as many men have it compared to women.

- Chronic headache is characterized by a combination of background, low-grade muscle contraction-type symptoms, often with stiffness in the neck and superimposed migrainous symptoms.

- It is possible that daily use of simple analgesics and combinations containing codeine causes CDH.

- Any frequent headache needs referral to the general practitioner (GP) for assessment.

Cluster headaches

- Cluster headaches involve, as their name suggests, a number of headaches one after the other.

- A typical pattern would be daily episodes of pain over 2–3 months, after which there is a remission for anything up to 2 years.

- The pain can be excruciating and often comes on very quickly even waking the sufferer from sleep.

- Each episode of pain can last from 0.5 to 3 h and the pain is usually experienced on one side of the head, in the eye, cheek or temple.

- A cluster headache is often accompanied by a painful, watering eye and a watering or blocked nostril on the same side as the pain.

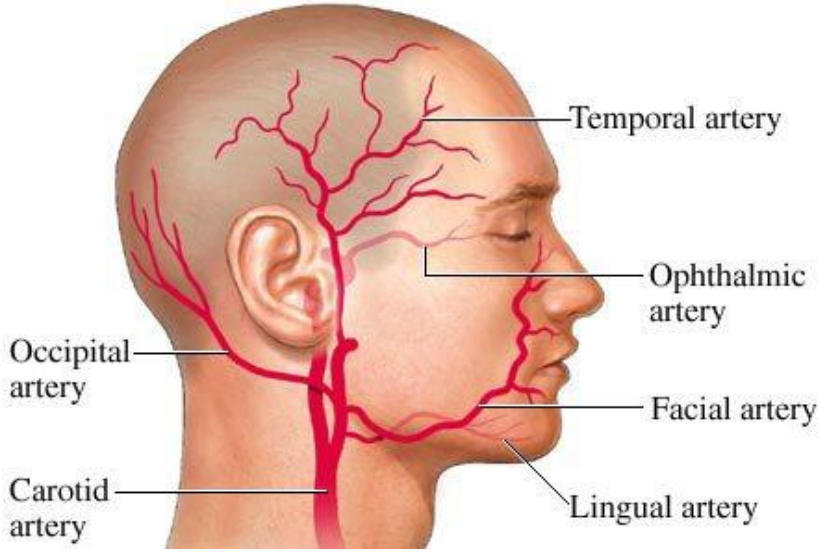
- Any recurrent, persistent or severe headache needs referral to the GP for a diagnosis.

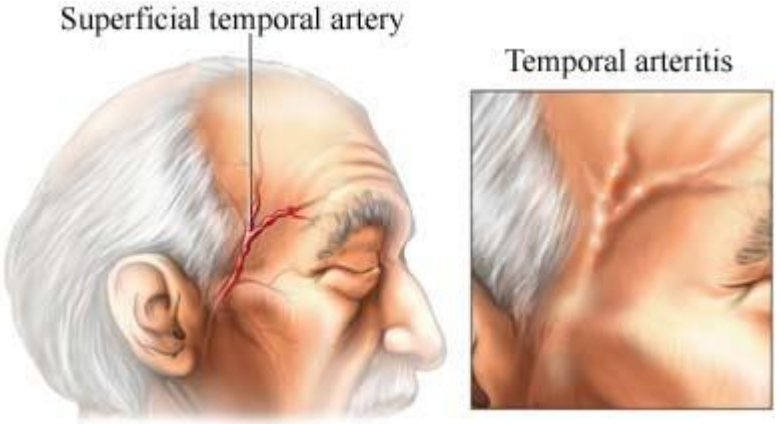
Sinusitis

- Sinusitis may complicate a respiratory viral infection (e.g. cold) or allergy (e.g. hay fever), which causes inflammation and swelling of the mucosal lining of the sinuses.
- The increased mucus produced within the sinus cannot drain, a secondary bacterial infection develops and the pressure builds up, causing pain.
- The pain is felt behind and around the eye and usually only one side is affected.
- The headache may be associated with rhinorrhoea or nasal congestion.
- It is typically worse on bending forwards or lying down.

Temporal arteritis

- Temporal arteritis usually occurs in older patients;
- the arteries that run through the temples become inflamed.
- They may appear red and are painful and thickened to the touch.
- However, these signs are not always present.





- Any elderly patient presenting with a frontal or temporal headache that persists and is often associated with a general feeling of being unwell should be referred immediately.

- Temporal arteritis is a curable disease and delay in diagnosis and treatment may lead to blindness, because the blood vessels to the eyes are also affected by inflammation.

- Treatment usually involves high-dose steroids and is effective, provided the diagnosis is made sufficiently early.

Precipitating factors

- Tension (psychogenic) headache and migraines may be precipitated by stress, for example, pressure at work or a family argument.
- Some migraine sufferers experience their attacks after a period of stress, for example, when on holiday or at weekends.
- Certain foods have been reported to precipitate migraine attacks, for example, chocolate and cheese.
- Migraine headaches may also be triggered by hormonal changes. In women, migraine attacks may be associated with the menstrual cycle.

Recent trauma or injury

- Any patient presenting with a headache who has had a recent head injury or trauma to the head should be referred to the doctor immediately because bruising or haemorrhage may occur, causing a rise in intracranial pressure.

- The pharmacist should look out for drowsiness or any sign of impaired consciousness.

- Persistent vomiting after the injury is also a sign of raised intracranial pressure.

eye test

- Headaches associated with periods of reading, writing or other close work may be due to deteriorating eyesight and a sight test may be worth recommending to see whether spectacles are needed.

Medication

- The nature of any prescribed medication should be established, since the headache might be a side effect of medication, for example, nitrates used in the treatment of angina.
- It is also known now that headaches can occur because of medication overuse.
- Up to 4% of the population suffers from CDH.
- This is when headaches occur on more than 15 days per month.

- The headaches may be tension or sometimes associated with superimposed migraine.

- Sometimes the headaches may actually be caused by taking too much medication, as it is possible to develop tolerance and then rebound headaches.

Contraceptive pill

- Any woman taking the combined oral contraceptive (COC) pill and reporting migraine-type headaches, either for the first time or as an exacerbation of existing migraine, should be referred to the doctor, since this may be an early warning of cerebrovascular changes.

- Occasionally, a headache is caused by hypertension but, contrary to popular opinion, such headaches are not common and occur only when the blood pressure is extremely high.

- In drug interactions which have led to a rise in blood pressure, for example, between a sympathomimetic such as pseudoephedrine and a monoamine oxidase inhibitor, a headache is likely to occur as a symptom.

- The patient may already be taking a non-steroidal anti-inflammatory drug (NSAID) or other analgesic on prescription and duplication of treatments should be avoided, since toxicity may result.

When to refer
Headache associated with injury/trauma
Severe headache of more than 4-h duration
Suspected adverse drug reaction
Headache in children under 12 years
Severe occipital headache (across the back of the head)
Headache that is worse in the morning and then improves
Associated drowsiness, unsteadiness, visual disturbances or vomiting
Neck stiffness
Frequent migraines requiring prophylactic treatment
Frequent and persistent headaches

Management

- The pharmacist's choice of oral analgesic comprises three main agents:
  - *paracetamol,*
  - NSAIDs (ibuprofen and *diclofenac)*
  - *aspirin.*

- These may be combined with other constituents such as
  - *codeine,*
  - *dihydrocodeine,*
  - *doxylamine*
  - *caffeine.*

- OTC analgesics are available in a variety of dosage forms and, in addition to traditional tablets and capsules, syrups, soluble tablets and sustained release dosage forms are available for some products.

- The peak blood levels of analgesics are achieved 30 min after taking a dispersible dosage form; after a traditional *aspirin* tablet, it may take up to 2 h for peak levels to be reached.

- The timing of doses is important in migraine where the analgesic should be taken at the first sign of an attack, preferably in soluble form, since GI motility is slowed during an attack and absorption of analgesics delayed.

- Combination therapy may sometimes be useful, for example, an analgesic and decongestant (systemic or topical) in sinusitis.

- Sumatriptan 50 mg tablets can be used for acute relief of migraine with or without aura and where there is a ‘clear diagnosis of migraine’.

Paracetamol

- *Paracetamol* has analgesic and antipyretic effects but little or no anti-inflammatory action.
- The exact way in which *paracetamol* exerts its analgesic effect remains unclear, despite extensive research.
- It is less irritating to the stomach than is *aspirin* and can therefore be recommended for those patients who are unable to take *aspirin* for this reason.
- Evidence for the effectiveness of *paracetamol* in the management of migraine is limited.

- *Liver toxicity*
- At high doses, *paracetamol* can cause liver toxicity and damage may not be apparent until a few days later.

- All overdoses of *paracetamol* should be taken seriously and the patient referred to a hospital casualty department.

NSAIDs (ibuprofen and diclofenac)

- *Ibuprofen* and *diclofenac* have analgesic, anti-inflammatory and antipyretic activities and cause less irritation and damage to the stomach than does *aspirin.*

- The dose required for analgesic activity is 200– 400 mg and that for anti-inflammatory action 300–600 mg (total daily dose of 1600–2400 mg).

- The maximum daily dose allowable for OTC use is 1200 mg and *ibuprofen* tablets or capsules

- *Diclofenac* 12.5 mg tablets can be used in adults and children aged 14 years and over.
- Two tablets should be taken initially, then one or two tablets every 4–6 h as needed.
- The maximum daily dose is 75 mg.
- When responding to a request to buy OTC oral diclofenac or considering recommending it, pharmacists and their staff need to ask suitable questions to identify whether the patient has cardiovascular disease.

- *Indigestion*
- NSAIDs can be irritating to the stomach, causing indigestion, nausea and diarrhoea, but less so than *aspirin.*
- Gastric bleeding can also occur.
- For these reasons, it is best to advise patients to take NSAIDs with or after food, and they are best avoided in anyone with a peptic ulcer or a history of peptic ulcer.

- Elderly patients seem to be particularly prone to these effects.
- NSAIDs can increase the bleeding time due to an effect on platelets.
- This effect is reversible within 24 h of stopping the drug (whereas reversibility may take several days after stopping *aspirin)*.
- *Ibuprofen* and *diclofenac* seem to have little or no effect on whole blood clotting or prothrombin time, but it is still not advised for patients taking anticoagulant medication for whom *paracetamol* would be a better choice.

- *Hypersensitivity*
- Cross-sensitivity between *aspirin* and NSAIDs occurs, so it would be wise for the pharmacist not to recommend them for anyone with a previous sensitivity reaction to *aspirin.*

- Since asthmatic patients are more likely to have such a reaction, the use of NSAIDs in asthmatic patients should be with caution.

- *Contraindications*
- Sodium and water retention may be caused by NSAIDs and they are therefore best avoided in patients with congestive heart failure or renal impairment and during pregnancy, particularly during the third trimester.

- Breastfeeding mothers may safely take *ibuprofen* and *diclofenac,* since it is excreted in only tiny amounts in breast milk.

- *Caution*
- NSAIDs are best avoided in *aspirin*-sensitive patients and should be used with caution in asthmatics.
- Adverse effects are more likely to occur in the elderly and *paracetamol* may be a better choice in these cases.

Aspirin

- *Aspirin* is analgesic, antipyretic and also anti-inflammatory if given in doses greater than 4 g daily.

- About half of migraine sufferers show significant improvement in their headache 2 h after taking aspirin.

- It should not be given to children under 16 years because of its suspected link with Reye's syndrome.

- Reports indicate that some parents are still unaware of the contraindication in children under 16 years.

- Analgesics are often purchased for family use and it is worth reminding parents the minimum age for the use of aspirin.

- *Indigestion*
- Gastric irritation (indigestion, heartburn, nausea and vomiting) is sometimes experienced by patients after taking *aspirin,* and for this reason the drug is best taken with or after food.

- When taken as dispersible tablets, *aspirin* is less likely to cause gastric irritation.

- *Bleeding*
- *Aspirin* can cause GI bleeding and should not be recommended for any patient who either currently has or has a history of peptic ulcer.

- *Aspirin* affects the platelets and clotting function, so bleeding time is increased, and it has been suggested that it should not be recommended for pain after tooth extraction for this reason.

- The effects of anticoagulant drugs are potentiated by *aspirin,* so it should never be recommended for patients taking these drugs.

- *Alcohol*
- Alcohol increases the irritant effect of *aspirin* on the stomach and also its effects on bleeding time.

- Concurrent administration is therefore best avoided.

- *Pregnancy*
- *Aspirin* is best avoided in pregnancy.

- *Hypersensitivity*
- Hypersensitivity to *aspirin* occurs in some people; it has been estimated that 4% of asthmatic patients have this problem and *aspirin* should be avoided in any patient with a history of asthma.

- When such patients take *aspirin,* they may experience skin reactions (rashes and urticaria) or sometimes shortness of breath, bronchospasm and even asthma attacks.

Codeine

- *Codeine* is a narcotic analgesic; a systematic review of evidence from clinical trials showed that a dose of at least 15 mg is required for analgesic effect.

- *Codeine* is commonly found in combination products with *aspirin, paracetamol* or both.

- Constipation is a possible side effect and is more likely in elderly patients and others prone to constipation.

- *Codeine* can also cause drowsiness and respiratory depression, although this may be unlikely at OTC doses.

- Codeine-containing medicines should only be used in children over 12 years old to treat acute moderate pain, and only if it cannot be relieved by paracetamol or ibuprofen.

- Codeine should also not be used by breastfeeding mothers because it can pass to the baby through breast milk and potentially cause harm.

Dihydrocodeine

- *Dihydrocodeine* is related to *codeine* and has similar analgesic efficacy.
- A combination product containing *paracetamol* and *dihydrocodeine* is available with a dose per tablet of 7.46 mg *dihydrocodeine.*
- The product is restricted to use in adults and children over 12 years.
- Side effects include constipation and drowsiness. Like *codeine,* the drug may cause respiratory depression at high doses.

Caffeine

- *Caffeine* is included in some combination analgesic products to produce wakefulness and increased mental activity.
- It is probable that doses of at least 100 mg are needed to produce such an effect and that OTC analgesics contain 30–50 mg per tablet.
- A cup of tea or coffee would have the same action.
- Products containing *caffeine* are best avoided near bedtime because of their stimulant effect.
- It has been claimed that *caffeine* increases the effectiveness of analgesics but the evidence for suchclaims is not definitive.
- *Caffeine* has an irritant effect on the stomach.

Doxylamine succinate

- *Doxylamine* is an antihistamine whose sedative and relaxing effects are probably responsible for its usefulness in treating tension headaches.

- Like other older antihistamines, *doxylamine* can cause drowsiness and
- patients should be warned about this.

- *Doxylamine* should not be recommended for children under 12 years.

Sumatriptan

- Sumatriptan 50mg tablets can be used OTC for acute relief of migraine with or without aura and where there is a ‘clear diagnosis of migraine’.
- It can be used by people aged between 18 and 65 years.
- A 50 mg tablet is taken as soon as possible after the migraine headache starts.
- A second dose can be taken at least 2 h after the first if symptoms come back.
- A second dose should be taken only if the headache responded to the first dose.

- Practice guidance from Royal Pharmaceutical Society (RPS) suggests that if the patient has previously received sumatriptan on prescription and the pharmacy holds their patient medication record, then OTC supplies can be made, provided there has been no change in the condition.

- If the person has not used sumatriptan before, the pharmacist needs to determine their suitability for the treatment.

- They must have an established pattern of migraine and the pharmacist needs to identify any other symptoms or relevant medical conditions as well as any medication.

Feverfew

- Feverfew is a herb that has been used in the prophylaxis of migraine.
- Some clinical trials have been conducted to examine its effectiveness, but results have been conflicting.
- Adverse effects that have been reported from the use of feverfew include
  - mouth ulceration involving the oral mucosa and tongue (which seems to occur in about 10% of patients),
  - abdominal colic,
  - heartburn
  - skin rashes.
- The herb has a bitter taste, which some patients cannot tolerate.
- Feverfew was used in the past as an abortifacient and it should not be recommended for pregnant women with migraine.

Case 1

- For several years Sandra Brown, a young mother, has purchased
- combination analgesics for migraine from your pharmacy every few
- months. She has suffered from migraine headaches since she was a
- child. Today she asks if you have anything stronger; the tablets do not
- seem to work like they used to. She is not taking any medicines on
- prescription. (You check whether she is taking the contraceptive pill
- and she is not.) Sandra tells you that she now suffers from migraines
- two or three times a month and they are making her life a misery.
- Nothing seems to trigger them and the pain is not more severe than
- before. She has read about feverfew and wonders whether she should
- give it a try.

Case 2

- Wei Lin, a woman aged about 30 years, has asked to speak to you. She tells you that she would like you to recommend something for the headaches that she has been getting recently. You ask her to describe the headache and she explains that the pain is across her forehead and around the back of the head. The headaches usually occur during the daytime and have been occurring several times a week, for several weeks. There are no associated GI symptoms and there is no nasal congestion. No medicines are being taken, apart from a compound OTC product containing *aspirin,* which she has been taking for her headaches. On questioning her about recent changes in lifestyle, she tells you that she has recently moved to the area and started a new job last month. In the past, she has suffered from occasional headache, but not regularly. This lady does not wear glasses and says she has not had trouble with her eyesight in the past. She confides that she has been worried that the headaches might be due to something serious.

Case 3

- Monowarar Ahmed is a regular visitor to your shop. She is a young
- mother, aged about 25 years, and today she seeks your advice about
- headaches that have been troubling her recently. The headaches are of
- a migraine type, quite severe and affecting one side of the head. Mrs
- Ahmed had her second child a few months ago, and when you ask
- if she is taking any medicines she tells you that she recently started
- to take the COC pill. In the past, she has suffered from migraine type
- headaches, but only occasionally and never as severe as the ones
- she has been experiencing during the past weeks. The headaches have
- been occurring once or twice a week for about 2 weeks. *Paracetamol*
- has given some relief, but Mrs Ahmed would like to try something
- stronger.

Case 4

- Ben Jones, a 35-year-old man, comes in asking whether he could have something stronger for his migraines. He tells you that he has had migraines since he was a teenager. The attacks are not that frequent but are quite disabling when they come on. He is particularly concerned that he travels a lot in his job as an IT consultant and cannot afford to be laid up when he is working away from home. Last year he saw his GP who encouraged him to continue with soluble paracetamol and also prescribed domperidone to reduce his nausea. The GP mentioned that he might benefit from a ‘triptan’ if this was not helping him enough. Ben explains that his migraine starts with a small area of wavy vision in the centre of his visual field, which is then followed about half an hour later by a throbbing headache above his left eye with nausea and vomiting. He says he feels so bad that he has to lie down in a darkened room. He goes on to say that he usually falls asleep after an hour or so and then sleeps fitfully until the next day when he is better. He is otherwise fit and well, plays regular sports, is a non-smoker and does not take any other medication. He goes on to say, ‘Can I buy the triptan or do I need to go back to the doctor?’

Case 5

AM, a 25-year-old woman, has no significant medical history and is not taking prescription medications. She approaches your pharmacy counter to ask about something “stronger” for her migraines. OTC ibuprofen initially helped her migraines, which were occurring once every few weeks, but now she is having almost daily throbbing headaches with associated nausea and photophobia. She is taking ibuprofen multiple times a day, every day, with little relief, and has been missing work frequently.

What would you recommend to AM regarding treatment options for her migraines?