NHS
Kent and Medway

# NHS Kent and Medway

## Management of Adults with Headaches and Migraines in Primary Care

Version 2.1

Date: 9th August 2022

This document contains information on specialist treatment - this is to provide information and is not an exhaustive guidance for treatments in secondary care. The document is not an exhaustive list of headaches/migraines – please refer into the appropriate specialist pathway where required.

Approved by: July JPC  Ratified by Kate Langford
Ratified Date: Aug 2022
Review Date: Aug 2024

**Contact Details**

| | |
|---|---|
| **Name** | Dami Adebiyi |
| **Title** | Management of Adults with Headaches and Migraines in Primary Care |

**Document Description**

| | |
|---|---|
| **Document type** | Clinical guideline |
| **Service application** | Primary Care |
| **Version** | 2.1 |
| **Ratification date** | |
| **Review date** | January 2023 |

**Produced in consultation with:**

| | |
|---|---|
| | Andrew Dowson - EK |
| | Ivona Tylova - DGS |
| | Gerard Saldanha - WK |
| | Dr Vanessa Short - GP |

**Change history**

| Version | Date | Comments |
|---|---|---|
| 1.0 | 7th January 2021 | Developed by Geoffrey Howell |
| 1.1 | 11th March 2021 | Abimbola Alaba |
| 1.2 | 16th April 2021 | Abimbola Alaba |
| 1.3 | 20th April 2021 | Andrew Dowson |
| 1.4 | 2nd May 2021 | Abimbola Alaba |
| 1.5 | 22nd May 2021 | Abimbola Alaba |
| 1.6 | 29th Sep 2021 | Abimbola Alaba – Emergency presentation of headaches updated |
| 1.7 | 4th Nov 2021 | Abimbola Alaba – Amendment to page 16 (s/c sumatriptan) |
| 1.8 | 10th Nov 2021 | Abimbola Alaba – Prescribing responsibilities (page 5) |
| 1.9 | 3rd Dec 2021 | Andy Dowson/Abimbola Alaba – Pizotifen update |
| 2.0 | 31ST Dec 2021 | Abimbola Alaba – Criteria for prophylaxis amended to include >/= two migraines (lasting 1-3 days) each month |
| 2.1 | 9th Aug 2022 | Dami Adebiyi – Updated contact details (page 2) and web link for Home Oxygen Order Forms (page 18) |

NHS Kent and Medway includes four integrated care partnerships: Medway and Swale ICP, West Kent ICP, East Kent ICP and Dartford Gravesham and Swanley ICP. They are referred to collectively in this document forthwith as “Kent and Medway” or the “Authority”.

**Contents**

## 1. Purpose of clinical guideline:

- To provide clinicians in primary care with information on prescribing medication for patients presenting with headache and migraines.
- To promote the safe, effective and economic use of medication
- To minimise the risk of medication related side-effects

**Principles of Treatment:**

This guidance is based on the best available evidence, but its application may be modified by professional judgment. Often it is not possible to identify a universal first choice therapy for patients with headache and migraine and so the choice of drug prescribed should take into account:

- Clinical and lifestyle characteristics (especially childbearing status)
- Patient preference
- Value for money. Where similar types of drugs [with no definite difference] are available, opting for the drug with the lowest acquisition cost.

The guideline is for the management of **patients over 16 years of age**. Patients under 16 years should be managed using the BNF for children. Specific dosing for children is available here: https://bnfc.nice.org.uk/

**Recommendations for prescribing are based on:**

1. NICE CG150: Headaches in over 12s: diagnosis and management, September 2012 (https://www.nice.org.uk/guidance/cg150)
2. NICE Clinical Knowledge Summaries (https://cks.nice.org.uk/#?char=A)
3. NICE pathway guidance for headache (https://pathways.nice.org.uk/pathways/headaches)
4. SIGN 155: Pharmacological management of migraine, February 2018 (https://www.sign.ac.uk/media/1091/sign155.pdf)
5. Discussions with our primary and specialist secondary care colleagues across the health economy.

**Current dosing and licensing information should be used:**

- eBNF for adults: https://bnf.nice.org.uk/
- eBNF for chidren: https://bnfc.nice.org.uk/
- Specific Product Classification (SPC): https://www.medicines.org.uk/emc/

**These are guidelines not rules and they are here to help you and your patients**

**2. All headache disorders:**

Consider using a headache diary:

- To record the frequency, duration and severity of headaches
- To monitor the effectiveness of headache interventions
- As a basis for discussion with the person about their headache disorder and its impact.

**Do not refer people diagnosed with tension-type headache, migraine, cluster headache or medication overuse headache for neuroimaging solely for reassurance.**

**Self Help Resources:**

- Patient UK: https://patient.info/
- The migraine trust: https://www.migrainetrust.org/
- Organization for the Understanding of Cluster Headache: http://www.ouchuk.org/ (Helpline No.: 01646 651 979)
- Migraine in Primary Care Advisors (Guidance and information on further education): www.mipca.org.uk/
- The International Headache Society http://ihs-classification.org/en/

**Key Messages:**

- Most headaches presenting to GPs will be primary headaches, i.e., without identifiable associated pathology; typically tension headaches or migraines.
- Most GPs are extremely experienced in the assessment and management of tension headaches and migraines and will not need to refer them to a headache specialist.
- More than one headache type is possible in an individual patient
- Analgesic overuse can lead to the development of increasing headache frequency and/or unresponsiveness to standard therapeutic agents.
- Patients who lack significant symptom improvement despite having had a trial of several recommended, appropriately dosed, prophylactic treatments for migraine, taken compliantly and without evidence of analgesicoveruse should be referred for a specialist opinion.
- Patients presenting with a first episode of cluster headache should be referred for a specialist opinion to confirm the diagnosis and advice on treatment options.
- Where patients have been issued a secondary referral and subsequently put on an unlicensed treatment, it is important to emphasise patient care and safety. The responsibility for ongoing treatment should be based on the formulary classification of the drug (first choice, specialist initiation, secondary care only, etc.) and whether there is an existing shared care pathway or if the GP has specialist knowledge.

  Patients should remain under the care and supervision of their consultants until they are stable, before treatment regimen is taken over by a primary care clinician. In some cases, primary care prescribing may be appropriate if a GP has specialist knowledge; or experience of prescribing a particular drug for a particular patient and then it would be inappropriate to expect to transfer prescribing responsibility back to the Consultant.

**Red flags:**

Most headaches are benign, but rarely headaches can be caused by serious conditions. **The following examples should prompt an urgent referral for admission or to an appropriate specialist opinion / brain imaging.** Consider admission, urgent MRI scan (marked *) or 2ww referral as appropriate (direct access MRI not available in all CCGs)

- Worsening headache with fever
- New onset neurological deficit
- New onset of cognitive dysfunction
- Impaired level of consciousness
- Recent (typically within the past 3 months) head trauma
- Orthostatic headache [associated with postural change (bending) or coughing (possible raised ICP)]
- A substantial change in the characteristics of their headache
- New onset headaches in patients with compromised immunity (caused for example by HIV or immunosuppressive drugs), are aged under 20 years and a history of malignancy, a history of malignancy know to metastasise to the brain (e.g. lung, breast, melanoma, renal, colorectal) or vomiting without any other cause.
- Thunderclap headache (intense headache of "explosive" onset suggest subarachnoid haemorrhage (SAH)
- Jaw claudication (suggests temporal arteritis - take ESR /CRP & start steroids immediately)
- Headache with atypical aura (duration >1 hour, or including significant / prolonged motor weakness)
- Unilateral red eye – consider angle closure glaucoma
- Rapid progression of personality changes confirmed by witness where there is no reasonable explanation
- Headache causing patients to wake from sleep

### *3.* Medication overuse headache *https://cks.nice.org.uk/topics/headache-medication-overuse/*

**Key Messages:**

- Medication Overuse Headache (MOH) can also be called "rebound" or "painkiller" headaches and is typically described as a headache which is present chronically (usually for 15 days or more per month) and which has developed or worsened while taking regular symptomatic medication.
- Medication history is crucial, especially the use of Over the Counter (OTC) analgesia.
- Medication overuse headache is very common and must be excluded in all patients with chronic daily headache.
- **Triptans or analgesics should not be used on more than 10 days per month or 2 days per week to avoid them causing overuse headache.**
- **Most patients with MOH will find it difficult to stop their analgesics**. Medication withdrawal should, nevertheless, be attempted in all patients.

**Treatment:**

Advise the person to stop taking all overused acute headache medications:

- **Medication should be stopped for at least 1 month**
- Withdrawal of ergots, triptans, and non-opioid analgesics should be abrupt
- Withdrawal of opioids, caffeine and benzodiazepines needs to be gradual to minimize withdrawal symptoms

**Use of adjunctive treatment for withdrawal symptoms**:

- NICE guideline recommends that most people can withdraw without the need for adjunctive treatments to manage withdrawal symptoms.
- Opiate withdrawal may cause agitation, diarrhoea and insomnia. The headache will often worsen before improving. Rest, over-hydration (1-2 pints of water) at the beginning of the attack, local application of cooling strips, ice or heat packs or neck/temple/scalp massage can be helpful.
- If treatment of withdrawal symptoms is deemed necessary:
    - **Naproxen** 500mg bd for up to 2 weeks or **Prednisolone** 30mg od for 7 days can be used to help with **pain**. The use of oral steroids for MOH is unlicensed and should be initiated in secondary care, unless otherwise appropriate
    - **Metoclopramide** 10mg and **Prochlorperazine** (buccal) 3mg can help with **nausea**,
    - **Prochlorperazine** can also help with **pain** and **sleep disturbance**.

**Consider PROPHYLACTIC treatment** for the underlying primary headache disorder if a frequent headache persists after withdrawal:

- A useful strategy may be to **wait for up to 3 months**, depending on which rescue medication is overused, before considering prophylaxis.
- For a person who is unable to otherwise withdraw from the overused medication, prophylactic treatment may be considered in addition to withdrawal.
- The choice of prophylactic treatment will depend on the underlying primary headache disorder.

**Review in 4–8 weeks,** at the start of withdrawal of the overused medication to:

- Review the diagnosis of MOH
- Assess the need for further management of an underlying primary headache disorder

## 4 Migraine

**Key Messages:**

- Migraines are often straightforward to diagnose and can usually be managed in primary care. They do not require neuroimaging.
- The characteristic presentation includes headaches lasting for 4 to 72 hours, with moderate to severe intensity of pain (usually throbbing/pulsing) aggravated by physical activity. Nausea, vomiting, photophobia and phonophobia are commonly associated.
- Patients who consult with episodic headaches that significantly interfere with normal function almost always have a migraine.

**Diagnosis: IHS criteria (*Headache Classification Committee of the IHS. Cephalalgia 1988;7 (Suppl***

- Five or more lifetime headache
- Attacks last 4-72 hours each if untreated or unsuccessfully treated
- At least two of the following characteristics:
  - Moderate-severe pain
  - *Unilateral
  - Throbbing/pulsating
  - Exacerbated by routine activities
- One or more of the following non-headache features:
  - Nausea/Vomiting
  - Photophobia/Phonophobia
- Exclusion of secondary headaches

**In 50% of cases the headache will be generalised*

***7):19-28)***

**Migraine with aura:**

Greater than 25% of migraineurs experience auras (for at least some of their attacks). Rarely, patients experience auras without accompanying headache, which can lead to diagnostic confusion (including misdiagnoses of TIA). The history is therefore key to assessing migrainous auras.

Auras can last from 5 to 60 minutes and are fully reversible.

Typical auras include:

- Visual symptoms (usually of a fortification spectrum – a spreading jagged crescentic pattern), most often in one eye;
- Unilateral sensory disturbance (can involve the face, including the lips/mouth spreading to the arm and/or leg);
- Unilateral weakness;
- Dysphasia;
- Vertigo (more typically imbalance/rocking rather than rotatory movement.

The balance between "positive" and "negative" symptoms is not always helpful in distinguishing aura from TIA.

**Prolonged or atypical auras are an indication for a specialist opinion / brain imaging**

**Trigger factors:**

- Triggers for migraines are relatively rare and are often difficult to avoid.
- Stress and anxiety can amplify symptomatology or change pre-existing headache patterns. Stress management techniques may therefore be beneficial. Also consider underlying depression as a possible trigger and/or exacerbating factor.

**Internal triggers include:**

- Menstrual cycle in women (see below for further information)
- Menopause
- Altered sleep patterns
- Stress
- Relaxation after stress, so-called 'weekend migraine'

**External triggers include:**

- Specific foods — these should only be suspected as a trigger when migraine occurs within 6 hours of intake, and this effect is reasonably reproducible. Once a food has been identified as a trigger, a trial of avoidance can be undertaken to see if the migraine improves. Chocolate, cheese, caffeine, and alcohol have been reported as precipitants.
- Strong smells
- Bright light
- Dehydration and missed meals
- Jet lag
- Strenuous exercise is thought to trigger migraine in those unaccustomed to it; however, regular exercise may help to prevent migraine.

**Migraine: Acute Treatment**

**Key Messages:**

Treatment should be selected according to:

- Severity and frequency of attacks
- Symptoms
- Age
- Patient's medical history and history of treatment

The medication overuse headache should be discussed with the patient and **opioid analgesics should NOT be routinely used**, due to this potential issue.

Do not routinely recommend OTC products containing CODEINE, e.g., Migraleve® preparations (typically containing paracetamol 500 mg and codeine phosphate 8 mg) or Caffeine, e.g., Anadin Extra® (typically containing Aspirin 300 mg, Paracetamol 200 mg and Caffeine 45 mg).

Patient information is available from:

- NHS A-Z (Migraine): https://www.nhs.uk/conditions/migraine/
- The Migraine Trust: https://www.migrainetrust.org/

**First Line Acute Treatment: Simple Analgesia (including NSAIDs)**

Consider patient preference, co-morbidities and risk of adverse event prior to choosing treatment: https://www.nice.org.uk/guidance/cg150

| Drug | Dose |
|---|---|
| **Aspirin** | 600 mg to 900 mg every 4 hours, no more than four doses in 24 hours |
| **Ibuprofen** | 400 mg to 600 mg every 4 hours, no more than four doses in 24 hours |
| **Paracetamol** | 1 g every 4–6 hours, no more than four doses in 24 hours (less effective than for migraine than NSAIDs; only recommend when NSAIDs are contraindicated) |
| **Naproxen** | 500mg maximum of 1000mg in 24 hours |

**Anti-emetic drugs:**

Anti-emetics have an independent action on migraine, so should be considered even if nausea/ vomiting are not present. Choices include:

| Drug | Dose | Caution |
|---|---|---|
| **Metoclopramide** | 10 mg, up to three doses in 24 hours should be considered as rescue therapy | Patients requiring more than a few days treatment should be referred for a specialist opinion. Do not prescribe metoclopramide for longer than 5 days in adults (MHRA 2013). |
| **Prochlorperazine buccal tablets** | 3 mg to 6 mg, up to two doses in 24 hours | No prokinetic effect, i.e., not aiding the absorption of other drugs |
| **Domperidone** | 10mg up to three doses in 24 hours | Use the lowest effective dose for the shortest possible duration because of a small increase risk |

| | | |
|---|---|---|
| | | of serious cardiac side-effects. Contraindicated in conditions where cardiac conduction is, or could be, impaired or in people with cardiac disease (MHRA 2014) |

**Second Line Acute Treatment: Triptans**

Consider a Triptan if previous attacks have not been controlled using simple analgesics.

There is quite significant variation in effect both between patients and individual attacks. In general, they should not be used during the prodrome or aura in anticipation of the headache.

Triptans can be also be given with anti-emetics.

**Triptans:**

- Should be taken at or soon after the onset of headache phase of the migraine attack.
- Orodispersible / lyophilisate preparations {Maxalt® Melt wafers] have no definite advantages over tablets (triptans are not absorbed buccally).
- If first line triptan is not effective or not tolerated a different triptans should be tried
- **Triptan contraindications:**
    - Uncontrolled or severe hypertension
    - A high risk of cardiovascular disease
    - Coronary vasospasm (including Prinzmetal's angina)

| Triptan | Formulation | Comments |
|---|---|---|
| **Sumatriptan (First line treatment)** | **Tablets (50mg, 100mg)** | Greatest body of clinical evidence |
| | **Solution for injection (6mg/0.5mL)** | Administered by auto injector. Useful if the patient is vomiting. |
| | **Nasal spray (100 mg/1 mL)** | Useful if the patient is vomiting or if there is a need for a quicker response. *Sumatriptan nasal has a 5% nasal absorption and tastes bad for most. It is an expensive route of administration* |
| **Rizatriptan** | **Tablets 5mg and 10mg** | |
| | **Orodispersible tablets 10mg** | If an orodispersible is required, prescribe generically as 'rizatriptan orodipersible and **NOT** as Maxalt® Melt wafers |
| **Zolmitriptan** | **Zolmitriptan 2.5mg and 5mg tablets and Orodispersible tablets SF Zolmitriptan 5mg/0.1ml nasal spray unit dose** | Nasal zolmitriptan can be given to patients who present with early vomiting or who have severe migraine attacks. *Zolmitriptan is 30% nasally absorbed and better taste. It is useful for those who need a more rapid effect and/or vomit early or have pronounced gastric stasis* |
| **Naratriptan** | **2.5mg tablets** | Slower onset of action; longer half life. Perceived to be a gentler triptan |
| | | |

** NICE CKS recommends **Sumatriptan 50mg tablet to be used first** in most people requiring a triptan. Although there is no evidence that any triptan is safer than another, Sumatriptan is in the mid-range of tolerability compared with other triptans.*

If treatment with the initial choice of triptan (usually Sumatriptan) proves to be inadequate, assess compliance, and consider:

- **Increasing to a dose of Sumatriptan 100mg** (if not used already). If the patient responds to the first dose, but the symptoms recur a second dose may be given in the next 24 hours, provided there is a minimum interval of 2 hours between the two doses. No more than 300 mg should be taken in any 24-hour period.

- Using a more effective, potent oral triptan, such as **Rizatriptan** 10mg tablets daily. The total daily dose should not exceed 2 doses in 24 hours. Absorption of Rizatriptan is delayed by 1 hour when taken with food.
- If vomiting is problematic switch to a non-oral formulation, such as Zomig 5mg/0.1ml nasal spray for patients 18-65 years. Initially 10–20 mg, dose to be administered into one nostril, followed by 10–20 mg after at least 2 hours if required, to be taken only if headache recurs (patient not responding to an initial dose should not take a second dose for same attack).

Consider adding **Naproxen** 500mg (or **Paracetamol** 1g if NSAIDs contraindicated) in combination with a triptan, particularly for acute migraine with prolonged attacks.

**NOTE: Triptans or analgesics should NOT be used on more than 10 days per month or 2 days per week to avoid overuse headache.**

**Menstrual-related migraine:**

For women and girls with predictable menstrual-related migraine, NSAIDs, e.g., ibuprofen and Naproxen 500mg BD, given regularly from 2-3 days before predicted onset of menstruation, until 2-3 days after the first bleeding should be trialled.

Frovatriptan is recommended in menstrual migraine prophylaxis at a dose of 2.5 mg twice daily, to be taken from 2 days before until 3 days after bleeding starts.

If this does not adequately control headaches, try **sumatriptan 50mg/100mg per day starting** two days before predicted onset of menstruation and continue for six days.

**Combined hormonal contraceptive use by women and girls with migraine:**

Do not routinely offer combined hormonal contraceptives (CHP) for contraception to women and girls who have **migraine with aura**. (**Migraine with aura** is an independent risk factor for stroke).

**Migraine during pregnancy**

Migraine usually improves during pregnancy, reducing the need for treatment.

| Treatment Options | Advice |
|---|---|
| Paracetamol | Safe throughout pregnancy |
| NSAIDs | Safe except in the third trimester |
| Triptans | Although there is no evidence that triptans are unsafe in pregnancy, this is |

| | |
|---|---|
| | an unlicensed indication and are not recommended as routine. |
| Antiemetic's | Metoclopramide or domperidone are unlikely to cause harm throughout pregnancy and lactation. |
| Prophylactic treatment | Seek specialist advice if migraine prophylaxis is needed during pregnancy. Consider referral for alternative interventions, such as greater occipital nerve block or transcranial magnetic stimulation. |

**Migraine: Prevention**

**Key Messages:**

1. Starting or increasing preventative treatment for migraine should be considered for patients who:
   - Are taking analgesics for 2 days each week OR experience debilitating migraines (lasting 1-3 days) twice a month OR one migraine attack per week.
   - Experience prolonged, e.g., >48 hours, attacks or severe attacks leading to substantial disability
   - Experience migraines refractory to abortive treatment measures
   - Cannot take suitable acute treatment for migraine attacks due to contraindications or intolerance.

Please note: This is not an exhaustive list pf presentations and patient experience should be considered with regards to migraine prophylaxis.

2. Appropriately taken preventative treatments which are likely to be effective in reducing frequency/intensity of migraine, but often do not abort all migraine attacks completely.

3. Some patients may wish to try **Riboflavin** 400mg or **Magnesium** 200-600mg or **Coenzyme Q10** per day alone or in combination before being prescribed preventative medication. **DO NOT PRESCRIBE – to be purchased OTC.**

4. Failure of preventative therapy is most commonly the result of:
   a. Non-adherence or patients stop taking the medicine due to side effects
   b. Drug intolerance (particularly if sedation is experienced)
   c. Insufficient dose administration
   d. Inappropriately short duration of therapy (most preventatives take weeks or month to start taking a useful effect)
   e. Inappropriate re-introduction of abortive agents and/or caffeine use

Patients should be given as much support and information to have, as a successful drug trial as possible; this is important in the assessment of having failed THREE different prophylactic drug responses before consideration/referral for specialist treatments including, Botulinum Toxin A injection therapy and calcitonin gene-related peptide (CGRP) receptor inhibitors (fremanezumab, galcanezumab or erenumab).

**Most preventatives are started at a low dose and titrated up to effective doses and continue for at least TWO months (often longer) before considering the drug has failed.** Side-effects may intervene

and disrupt the titration in which case an alternative would be needed (determined by the clinical state). It may be possible to down titrate and even stop prevention after a period of better control. Long-term maintenance is required in some. This may be at the initially effective dose or sometimes a lower dose is sufficient.

5. **In the presence of analgesic overuse, prophylactic agents are thought to be less likely to be effective.**

**A. Propranolol 80 Modified-release capsules**

| | |
|---|---|
| **Starting Dose** | 80–240 mg daily |
| **Titration Dose** | Titrate using a TWO or THREE times a day regimen |
| **Max. Dose** | 240mg daily |

Propranolol is suitable for people with coexisting hypertension or anxiety.

**Contraindications** in people with asthma, chronic obstructive pulmonary disease, peripheral vascular disease, or uncontrolled heart failure.

**Side-effects** include bradycardia (commonly), hypotension. If the patient experiences fatigue, nightmares or worsening asthma, medication discontinuation is normally required.

Other beta blockers can be tried (**Metoprolol**, **Nadolol**, **Timolol**). **Atenolol** does not cross the blood brain barrier and is therefore probably ineffective.

**B. Amitriptyline**

Before prescribing Amitriptyline, explain to the person that the drug is being prescribed to reduce attacks of migraine, and not for depression.

| | |
|---|---|
| **Starting Dose** | 10mg OD |
| **Titration Dose** | Increase by 10mg every week to 30mg. |
| **Max. Dose** | If needed, the dose can be increased to 50mg ON and then 75mg ON according to patient's response. |

Advise patients to take it 1–2 hours before bedtime (it has a sedative effect).

**Avoid** in people who have had a recent myocardial infarction or who have arrhythmia.

**C. Topiramate:**

Titration should begin at 25 mg nightly for 2 weeks. The dosage should then be increased in increments of 25mg/day administered at 2-week intervals. The recommended total daily dose of topiramate for prophylaxis of migraine headache is 100mg/day administered in two divided doses.

- If the patient is unable to tolerate the titration regimen, longer intervals between dose adjustments can be used.

**Titration schedule (Topiramate 25mg Tablets – Do NOT prescribe capsules)**

| | Morning | Evening |
|---|---|---|
| Week 1 & 2 | - | 25mg |
| Week 3 & 4 | 25mg | 25mg |
| Week 5 & 6 | 25mg | 50mg |
| Week 7 & 8 | 50mg | 50mg |

- Some patients may experience a benefit at a total daily dose of 50 mg/day. Patients have received a total daily dose up to 200 mg/day. This dose may be beneficial in some patients. Monitor for side-effects at all doses.

**Comments:**

- **Advise women and girls of childbearing potential that Topiramate is associated with a risk of fetal malformations and can impair the effectiveness of hormonal contraceptives. Ensure they are offered suitable contraception if needed. [NICE 2015]**
- Greater than 200mg of Topiramate a day can cause reduced efficacy of the Oral Contraceptive Pill.
- Hand and foot paraesthesia is common, but typically not particularly troublesome and often resolves with time.
- Mood disturbance (irritability, depression, aggression) can prove limiting.
- Taste alteration, appetite reduction and/or weight loss can all be seen at higher doses.
- 20% of patients experience significant cognitive slowing and/or speech difficulties, which should prompt discontinuation.
- Adequate hydration is recommended to reduce increased risk of renal tract stones.
- Topiramate lowers serum bicarbonate levels, with the potential to cause metabolic acidosis.
- The other main side effects that prescribers should also be aware of are glaucoma and aplastic anaemia.

**D. Candesartan**

| | |
|---|---|
| **Starting Dose** | 4mg OD |
| **Titration Dose** | Increase every TWO to FOUR weeks in steps of 4mg, aiming for a therapeutic dose |
| **Therapeutic Dose** | 16mg OD |

* In cases of partial response, increases of up to 32 mg daily can be safely used.

Check U&Es prior to treatment and after 2 weeks.

**Side effects** are usually minor, but can cause hypotension and consequent postural light headedness.

**E. <u>Pizotifen</u>**

Start **Pizotifen** at 0.5mg at night and increase every 2 to 4 weeks in steps of 0.5mg, aiming for a therapeutic dose of up to 1.5 mg daily.

Side effects of weight gain via increased appetite and lethargy mean that it is no longer a popular drug in adult practice although it is sometimes used in those under 16 for migraine and migraine equivalents (abdominal pain syndrome etc)

Pizotifen is a migraine specific preventative and can be one of the failed drugs when applying the NICE starting rules for Botox and MABs.

**Cluster Headache: Introduction**

**Key Messages:**

- This is the most common trigeminal autonomic cephalalgia (TAC), with a prevalence of 1 in 1,000.
- They are characterised by attacks of severe unilateral pain in a trigeminal nerve distribution and is associated with prominent **agitation** and **ipsilateral cranial autonomic features**, e.g., red, watering eyes with nose running/blocking on that side and sometimes partial ptosis and pupil change.
- Diagnosis is not always clear as features may overlap with migraines and migraine is much more prevalent. Cluster headaches (CHs) are often at night and typically shorter in duration (30 to 60 minutes – although some can last up to 2 hours).
- Daily frequency can range from every other day to 8 per day. Patients are typically restless during the headache (unlike migraines where patients usually rest/lie down).
- **If cluster headaches are suspected, refer for a specialist opinion.**
- Do **NOT** offer paracetamol, aspirin, nonsteroidal anti-inflammatory drugs (NSAIDs), ergot, or *oral* triptans for the acute treatment of cluster headache.
- ***Parenteral* triptans and / or oxygen must be offered as an acute treatment**
- Alcohol or inhaling volatile fumes [if relevant] from substances such as solvents or oil based products, may trigger an attack during an active period of cluster headaches.

**Acute treatment: cluster headaches**

**A. Subcutaneous or nasal route of administration**

| Drug | Formulation | Dose |
|---|---|---|
| **Sumatriptan** | **Solution for injection (6mg/0.5mL)** for **subcutaneous** administration | 6mg injection is the most rapid and effective treatment for a cluster attack. This can be given once at the onset of pain and repeated with further bouts. |
| Zolmitriptan | 5mg/0.1ml nasal spray unit dose | 5 mg, dose to be administered as soon as possible after onset into one nostril only, followed by 5 mg after at least 2 hours if required, dose to be administered only if migraine recurs; maximum 10 mg per day. |

**B. Oxygen**

- Ensure diagnosis has been confirmed by a specialist before arranging provision of home oxygen therapy.
- Oxygen should be offered to cluster headache patients to try as soon as the diagnosis has been made.

- This should be a flow rate of 12-15l/min for ONE hour per day. The equipment should be one static cylinder and a non-rebreathe high concentration mask with reservoir.
- The GP should prescribe oxygen via https://www.airliquidehealthcare.co.uk/home-oxygen-service-healthcare-professionals/ordering-home-oxygen
- In addition to the HOOF form, the person starting the oxygen needs to complete a safety assessment and ensure the patient consents to share their details with a third party.
- Once the HOOF form, safety assessment and patient consent are in place, this will enable the patient to be provided with a basic oxygen supply.
- Those who find it helpful can continue to use it, and **those who do not can stop using it and have it removed.**
- If the oxygen is to stay in place, refer to the local specialist home oxygen assessment and review (HOSAR) team, who can then liaise with the patient if anything additional is required.
- Responsible Oxygen Prescribing Messages are available here

**Key documents from the London Clinical Oxygen Network are available below and include:**

- Click here: Oxygen treatment for cluster headache (adults): for GPs and neurologists
- Click here: Oxygen treatment for cluster headache (adults): for patients
- Click here: Oxygen treatment for cluster headache (adults): example HOOFs

**Advice and review**

- For queries regarding cluster headache patients receiving oxygen therapy, including frequent use of higher oxygen levels, seek specialist advice.

**Prophylactic Treatment: Cluster Headaches**

**A. Prednisolone**

- 30 – 60mg a day to be taken at the start of the episode. This can be stopped after 7 days.
- A reducing schedule is not required for lower doses, but for people on higher doses, consider reducing in steps of 10mg every three days.
- Relapse is common after dose cessation and so **consider starting Verapamil in parallel**.

**B. Verapamil**

- Prophylactic treatment with Verapamil (standard release) may be given intermittently or continuously depending on the frequency and duration of cluster headache periods.

| | |
|---|---|
| **Starting Dose** | 80mg TDS |
| **Titration Dose*** | Gradually increased in 80mg steps up to 960mg daily (in THREE divided doses), based on response and advice of a specialist in patients having their first attack. |

*** If the person is not already known to have cluster headaches refer to a specialist for a review of the diagnosis. Patient should be stable before treatment regimen is taken over by primary care clinician.**

**ECG monitoring:**

- Verapamil can cause palpitations and cardiac arrhythmias in some people, particularly at higher doses (480mg/day or more).
- 12-lead ECGs are recommended in people who have not been prescribed Verapamil previously or who have had cardiac issues during previous use; the frequency of performing 12-lead ECGs will be advised by a headache specialist.

**We recommend an ECG prior to starting Verapamil whenever possible, or soon after starting if is not to avoid delaying initiating treatment. Enclose a copy of the ECG when referring to a specialist clinic for suspected cluster headache.**

Once it is ascertained that a Verapamil dose does not cause cardiac arrhythmias in an individual, it is unlikely this will occur in ongoing use (chronic cluster) or for subsequent pulsed treatment (next episode of episodic cluster); however, if palpitations occur a 12-lead ECG should be performed.

**Cautions and contraindications:**

Verapamil is contraindicated in people with:

- Heart failure
- Severe bradycardia
- Second- or third-degree heart block (in the absence of a permanent pacemaker)
- Sick sinus syndrome
- Cardiac outflow obstruction (significant aortic stenosis or obstructive hypertrophic cardiomyopathy): vasodilatation may result in reduced cardiac output.

**Adverse effects:**

- Verapamil is usually well tolerated. Commonly, it can cause constipation (which can be severe) and flushing.
- Gingival hyperplasia may occur; if gum bleeding occurs, refer for dental review.

## Tension Type Headache (TTH)

The characteristics of a tension headache are:

- Bilateral
- Pressure or “tight band”
- Mild to moderate in intensity
- No nausea
- Not aggravated by physical activity

**1. Episodic tension type headache:**

- Episodic tension type headache is TTH that occurs in less than 15 days a month.
- Reassurance and symptomatic treatment are usually sufficient.
- Try regular exercise, relaxation therapy, yoga, medication, acupuncture, physiotherapy.
- **Treat acute TTH** with paracetamol, aspirin, or NSAIDs (e.g., ibuprofen or naproxen)
    - Aspirin should not be used in people aged less than 16 years old (because of an association with Reye's syndrome).
    - Titrate the dose of treatment to effect on the headache.
    - Advise people that the overuse of painkillers (prescribed or OTC) can lead to medication overuse headache.
- **Do NOT treat acute TTH with opioids or triptans.**
- Consider preventative treatment for people with frequent episodic TTH (requiring analgesia on 2 days or more each week).

**2. Tension Type Headache**

- NSAIDs is recommended for the infrequent treatment of tension-type headache.
- **Codeine and other opioids are NOT recommended**

**Prophylaxis for Chronic / Frequent TTH:**

**1st Line: Amitriptyline**

| | |
|---|---|
| **Starting Dose** | 10mg OD |
| **Titration Dose** | Increase by 10mg every week |
| **Max. Dose** | 75mg ON, depending on the patient's response, or the maximum tolerated dose, and review |

For people who respond well to treatment, maintain the person on the upper dose for 2 months, and then decrease the dose by 10 mg to 25 mg each week.

**2nd Line: Imipramine**

| | |
|---|---|
| **Starting Dose** | 10mg ON |
| **Titration Dose** | Increase by 10mg every week |
| **Max. Dose** | 75mg ON, depending on the patient's response, or the maximum tolerated dose, and review |

Refer for a specialist opinion, if there is a poor response to treatment or if the patient is too sedated with imipramine or is failing to respond to tricyclics, after adherence check, or diagnostic uncertainty.

**Other Considerations:**

Some patients will present with conditions that come under the term of trigeminal neuropathic pains. The most common of which is trigeminal neuralgia, which is a sharp paroxysmal type stabbing pain which affects one or more of the distributions of the trigeminal nerve. The other diagnoses include burning mouth syndrome, which is classically a burning, scalded, sore or altered taste affecting the lining of the mouth, which is usually persistent, present on a daily basis and can get worse as the day progresses.

These are chronic conditions that often require secondary care management and a referral to local oral maxillofacial service, oral medicine clinic or facial pain service is recommended.

**Appendices - for information**

**Migraine Specialist Treatments**

As per clinical pathway: **Use of botulinum toxin type A and calcitonin gene-related peptide inhibitors for preventing migraine**

- Botulinum toxin type A (Botox®): NICE TA260
- Fremanezumab (Ajovy®): NICE TA631
- Galcanezumab (Emgality®): NICETA659
- Erenumab (Aimovig®): NICE TA682 Published: 10 March 2021

- Occipital Nerve Block: This involves an injection of local anaesthetic (often in combination with steroids) at the base of the skull, in the region of the origin of the greater occipital nerve. It can be used for the treatment of chronic migraines, cluster headaches or potentially as a bridging therapy in patients with analgesic overuse headaches attempting medication withdrawal.
- Neuromodulation devices: These include a variety of non-invasive devices, including superior orbital (trigeminal) nerve stimulation, vagal nerve stimulation and transcranialstimulation.

**Cluster: Specialist Treatments**

- Occipital Nerve Block: This involves an injection of local anaesthetic (often in combination with steroids) at the base of the skull, in the region of the origin of the greater occipital nerve. It can be used for the treatment of chronic migraines, cluster headaches or potentially as a bridging therapy in patients with analgesic overuse headaches attempting medication withdrawal.
- Neuromodulation devices: vagal nerve stimulation.
- Some clinic may initiate Topiramate and/or Gabapentin as second line options.
- Kudzo, Testosterone and melatonin have been investigated, but are not commonly used.
- Sphenopalatine blockade and stimulation as well as Occipital Nerve stimulation are being evaluated.
- Specialist Clinics may suggest options outside this guidance as evidence becomesavailable.

**Resources**

1. British Association for The Study of Headache (2010) Guidelines for all Health Professionals in the diagnosis and management of migraine, tension-type headache, cluster headache and medication-overuse headache. 3rd Edition
2. British National Formulary 2017. Available at: https://www.medicinescomplete.com/mc
3. SIGN guidance (107 Diagnosis and management of headache in adults November 2008) Available at: http://www.sign.ac.uk/guidelines/fulltext/107/
4. Summary of Product Characteristics 2017. Available at: https://www.medicines.org.uk/emc/
5. Dudley Clinical Commissioning Group. 2016. Available at: www.dudleyformulary.nhs.uk/download/16/headache-migraine-guideline
6. NICECG150 (2012). Headaches in over 12s: diagnosis and management including November 2015 updated recommendations on the prophylactic treatment of migraine. Available at: https://www.nice.org.uk/guidance/cg150
7. NICE Clinical Knowledge Summaries. Available at: https://cks.nice.org.uk
8. London Clinical Oxygen Network Information for GPs and Neurologists Available at: https://www.networks.nhs.uk/nhs-networks/london-lungs
9. London Clinical Oxygen Network Information for Patients Available at: Oxygen treatment for cluster headache (adults): for patients
10. London Neurosciences Strategic Clinical Network: Problem-specific video guides to diagnosing patients and helping them with management and prevention. Available at: http://www.londonscn.nhs.uk/wp-content/uploads/2015/03/neuro-adult-with-headache-edu-videos-032016.pdf
11. Commissioning for value. NHS RightCare. Available at: https://www.england.nhs.uk/resources/resources-for-ccgs/comm-for-value/
12. Guidelines in practice Available at: https://www.guidelinesinpractice.co.uk/pain/the-majority-of-patients-with-headache-can-be-managed-in-primary-care/306786.article

**Confidentiality Statement**