Migraine affects approximately 12-15% of the population of Ireland, i.e. approximately 500,000 people. It is a neurological condition characterised by a severe throbbing, one-sided headache and is often accompanied by aura (visual or other motor distortions), nausea, vomiting, intolerance to noise and light and in rare cases, paralysis and loss of consciousness. The condition is genetically inherited in up to 60% of cases and is 3 times more common in women. Attacks can last from 4 to 72 hours. Although there is no ‘cure’ for migraine, it can be effectively managed by using conventional and/or complementary treatments in conjunction with what you can do for yourself.

Migraine Medications
Migraine is a primary disorder – there is no known underlying cause. As a result, drug treatments for migraine may be acute (symptomatic) or preventative (prophylactic). Patients with frequent severe headaches often require both approaches. Acute treatment attempts to relieve or stop the progression of an attack or to abort it once it has begun. Acute treatment is appropriate for most attacks but should be used a maximum of 2-3 days a week, unless under the supervision or direction of a doctor. Preventative treatment is used in an attempt to reduce the frequency and severity of anticipated attacks. However, it is important to realise that these medications will not prevent attacks altogether and will not cure the underlying cause.

Acute Treatment:
Acute treatments are those used to treat an attack when it occurs. The choice of treatment will generally depend on the severity and frequency of the headaches, the impact that migraine has, associated symptoms, other illnesses that are present and the patient’s medical history. Acute treatment should be taken as early as possible in the headache phase of an attack to prevent its escalation and to increase the drugs’ effectiveness.

We have separated acute treatment into three distinct areas – Analgesics, Anti-Emetics and Triptans.
1. Analgesics

Analgesics are painkillers. They do not attack the cause of the pain but work by reducing the person’s perception of it, effectively numbing the pain-affected area. Analgesics are a favoured and effective treatment for many migraineurs.

**ASPIRIN** is the traditional first line painkiller for mild to moderate attacks. As well as reducing perception of pain, it also has anti-inflammatory effects, which affect some of the mechanisms which make a migraine painful. However, many people are sensitive to aspirin and it should not be used by children, pregnant women, people on blood thinning agents, or people with ulcers.

**PARACETAMOL** is the most used over the counter (OTC) analgesic and is favoured by those who cannot take aspirin. Unlike aspirin, it does not have an anti-inflammatory effect and is very dangerous in overdose. It is more suitable for children and has fewer side-effects than aspirin.

**NON STEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDs)** are used generally for more severe pain. Like aspirin, they have the added advantage of attacking inflammation. They should not be combined with aspirin or taken shortly before/after consuming alcohol. Ibuprofen is an NSAID available over-the-counter (OTC), while other NSAIDs such as Naproxen are available on prescription only.

**COMBINATION ANALGESICS** are so termed because they are used in tandem with another analgesic to be more effective in attacking pain. Codeine and caffeine are the most common combination painkillers. Codeine is a mild opiate useful when combined with paracetamol or aspirin to relieve severe attacks. Caffeine is also included in some combination preparations as it can help relieve migraine if used in small doses. However, excessive use of either of these drugs can lead to dependency or medication overuse headache (see page 10) and excessive caffeine can also be a migraine trigger for some people.

Comparatively speaking, analgesics work more effectively for mild to moderate, infrequent attacks. However, they must be taken as early as possible (during the prodrome or the aura phase for example) to achieve best results. If nausea is one of your migraine symptoms, the soluble forms of the above medications may be the best for you.

Despite often being termed ‘simple’ analgesics, OTCs can still be dangerous if taken incorrectly. Please also note that if the migraine does not respond to the stated dose of the analgesic, taking extra doses will not help and can in fact lead to medication overuse headache through misuse as well as stomach irritation.

An acute treatment cocktail is now favoured as best practice, e.g. Paracetamol – NSAID – Triptan – Anti Emetic

2. Anti-Emetics

The main purpose of anti-emetics is to combat nausea and sickness. They have no direct impact on migraine, but they can be used in two particular circumstances:

a. If nausea is a major part of your attack. This is a symptom in the vast majority of migraine attacks, and like the headache symptom, it too should be treated. Suppositories are a good option for anyone who experiences severe nausea or vomiting.

b. Anti-Emetics also aid the absorption of other medications into the system. During a migraine attack, absorption is slowed dramatically and this reduces the impact that analgesics can have. Taking a mild anti-emetic about 15 minutes before an analgesic will increase the chances that the analgesic will be effective.

Metoclopramide (Prescription) and Domperidone (OTC) are two common anti-emetics. Some tablets contain a combination of painkiller and anti-emetic medication e.g. Migraleve (OTC) and Paramax (Prescription). Although these are very effective medications for many people, others prefer to take their constituent elements separately.
3. Triptans

Triptans (or 5-HT agonists) are the migraine specific, prescription-only drugs that became available in the 1990s. A major breakthrough in migraine treatment, these medications target specific groups of serotonin receptors in the brain that are known to be closely involved in migraine attacks.

There are six Triptan drugs available in Ireland at the time of publication. These are Almogran (Almotriptan), Frovex (Frovatriptan), Imigran (Sumatriptan), Zomig (Zolmitriptan), Naramerg (Naratriptan) and Relpax (Eletriptan).

The main advantages of these medications are that they are fast acting, can be effective even if taken up to two hours into an attack and are beneficial in up to 80% of cases. In addition to tablets, other formulations are also available, depending on the triptan. Orally disintegrating tablets (dissolves on the tongue) and nasal sprays are often faster acting and preferable for those who suffer from nausea. Anti-emetics do not need to be taken with Triptans.

While all of the Triptans have proven to be effective, there are some differences in typical side effects, speed of action and headache recurrence rate. Analysis of the drugs has concluded that due to biochemical individuality, an individual’s response to a Triptan cannot be predicted. If one Triptan fails, another within the class may well succeed.

Triptans should be taken as early as possible in the headache phase of an attack. If you have migraine with aura, you should not expect the Triptan to affect the aura symptom. The Triptans only act on the headache part of the migraine.

Triptans are not prescribed for children, pregnant women, people over the age of 65 or those with conditions such as high blood pressure. Medication overuse headache is also possible through misuse. One of the problems associated with Triptan usage is the relatively high headache recurrence rate of up to 40%, although you can take analgesics, such as paracetamol or aspirin, (see Page 4) in addition to the Triptan to combat this.

Preventative Treatments

The goal of Preventative (prophylactic) treatments is to reduce the frequency of your migraine attacks. They are usually prescribed in one of five circumstances:

1. If you suffer from more than two or three attacks per month which you treat with acute remedies.
2. If your attacks are particularly severe or disabling and do not respond well to acute treatments.
3. To break the cycle of attacks, enabling you to treat your attacks at a later stage with acute treatments.
4. If your attacks follow a regular pattern (e.g. around the time of menstruation).
5. If you suffer from rare forms of migraine such as basilar (additional symptoms include loss of balance) or hemiplegic migraine (additional symptoms include partial paralysis on one side).

Preventatives are taken daily for a period of 9 – 18 months, starting at a low dose and slowly building up every four weeks. While they rarely prevent attacks altogether, their success rate of about 50-60% means that it is likely you will experience at least some benefit. Preventatives will not be beneficial in treating an attack once it has started. Acute treatment (pages 3-6) is then necessary.
One of the biggest problems in relation to preventative treatment is that people often take it incorrectly, either by missing days or by not taking the treatment for a long enough period of time. Three month treatments are often required before a proper analysis of the benefits of a preventative therapy can be assessed. For this reason, it is important to complete the course of treatment prescribed and in the manner prescribed. However, if side effects are causing you problems, let your doctor know as he/she may change the medication or lower the dosage. If, after the course is completed, there is no tangible effect on your migraine, your doctor may increase the dosage.

Some preventatives work better on one person than another, so if one does not work well, it is worth trying another. There is a wide selection of drugs that may be prescribed by your GP as a preventative. The most common include:

1. **Beta Blockers**

Originally designed as a drug to combat angina and high blood pressure, beta-blockers are the most commonly prescribed anti-migraine preventative. They work by blocking the receptors that send messages to your brain regulating blood flow and dilation of blood vessels. Examples of beta-blockers used for migraine treatment are propranolol, metoprolol and atenolol.

2. **Anti-Convulsants**

Drugs such as Sodium Valproate (Epilim)* and Topiramate originally used to prevent seizures in epileptic patients are occasionally used in small doses to treat migraine if they have not responded to other treatments. Gabapentin is another epilepsy drug that is used to treat transformed migraine (where migraine attacks occur almost daily often accompanied by tension-type headache) and some chronic daily headache patients.

3. **Anti-Depressants**

Anti-Depressants affect the serotonin receptors in the central nervous system. In most cases, it is this, not their anti-depressive qualities that makes them a very effective migraine preventative. Many people are offended when prescribed an anti-depressant believing that their doctor misunderstands their condition, but just as beta blockers can be prescribed for you even though you do not have high blood pressure, anti-depressants may be prescribed in the same manner. Tricyclic Anti-depressants are the type usually used to treat migraine. The most common is Amitriptyline, which is prescribed in much lower doses than it would be for depression. The newer SSRI (selective serotonin reuptake inhibitor) anti-depressants are not usually prescribed for migraine because they can aggravate headaches in some people. However, if you suffer from both migraine and depression, you may be prescribed an SSRI (selective serotonin reuptake inhibitor).

4. **Calcium Channel Blockers**

Also known as calcium antagonists, one drug in this range – Flunarizine – is used as a migraine preventative. Originally developed to treat high blood pressure, calcium channel blockers are usually used as an alternative to beta-blockers in migraineurs who experience side effects from the latter. They work by preventing calcium from entering certain cells. Flunarizine may take up to three months to take effect.

5. **5-HT Antagonists**

5-HT Antagonists interfere with the action of serotonin, which is known to play a large part in migraine attacks. Pizotifen is a widely used drug, which has been shown to reduce headache frequency and severity in up to 50-70% of cases. The treatment can last for nine months to a year.

* The European Medicines Agency recently imposed tighter restrictions on the use of Sodium Valproate (Epilim) for female children, adolescents, women of childbearing age and pregnant women. Please consult your doctor if in any doubt – See www.migraine.ie for further information.
SOME TIPS ABOUT YOUR PRESCRIPTION MEDICATION:

- Complete the course of treatment prescribed and in the manner prescribed.
- Treat your attacks as early as possible in the headache phase of an attack.
- Always bring your medication with you wherever you go.
- Use your Migraine Diary to record the effectiveness of the medication.
- Do not overuse painkillers as this can lead to Medication Overuse Headache (see below).
- Report any side effects to your doctor immediately.

Medication Overuse Headache

Thousands of people suffer from headaches nearly every day, effecting their family lives, jobs and relationships. This is called chronic daily headache. Those affected often have a past history of migraine that becomes more frequent over time. When people with infrequent migraines begin to experience more frequent and severe headaches, they often unwittingly increase their use of acute pain medication in response. However, if taken too often, pain-relieving medication can itself lead to a type of chronic daily headache called medication overuse headache.

As the body gets accustomed to medication, it craves more. When the medication wears off, a headache is triggered, which causes the person pain and leads him/her to take more medication. This leads to a vicious cycle of taking medication to get rid of a headache that is itself caused by taking medication. The condition is sometimes called Analgesic Rebound Headache, as it is mostly associated with this form of medication. It has recently been shown that overusing triptans can also lead to Medication overuse headache (though not as regularly or severely).

Use of any treatment product for more than 4-6 days per month can result in medication overuse headache. The resulting headache is typically bilateral and diffused, with pain that worsens and eases. It may be associated with fatigue, nausea, vomiting, and restlessness. Unless the medication overuse headache is addressed and eliminated, migraine is unlikely to be adequately treated by any of the abortive or prophylactic medications.

Common Questions about Migraine Medication

What should I know about a medication I am prescribed?

If you are prescribed a medication to treat your migraine, you should be able to understand the basics of the drug, how to take it and what role it has in your overall strategy. There are certain questions that you might want to ask. The doctor will probably volunteer the majority of the information anyway, but do not be afraid to ask questions such as:

- What type of medication is it?
- How does the medication work?
- How long will it take to start showing results?
- What are the common side effects?
- Are there any risks to taking this drug?
- Should I let you know if any side effect starts to occur?
- Must I avoid other medication while on the one being prescribed?
- Am I being started on a lowest dose?
- What is the next step if this doesn’t work?
- What forms does this medicine come in?
- Is it safe to drive or work while taking this medication?
Is it safe to take more than one drug to combat a migraine attack?

In general, drugs can be taken together to fight an attack, but only as long as you carefully follow the guidelines set down by your doctor and the instructions on the pack. There are exceptions to this rule as some drugs may have contraindications so always consult your doctor on this issue.

For example, aspirin should never be taken simultaneously with ibuprofen or blood thinning agents such as warfarin. If your GP prescribes a drug for migraine, he or she will ensure that there are no interactions with other medications that you may be on. Check with your GP if it is okay to take OTC medications for migraine if you are on medication for other illnesses or conditions.

Why is my medication not working?

Migraine is very individual. While some people get relief with the first drug they try, it can take time to find something that works. On average, five treatments are tried before the most suitable medication is identified. There is a large range of alternatives available, so most people do find something sooner or later. Follow the guidelines outlined by your doctor to make sure that you are taking your medication properly before you report back its failure. Do not stop taking the medication if it is not working – talk to your doctor. See also our tips on page 10.

Can I use complementary treatments in conjunction with my medication?

Yes. However, if you are attending a complementary practitioner you should always inform your doctor. Complementary therapies such as biofeedback, physiotherapy and relaxation therapy are well respected within the medical profession as treatments for migraine. Individuals also report that treatments such as acupuncture, reiki, homeopathy and herbal remedies may be beneficial in augmenting a drug treatment strategy. Always check the credentials of complementary practitioners before undergoing treatment and approach the treatment with the same caution and judgement that you would with any drug treatment.

What drug-treatments are suitable for children?

Preventative measures such as rest, sleep, diet management (in some cases) and other non-drug treatments should be utilised to full capacity before drug treatments for children. Keeping a Migraine Diary is also a good management tool for children. If pharmacological intervention is required, then paracetamol at the recommended dose is a suitable choice, preferably in soluble form. Aspirin however is not suitable due to its association with Reyes Syndrome. Anti-Emetics such as domperidone may also be given to children if they feel nauseous, but make sure to consult with your doctor or pharmacist. Triptans are not approved for children. The most commonly used preventative drug for children is pizotifen.
What drugs can be taken during pregnancy?

Studies show that migraine improves during pregnancy in the majority of cases, particularly in the second and third trimesters. However, if attacks persist, all non-drug treatments should be exhausted before considering medication. The only drug considered safe throughout pregnancy and breastfeeding is paracetamol*. You should consult your doctor about this. Medication may be harmful to the developing foetus, especially in the first three months, so usage should be discontinued as soon as you discover that you are pregnant.

Sometimes, your doctor may prescribe drug therapy under strict supervision. However, if you are unhappy about being prescribed a drug while pregnant, let your doctor know.

* Though some drugs are described here as being safe, please remember that no drug can be considered completely without risk.

Frequent use of Analgesics (painkillers)/NSAIDs/Triptans in migraine - MOH

- Medication Overuse Headache (MOH).
- The most important issue is the number of days per month on which painkillers are taken (not the number of painkillers). Any painkiller or Triptan used too often may cause headaches to occur more frequently. For example:
  - Any painkiller (Paracetamol, Nurofen, Tramadol, Zydol, Difene) >4-6 days per month.
  - Any Triptan (Naratriptan, Zolmitriptan, Sumatriptan, Almotriptan, Frovatriptan, Eletriptan)>4-6 days per month.
  - Keep a daily diary listing all medication – very helpful for treatment.

Treatments

Preventative

When & how to use preventatives?

- Disabling headache >5-6 days/month.
- If patient overusing acute/abortive treatment (>5-6 days/month).
- Frequent mild/moderate headache.
- Start at lowest dose and titrate to maximum effective/tolerated dose.
- Increase dose every 4-8 weeks (or slower if side effects).
- Need to be on preventative at sufficient dose for minimum of six months.
- Choice of preventative depends on individual patient and co-morbidity.
### Painkillers
- Paracetamol
- Tramadol

### NSAIDs
- Naproxen
- Difene
- Ibuprofen

### Triptans
- Naratriptan
- Frovatriptan
- Sumatriptan
- Zolmitriptan
- Eletriptan
- Almotriptan

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**ACUTE**

**Maximum 4-5 days/month**

Four categories - Analgesics, NSAIDs, Triptans, Anti-emetics

Can use individually or in combination.

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**Amitriptyline**
- 10mg – 50mg
- Possible Side effects include: drowsiness, weight gain, blurred vision, nausea, constipation

**Topiramate**
- 25mg BD – 100mg BD
- Possible Side effects include: pins and needles, weight loss, memory impairment, visual disturbance and renal stones

**Flunarizine**
- 5mg – 15mg daily
- Possible Side effects include: sedation, weight gain, abdominal pain

**Half Inderal LA (Propranolol)**
- 80mg – 240mg daily
- Possible Side effects include: slow pulse rate, depression, dreams, sleep disturbances, fatigue

**Sanomigran (Pizotifen)**
- 0.5mg – 3mg daily
- Possible Side effects include: weight gain, drowsiness, sedation.
  Sanomigran is currently unavailable in Ireland and the UK but some generic Pizotifen may be sourced by pharmacies.
Can take one drug from each of the four categories for each attack
e.g. Paracetamol + Naproxen + Zomig + Motilium.
Establishing a good working relationship with your GP is a critical factor in treating your migraine.

There is no cure for migraine but it can be effectively managed.

There are two types of drug treatments. Acute treatments are designed to abort an attack. Preventative treatments aim to reduce the frequency of attacks.

Over-the-counter medications such as Aspirin and Paracetamol are commonly used as first-line treatments and are effective for many people.

Triptans, the migraine specific drugs developed in the 1990’s are available on prescription only and are effective for up to 80% of migraineurs.

Preventative treatments are taken daily for a period of 9-18 months. They include drugs such as beta-blockers, calcium channel blockers, tricyclic anti-depressants and anti-epilepsy drugs.

Medication overuse headache is a common headache disorder caused by overusing medication, normally though not exclusively painkillers. Not all medications will work for everyone. It may take a while to find one that works for you. The best migraine drug is the one that works for you!