Medicines to Prevent Migraine Attacks

Some medicines are used to prevent migraine attacks (episodes). They may not completely stop every migraine attack, but the number and severity of attacks are often reduced. You need to take the medicine every day.

Who should take a medicine to prevent migraine attacks?

There is no definite rule. For example, you may wish to consider this option if you have:

- More than two migraine attacks (episodes) per month that cause significant disruption to your life.
- Less frequent, but severe migraine attacks.
- The need to use a lot of painkillers or triptan medicines to treat migraine attacks.
- Painkillers or triptans for migraine attacks not working very well, or you being unable to take them because of side-effects or other problems.
- Migraine attacks, which are suspected of causing medication-induced headache - see below.

Before embarking on preventative treatment, it is probably best to keep a migraine diary for a few months to assess:

- How often and how bad your migraine attacks are.
- Your current use of medication to treat the migraine attacks.

This may help you to decide if preventative treatment is worth a try, and also to help assess if you may have medication-induced headache. See separate leaflet called Migraine - Triggers and Diary which includes a migraine diary that you may like to print out and use.

What is medication-induced headache?

Medication-induced headache (also known as medication-overuse headache) is caused by taking painkillers or triptan medicines too often for tension-type headaches or migraine attacks. It is a common cause of headaches that occur daily, or on most days. About 1 in 50 people develop this problem at some time in their lives. The following is a typical case:

You may have a bad spell of tension-type headaches or migraine attacks, perhaps during a time of stress. You take painkillers or a triptan more often than usual. You continue doing this for a while. Therefore your body becomes used to the painkillers or triptan. A rebound or withdrawal headache then develops if you do not take a painkiller or triptan within a day or so of the last dose. You think this is just another tension-type headache or migraine attack, and so you take a further dose of painkiller or triptan. When the effect of each dose wears off, a further withdrawal headache develops, and so on. A vicious circle develops. In time, you may have headaches on most days, or on every day, and you end up taking painkillers or a triptan every day, or on most days.

So, some people who may think they are having frequent migraine attacks are in fact having medication-induced headache. If you use painkillers or a triptan medicine on more than two days per week on a regular basis, you are at risk of developing medication-induced headache.

You should talk to your doctor if you suspect that you may have medication-induced headache. It is essential to rule this out before preventative treatment for migraine is started. There is a separate leaflet called Medication-induced Headache which has further details.

Which medicines are used to prevent migraine attacks?

Beta-blockers

Beta-blockers include propranolol, atenolol, metoprolol, timolol and nadolol. They are commonly used to treat conditions such as angina and high blood pressure. It was first noticed by chance that some people who were treated for angina, who also had migraine, found their migraine attacks (episodes) lessened when on propranolol. It is not clear how they work to prevent migraine. However, beta-blockers are now a common treatment for migraine - most commonly, propranolol. A low dose may work, but the dose can be increased if necessary. Some people cannot take beta-blockers - for example, some people with asthma or peripheral arterial disease.

Anticonvulsants

Medicines called sodium valproate and topiramate are sometimes used. These are classed as anticonvulsants, and are usually used to prevent seizures of epilepsy. However, it was found that they can also prevent migraine attacks.

Amitriptyline

Amitriptyline is classed as a tricyclic antidepressant. However, it has an anti-migraine action separate to its antidepressant effect. It is not clear how it works for migraine. A low dose is started at first, and can be increased if necessary. Some people cannot take amitriptyline - for example, people who have had a heart attack (myocardial infarction), or have ischaemic heart disease, arrhythmia, or epilepsy. **Note**: strictly speaking, amitriptyline is not licensed for preventing migraine. However, in practice, it is commonly used, and many doctors are happy to prescribe it for this purpose.

Flunarizine

This medicine is classed as a calcium-channel blocker. It is used quite a lot in many countries as a medicine to prevent migraine. However, flunarizine is not marketed and is not licensed in the UK. Despite this, it is sometimes specially imported from abroad under the direction of a headache specialist when it is considered worthwhile to try.

Others

Various other medicines have been used for the prevention of migraine attacks. Most have limited evidence regarding their effectiveness or have potentially serious side-effects. However, if all else has failed, a specialist may suggest that you try out one of these. They include pizotifen, gabapentin, calcium-channel blockers, lisinopril, and selective serotonin reuptake inhibitors (SSRIs).

Some points about medicines to prevent migraine attacks

- You need to take the medicine every day.
- It is unlikely to stop migraine attacks (episodes) completely. However, the number and severity of attacks are often much reduced by a preventative medicine. It is useful for you to keep a migraine diary to monitor how well a medicine is working.
- It may take 1-3 months for maximum benefit. Therefore, if it does not seem to work at first, do persevere for a while before giving up.
- It is common practice to take one of these medicines for 4-6 months. After this, it is common to stop it to see if it is still needed. It can be restarted again if necessary.
- If a migraine attack occurs, you can still take painkillers or a triptan in addition to the preventative medicine.
- It is worth trying a different medicine if the first one you try does not help.
- Read the leaflet in the medicine packet for a list of cautions and possible side-effects.

Medicines plus behavioural therapy

An interesting research study published in 2010 compared two groups of people who had frequent migraines. One group took a beta-blocker medicine alone. Another group took a beta-blocker but also had a course of behavioural migraine management (BMM). BMM included education about migraine, helping to identify and manage migraine triggers, relaxation techniques and stress management. After a number of months the group of people who took the beta-blocker plus BMM had, on average, significantly fewer migraines compared with the group who took beta-blockers alone. Further research is needed to confirm this and to look at BMM combined with other medicines to prevent migraine.

Botulinum toxin (Botox®) injections to prevent migraine

In July 2010 the Medicines and Healthcare products Regulatory Agency (MHRA) licensed the use of botulinum toxin injections for the prevention of migraine. This decision was based on research studies that seemed to show it to be an effective treatment at reducing the number of migraine attacks (episodes).

Treatment consists of up to five courses of treatment with botulinum toxin injections every 12 weeks. The injections are given into muscles around the head and neck. It is not clear how this treatment may work for migraine. Botulinum toxin relaxes muscles but it may also have some sort of action to block pain signals. The theory is that these actions may have an effect of stopping a migraine headache from being triggered.

In 2012, guidelines were issued by the National Institute for Health and Care Excellence (NICE) on this treatment. NICE recommends botulinum toxin type A as a possible treatment for preventing headaches in some adults with persistent (chronic) migraine. The criteria set down by NICE for people who may be considered for this treatment are:

- If you have chronic migraine (that is, you have headaches on at least 15 days each month, with migraine on at least 8 of these days); and
- You have already tried at least three different medicine treatments to prevent your chronic migraine headaches, but these have not worked; and
- You are not taking too many painkillers or using them too often.

Also, treatment should be stopped if:

- The number of days you have a chronic migraine headache each month hasn't reduced by at least 30% after two courses of botulinum toxin type A treatment; or
- Your chronic migraine changes to episodic migraine (that is, you have fewer than 15 days with headaches each month) for three months in a row.

Note: botulinum toxin injections are also used for cosmetic purposes - for example, as a treatment to smooth out wrinkles. However, for the treatment of migraine the injections need to be in specific sites around the head and neck muscles. Therefore, to prevent migraine attacks, it should only be administered by people trained in its use for this purpose.

How to use the Yellow Card Scheme

If you think you have had a side-effect to one of your medicines you can report this on the Yellow Card Scheme. You can do this online at the following web address: www.mhra.gov.uk/yellowcard.

The Yellow Card Scheme is used to make pharmacists, doctors and nurses aware of any new side-effects that medicines may have caused. If you wish to report a side-effect, you will need to provide basic information about:

- The side-effect.
- The name of the medicine which you think caused it.
- Information about the person who had the side-effect.
- Your contact details as the reporter of the side-effect.

It is helpful if you have your medication - and/or the leaflet that came with it - with you while you fill out the report.

Further help & information

Migraine Action

4th Floor, 27 East Street, Leicester, LE1 6NB

Tel: 0116 275 8317 (10 am-4 pm weekdays)

Web: www.migraine.org.uk

National Migraine Centre

22 Charterhouse Square, London, EC1M 6DX

Tel: 020 7251 3322

Web: www.nationalmigrainecentre.org.uk

The Migraine Trust

52-53 Russell Square, London, WC1B 4HP

Tel: 020 7631 6975

Web: www.migrainetrust.org

Further reading & references

- Migraine; NICE CKS, August 2013 (UK access only)
- Botulinum toxin type A for the prevention of headaches in adults with chronic migraine ; NICE Technology Appraisals, June 2012
- Carod-Artal FJ; Tackling chronic migraine: current perspectives. J Pain Res. 2014 Apr 8;7:185-94. doi: 10.2147/JPR.S61819. eCollection 2014.
- Diagnosis and Management of Migraine, Tension-Type, Cluster and Medication-Overuse Headache; British Association for the Study of Headache (BASH) Guidelines, (2010 - reviewed 2014)

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