Medication overuse headache and undergoing a detox programme
What is medication overuse headache?
Medication taken to help relieve migraine attacks can actually make headaches worse, if they are taken too frequently (more than 2 to 3 times a week), resulting in what is called “medication overuse headache” (MOH). Some experts suggest that even smaller amounts of medication may help cause medication overuse headaches and medication taken on a regular basis may stop preventative drugs from working. Caffeine has also been implicated in MOH when used alongside painkillers or on its own.

Medication overuse headache previously termed “rebound headache,” “drug-induced headache,” and “medication-misuse headache” is a daily or often daily headache caused by excessive and inappropriate use of acute medication including triptans, non-steroidal anti-inflammatory drugs, codeine based drugs and simple analgesics, such as paracetamol. MOH should also be considered when drugs that were initially effective lose their benefit and become ineffective.

For many migraineurs the occurrence of these headaches can be confused with the onset of a migraine itself and for many people the desire to prevent a migraine attack leads them to use painkillers as prophylactics (preventatives) and they find themselves in a vicious circle; the more medication they take, the more headaches they get, leading to more medication being taken, which in turn causes more headaches.

The availability of strong over the counter painkillers, which are easily available from pharmacists, have been implicated in the increasing reports of medication overuse headache, which some now believe affects up to 4% of the adult population (both migraineurs and non-migraineurs) and also affects children. Research also shows that the condition is five times more common in women than in men and that it is most common in the 30 - 40 year old age group. For example, if a painkiller is used 2 or 3 times a week for hip pain, there is still an increased danger of developing medication overuse headache.
Chronic daily headache (CDH) is a headache which occurs on more than 15 days a month. It can often be associated with overusing medication, although it can also develop without MOH, resulting in 2 sub-types: CDH without medication overuse and CDH with medication overuse (MOH).

According to research 80% of individuals overuse medications \cite{2, 3, 4} and over half of all CDH cases seen in health clinics are associated with medication overuse. \cite{5}. A consequence of overusing medication is that a disabling chronic headache usually evolves from an episodic form - a migraine or tension type-headache or both. These migraine-type headaches are frequently experienced on a daily basis, with some days being more severe than others, leading to an alternative label of chronic daily headache. However, they may also be referred to as drug induced headaches, painkiller headaches or chronic migraines.

As a general rule, increasing the dosage of medication results in increasing headache symptoms and increasing resistance to preventative treatments, whereas discontinuing medication results in fewer headaches overtime. However, CDH may continue despite the patient discontinuing overused medication if it is the result, not the cause, of the headache or if there is another health condition present; for example, individuals with depression may overuse painkillers to treat their mood swings.

For further information about CDH, please visit migraine.org.uk/cdh or call us on 0116 275 8317 to request a information booklet.
**Which medications can cause MOH?**

Nearly all medication used to treat migraine symptoms have the potential to cause MOH; however, the drugs most often implicated are those which include more than one drug in combination, such as an opioid or caffeine (i.e. co-codamol). Over the counter painkillers also implicated include paracetamol, Syndol and Solpadeine. Other drugs that may cause MOH include non-steroidal anti-inflammatory drugs, such as ibuprofen and diclofenac, and nasal decongestants. Triptans have a lower probability of causing MOH but still represent one of the main causes of medication overuse seen in headache clinics. Dihydroergotamine is the most unlikely to cause MOH. [6., 7., 8.]

MOH as a result of ergotamine, triptans, opioids, and combination painkillers requires at least 10 days per month of use. This is not necessarily 10 days in a row, as might be seen when a woman requires 10 days of medication during a menstrual migraine; rather, it is the individual who takes these medications 2 to 3 days a week every week. All other medication require at least 15 days per month of use for the headache to be considered MOH. [9.]. Bunching up of treatment days with long periods of no medication intake is unlikely to cause MOH.

**What causes MOH?**

The causes of the headache are not fully understood. It is thought that the physiological processes which lead to the headache may vary according to the medicine being taken. However, many theories point to possibility that the constant absorption of medicines whatever their type, by the body, leads to the body altering its pain perception.

With MOH the receptors in the brain that usually feel pain get reset, so instead of them being ‘switched off’ by the painkiller they are actually kept ‘switched on’. They are particularly sensitive, taking them very little to produce a pain response. [10.]. The frequent use of painkillers and triptans seem to muddle things up, making the nerves irritable so that instead of pain being prevented, it is caused.

Psychologically of course it is easy to surmise that the onset of a vicious circle of headache or increasing analgesic use headache, leads to a spiral. Depression may also become a problem based partly on the constant pain and partly on guilt at placing heavy reliance on painkillers; it may even be a symptom of migraine in its own right.
When should medication overuse be considered as a potential cause of the pain?

There are varying definitions of medication overuse. These include:

- The intake of painkillers on at least 10 days each month in the case of triptans, ergot derivatives or opioids.
- The intake on at least 15 days per month of non-steroidal painkillers for three months in succession.
- The use of three or more analgesics (e.g. paracetamol) daily for more than 5 days per week.
- The use of combination painkillers (particularly those containing codeine, more than 3 times per week).
- The use of narcotics more than twice per week.
- The gaps between the more severe headaches fill in with milder headaches or pressure.

As a migraineur are there warning signs I should look for?

In addition to keeping a diary of your use of painkillers to see if they fit into the pattern described, other warning signs may include:

- An increase in the frequency of headache days.
- A progressive reduction in the effect of painkillers.
- An increasing need for painkillers.
- Lack of effectiveness of normal medicines.
- An increased difficulty in carrying out daily routines.
- A headache which is present on waking.
- Depression.
How is medication overuse headache diagnosed?
The International Headache Society has criteria for diagnosing analgesic-induced headache. These are:

**A:** Headache present on / up to 15 days a month with at least one of the following characteristics and fulfilling criteria C and D:
- Bilateral
- Pressing / tightening (non-pulsating) quality
- Mild or moderate intensity.

**B:** Use of simple analgesics on 15 or more days a month for more than three months.

**C:** Headache developing or worsening during analgesic overuse.

**D:** Headache resolves or reverts to previous pattern within two months after discontinuation of analgesics.

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How can MOH be treated?
The only way medication overuse headache can be managed is by **detox** - completely stopping all acute medication and products containing caffeine which has been long recognised as causing headaches, especially on withdrawal. There are two schools of thought; some advising stopping the drugs and caffeine abruptly, whilst others feel a more gradual reduction can be effective. Caffeine can be found in numerous products, such as tea, coffee, chocolate, fizzy drinks (i.e. energy drinks and cola), painkillers etc.

**How long is the detox period for?**
To help break the MOH cycle many healthcare professionals recommend undergoing detox for at least six to eight weeks. However, this depends on your specialist and how quickly your headaches improves. If your headache is slow to respond, prolonging the ‘washout period’ is probably the best way to go. Some people find that they notice a dramatic improvement in a week or two whereas others may need as long as ten or twelve weeks; everyone is different and there is no real way of predicting how quickly or slowly things will change.[9].

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### Caffeine content

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Preparing for detox
It is important that you choose a time to undergo detox that is best suited to you. To break the cycle of MOH successfully preparation is required - you may need to organise things, such as time off work, arrange school pick-ups and drop-offs, pre-cook family meals etc. as well as find coping strategies that will help you to deal with the head pain, without taking medication.

Detox and withdrawal symptoms
To treat MOH successfully it is optimal to enlist the help of a sympathetic GP or if you have a specialist headache team at your local hospital. You will also need the support from family and friends, work colleagues etc. as withdrawing from medication is not easy. Particularly with an abrupt withdrawal, the headaches for the first one to two weeks can be quite severe; however, this gradually calms down and many people start to experience less severe headaches, more headache free days and see some improvement in associated non-headache symptoms, such as dizziness, tiredness, irritability, diarrhoea and confusion.

If painkillers and / or caffeine are taken during this ‘washout period’ the headaches may not improve, however you have to find what works best for you. If withdrawing from painkillers containing codeine or caffeine, you may need to stop them gradually to prevent withdrawal symptoms, such as nausea, vomiting, sensitivity to light, irritability, mood swings and difficulty sleeping. Withdrawal symptoms experienced can vary from person to person and is dependent on the type of headache you used to get; if you used to suffer from migraine the rebound symptoms will be similar to those of migraine, if you used to get tension-type headache the symptoms will resemble those of tension-type headache (TTH).

Some neurologists or GPs may prescribe domperidone to help cope with the nausea and / or prescribe a preventative (i.e. a low dose of amitriptyline) to help take the edge of the pain. Various lifestyle measures have also been suggested to help cope with the ‘washout period’, such as:

- Getting plenty of fresh air and exercise.
- Drinking plenty of clear fluids (e.g. 3 litres of water a day).
- Avoiding missing meals, daytime sleep and / or early morning lie-ins.
- Maintaining a regular sleeping pattern.
Success of detox

After detox your daily headache (that was caused previously by overusing medication) should be replaced with a headache or migraine that occurs now and again - back to your usual episodic migraines. The oversensitivity in your brain tends to calm down and the medication normally used to deal with an attack tends to be more effective. Some individuals may still have severe headaches requiring preventative treatments; however, having cut out painkillers and caffeine, this makes the chances of preventative medication working more successfully.

If headaches continue after withdrawal of caffeine or painkillers, most neurologists will prescribe a preventative treatment, such as amitriptyline, propranolol or topiramate, that help to reduce the frequency of attacks. Preventative medication should be introduced slowly; starting with a low dose that is gradually increased to reach the maximum tolerated dose. The type of preventative medication given can be changed if there seems to be no effect after four months or if the patient has a poor tolerance to it. For more information on preventative medications, please visit www.migraine.org.uk/preventatives or call us on 0116 275 8317 and request an information booklet. Acute medications should only used for activities, such as weddings, holidays, funerals etc. when you need something a bit stronger, and they should be limited to 4 - 5 times a year and less than one a month. Frequent use of acute drugs can lead to ‘rebound’ headaches that tend to be more painful than a migraine.

Research has indicated that while detoxification may cure dependency, the risk of relapse in the immediate months (in some cases for up to one year) remains very high. [1]. The most successful cases of withdrawal occur through perseverance, persistence and determination, along with continuous support from family, friends and healthcare professionals.
Case study

Pamela one of our members has been struggling with medication overuse headache for many years now. Following a talk at our AGM, in 2009, on medication overuse by Dr Nicholas Silver, Consultant Neurologist, at The Walton Centre for Neurology and Neurosurgery, Pamela was inspired and decided to take the plunge and try detox (also known as going ‘cold turkey’).

Pamela says: “I want to tell you about my ‘cold turkey’ – stopping all migraine medication - full stop!

I began this venture, not for the first time, after hearing the excellent talks at the AGM in September. It was with trepidation I began, but having put my hand to the plough, so to speak, I did not look back.

I followed the plan as recommended by Dr Silver - kept hydrated, cut out caffeine, cut out painkillers and kept the stomach moving. I felt that I had to do something about my chronic daily headaches as I was taking a triptan and other painkillers up to 18 days per month.

It went very well; I requested domperidone from my GP. I paid special attention to my trigger factors, and at the first hint of trouble I took a sickness tablet and managed October and November with only 4 days of triptans.

I lapsed into migraines over Christmas, probably due to stress and the fact I also found the snow very bright. I used Nurofen meltlets and spent the odd afternoon in bed instead of taking a tablet, which was very useful.

To date I have had less episodes being 21 days free of medication and I feel more positive. However, I try to remind myself that migraine is a neurological disorder and not to despair when I get an episode.”

Pamela’s story demonstrates that through sheer determination and motivation, the effects of taking too much medication can be combated and number of headache free days per month can be increased. Whilst, relapses may be experienced, the key is to keep on trying.
Tips on how to manage future migraine attacks

- Take medication to help with nausea and help the stomach to empty (reverse gastric stasis) e.g. domperidone 20mg up to 4 times a day.
- Avoid anti-sickness drugs that do not help gastric emptying (e.g. Stemetil, cyclizine etc.). Occasionally Buccastem may be used in addition to domperidone as Buccastem may help to reduce the pain to a small extent in some individuals and by taking it with domperidone, this will allow the stomach to keep moving, and will allow good hydration and intake of food at the beginning of an attack.
- Keep well hydrated at the first sign of an attack - 1 - 2 pints of water.
- Learn to manage stress and adopt coping strategies.
- Have plenty of rest and undertake regular exercise.
- Try relaxation techniques and massage your neck, temples or scalp.
- Try using soothing balms (e.g. 4head strips, tiger balm) or cold / heat packs.

Alternative therapies

Physical measures, such as physiotherapy, osteopathy and chiropractic to the neck can help with migraine pain. Many people with CDH have restricted neck movement, sometimes due to a previous neck injury, such as a whiplash injury.

There are also some exercises which you can try on your own at home in order to loosen your neck muscles. Do each of the following movements twice each day, morning and evening:

- Put your chin on your chest and then slowly move your head backwards so that you are looking at the ceiling; then bring it slowly back to normal positioning.
- Slowly tilt your head to the side to put first your left ear, then your right ear on to the respective shoulders.
- Slowly turn your head so that you are looking as far to the left as possible, then slowly turn it through 180 degrees so that you are looking as far right as possible.

You can also try hot or cold treatments on your neck muscles, such as a covered hot water bottle or ice pack both before and after the above exercises.

Web: www.migraine.org.uk/managingmigraine
Email: info@migraine.org.uk
Consulting your GP
If you think you may have a problem with medication overuse headache consult your GP at the earliest opportunity. When you go to see a healthcare professional take a diary with you outlining the duration, frequency and severity of your headaches, including medication used and any triggers identified. This will help the doctor to make a diagnosis. For more information, please visit www.migraine.org.uk/managingmigraine or contact us on 0116 275 8317 to request a diary.

When to seek a referral
Your GP may be experienced in headache management and may be able to successfully manage your medication overuse headaches. However, referral to specialist neurology or headache services may be necessary for inexperienced GPs and those who are struggling to help manage your condition.
FAQs

I take co-codamol quite regularly and my healthcare professional has suggested I reduce the dose gradually, how do I do this?

Stopping codeine suddenly can cause ‘rebound’ symptoms, such as those of migraine (nausea, vomiting, light sensitivity etc.). Therefore, by reducing the dose gradually can help to lessen the side effects experienced. You may want to consider reducing the dose of the tablet you take, so if you are taking 30mg tablets you may want to reduce to 8mg, then slowly reduce the total number of doses you take each day. [10].

Only you can decide how best to reduce the dose as it will depend on the symptoms you experience. Your specialist can help you to decide.

I have stopped taking painkillers but I am worried about the daily headache reoccurring, what do I use to treat my migraine?

You need to use an effective acute treatment that helps to get rid of your migraine and look out for changes to your headache pattern and how your medication responds. If your migraine starts to become less responsive, takes longer to settle and reoccurs more frequently, the medication overuse headache may be returning. If the number of days you get migraine increases, speak to your GP about preventative medication; this will help to reduce the frequency of your migraines so that you do not have to use acute treatments too often.
I want to stop taking painkillers but I don’t know if I can cope with the pain?
Stopping your reliance on painkillers is not easy, the only way to break the MOH cycle is to stop taking them for at least 6 to 8 weeks. Everyone is different but it is possible that you will experience ‘rebound’ symptoms that can be quite severe. You will need a lot of support and may want to consider taking some time off work or think about using other medication for chronic pain that can help with your headache, such as a preventative drugs. You need to find a way to help cope with the pain differently and you may want to consider speaking to your healthcare professional and seeking help from those around you.

I normally take co-codamol and have MOH can I take Syndol instead?
If you suffer from frequent headaches or have MOH, it is not a good idea swapping one painkiller for another. In this case both co-codamol and Syndol are paracetamol / opiate combinations. Any painkiller can cause MOH if taken more than 3 or 4 times a week, and should only be used occasionally.

Why can’t I take any painkillers during the ‘washout period’?
You need to allow the receptors in the brain to respond correctly to pain. Having taken painkillers regularly the receptors have been reset, instead of being ‘switched off’ by the painkiller they remain ‘switched on’. Therefore, it takes very little to stimulate them and send pain signals.
FAQs

What if my headaches do not improve even after I have stopped taking painkillers?
From a daily headache you should see the total number of headache days you get reduce; it should change from fewer headache days, a no dull aching background headache to just the occasional migraine. Your headaches should become less frequent and more manageable, with medication responding much better when you do have a migraine. If you do not see any improvement you should consider taking a preventative drug, but discontinue taking painkillers. This should help to manage your headache better so that you don’t have to rely on using painkillers.

I am currently taking a triptan daily but my GP thinks this is too much and has recommended I take another tablet instead, is he right?
Taking more than 8 - 10 triptans a month results in a triptan rebound headache. A headache tends to develop most commonly 12 - 14 hours after a dose or on waking the next morning. Stopping triptans will probably result in you experiencing withdrawal symptoms, however you will go back to experiencing episodic migraine rather than daily headaches.

Is there anything I can take to help with my symptoms whilst I stop taking triptans?
Preventative drugs, such as beta blockers and anti-depressants can be taken to help reduce the severity of the withdrawal symptoms and help to reduce the number of headache days you get. Some neurologists or GPs prescribe metoclopramide or domperidone to help with the nausea and vomiting, along with diazepam which helps to treat mood swings, irritability or sleep disturbance. For more information on preventative medication, please call us on 0116 275 8317 and request an information booklet or visit www.migraine.org.uk/preventatives.
FAQs

I was taking diazepam and metoclopramide to help with my rebound symptoms. When I stop taking these will my symptoms return? These should only be used as a short-term measure, for the first seven to ten days, when the most severe symptoms are experienced after having stopped the triptans. When you stop taking diazepam and metoclopramide the severe symptoms should not return, however, your headache symptoms may take longer to ease and for this you might want to consider using a preventative drug.

I have asthma can I take beta blockers when I stop taking my triptans? If you have asthma or a history of asthma, beta blockers are not suitable for you. You can try other preventative medication, such as anti-depressants (i.e. amitriptyline) and anti-epilepsy drugs (i.e. gabapentin, topiramate). Please speak to your GP or neurologist to discuss these and other treatment options.

The specialist nurse at the hospital suggested that I may need to be admitted into hospital to stop using triptans. Is this normal? Because the withdrawal effects of triptans can be quite severe some people are advised to stay in a hospital for a short period of time. There is nothing to worry about. You will be free of all the stresses and hassle of being at home and have people around to help and give you the appropriate medical care.
References


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For further information and advice on migraine management, and for updates on the latest migraine research, please contact Migraine Action by calling 0116 275 8317, emailing info@migraine.org.uk, or visiting the charity’s website at www.migraine.org.uk. All of our information resources and more are only made possible through donations and by people becoming members of Migraine Action. Visit www.migraine.org.uk/donate to support one of our projects or visit www.migraine.org.uk/join to become a member.