Medication-overuse Headache (Medication-induced Headache)

Medication-overuse headache is a cause of frequent headaches caused by taking painkillers or triptan medicines regularly for headaches or migraine.

It is usually called medication-overuse headache by doctors, even if you have been taking the medication correctly. It is also referred to as 'medication-induced headache'. The treatment is to stop the painkillers or triptan. This is vital to cure the problem. After stopping the painkillers or triptan, you are likely to have worse and more frequent headaches or migraines for a week or so, although sometimes it can be much longer. However, the frequency of headaches or migraines should then gradually return to a normal pattern.

What is medication-overuse headache and who is affected by it?

Medication-overuse headache (medication-induced headache) is the third most common cause of headache after migraine and tension headache. The correct medical term for it is ‘medication-overuse headache’ even though you may only be taking the medication at the recommended dose.

About 1 person in 50 develops this problem at some time in their life. It can occur at any age but is most common in people in their 30s and 40s. It is more common in women than in men.

Medication-overuse headache is caused by taking painkillers or triptan medicines too regularly for tension headaches or migraine attacks. It can occur when you have been taking the medication as instructed. It is a common cause of headaches that occur daily, or on most days. Some patients feel that their headache never leaves them at all.

The diagnosis of medication-overuse headache is very important as, when overusing medication in this way, other treatments (such as headache preventers) are unlikely to work.

Medication-overuse headache is defined in the following way:

- Headache present on at least 15 days per month.
- Headache has developed or markedly worsened during medication overuse.
- Headache resolves or reverts to its previous pattern within two months of discontinuing overused medication.
- Regular overuse for three months or more of one or more medicines that can be taken for treatment of headache.

The headache must resolve (or revert to its previous pattern) within two months of cessation of overuse if the diagnosis is to be definite. Prior to this happening, your diagnosis will be 'probable medication-overuse headache'. It is only after you are better that you can be absolutely certain.

Which medicines cause medication-overuse headache?

- **Opiate-containing medicines** such as codeine tend to cause problems most frequently. Codeine, both on its own and in co-codamol, (combined with paracetamol) are probably the worst culprits.
- **Triptans used for migraine attacks**, such as almotriptan, eletriptan, naratriptan, rizatriptan, sumatriptan, and zolmitriptan. (Strictly speaking, triptans are not classed as painkillers. They work in a different way. However, they can cause medication-overuse headache.)
- **Ergotamine** (although this is now rarely used).

Non-steroidal anti-inflammatory drugs (NSAIDs) are less likely to cause medication-overuse headache but can do so. These include ibuprofen, aspirin, naproxen and diclofenac. For this reason, ten days a month or more of triptan or opiate use is considered to be overuse, whereas fifteen days or more a month of paracetamol (alone) or NSAID use is considered as overuse.

What is important in the development of this type of headache is that you overuse the treatment both frequently AND regularly, ie on two days or more per week. Bunching up of days of treatment with long gaps in between is much less likely to cause the problem.

The problem of medication-overuse headache is particularly associated with taking medication for headache. If the medication is being used for something else, the same effect is not seen, unless you are a headache-prone person. This may relate to the sensitivity of your headache 'pain sensors'. If these are already extra-sensitive, they may then be more prone to be stimulated by medication to become more sensitive still.

The amount and frequency of medication use needed to cause medication-overuse headache is not clear. It varies between different people. It is possible that some people have more sensitive 'headache sensors' than others.
The diagnosis should definitely be considered in people who experience headache and who take paracetamol, aspirin, NSAIDs or a combination of these for an average of 15 or more days a month. Other painkillers such as opiates or triptans can cause this problem if taken for an average of 10 or more days a month.

Medication-overuse headache may, however, develop in some people who take less than this. This is why the general advice is that you should not take painkillers or triptans for headache or migraine for more than a couple of days at a time. Also, on average, you should not take them for more than two days in any week for headaches or migraine.

How does medication-overuse headache occur?

A typical case
You may have a bad spell of tension headaches or migraine attacks, perhaps during a time of stress. You take painkillers or triptan medicines 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 headache or migraine attack, and so you take a further dose of painkiller or triptan. When the effect of each dose has worn off, a further withdrawal headache develops, and so on.

A vicious circle develops. In time, you may have headaches or migraine attacks on most days, or on every day. You then end up taking painkillers or a triptan every day, or on most days. Some people start to take painkillers or triptans routinely every day to try to prevent headaches or migraine attacks. This only makes things worse.

The headache of medication-overuse headache is often described as oppressive and tends to be worse first thing in the morning, or after exercise. It may be a constant dull headache with spells when it gets worse.

What about taking painkillers for other conditions?

Medication-overuse headache (medication-induced headache) is much less likely to develop if you take painkillers regularly for other painful conditions such as arthritis. It usually only occurs if you take painkillers or triptans for headaches or migraine. It is not clear why this is so. It may be because people who are already prone to frequent migraine attacks or headaches are the same people who are more prone to having medication-overuse headache.

What is the treatment for medication-overuse headache?

The most important part of treatment is to recognise and understand the cause of your frequent headaches - the painkillers or triptans. You can then devise a plan to stop the painkillers. This is best done with the advice of a doctor. It is best to plan a day to stop them altogether rather than try to cut down gradually. You should stop taking them for at least one month, and possibly two.

You must stop the painkillers or triptan completely to cure the problem. Do not take an alternative painkiller unless advised by a doctor (see below). This is an uncomfortable process. You are likely to experience withdrawal symptoms - particularly an initial worsening of headache, but also some or all of:

- Feeling sick (nausea).
- Poor sleep.
- Restlessness.
- Tummy upset or diarrhoea.
- Anxiety.

These symptoms are more likely when withdrawing from opiates and may last up to a few weeks. Getting through this period of withdrawal involves willpower and commitment.

It's also important to understand that the complete withdrawal from medication is temporary, and is the first step in treatment, not the last. Once the medication-overuse headache has ceased then regular, preventative treatment for headache may be started.

Sometimes, although only under medical advice, switching medicines may be recommended. A provocative medicine (for example, codeine, which is more likely to cause medication-overuse headache) is replaced by a less provocative one (such as ibuprofen).

When you stop the painkillers or triptan, the headaches or migraine attacks are likely to become worse for a while. You will have to tolerate the headaches or migraine attacks for a while, and other withdrawal symptoms if they develop. Your headaches or migraine attacks should then gradually go back to a normal pattern. This often takes 7-10 days. However, in some people it can take a few weeks (occasionally up to 12 weeks) for the withdrawal symptoms to go completely and for headaches or migraine attacks to return to their normal pattern.

If an anti-inflammatory painkiller is not the cause of the medication headache then your doctor may advise a short course of an anti-inflammatory painkiller. This may ease headaches after stopping the causative painkiller. (This may sound illogical, but anti-inflammatory painkillers are in a different class of medicines to other types of painkiller. So, it may be an option to use one as a treatment in some cases if your body is not used to anti-inflammatory painkillers.)

Your doctor may also prescribe an anti-sickness medicine if nausea develops as one of the withdrawal symptoms.
In short - you will have to accept that things are likely to get worse, typically for a week or so, before they get better.

What about treating headaches in the future?

You can restart using painkillers or triptans as required when the pattern of your headaches or migraine attacks returns to normal. To prevent a recurrence of medication-overuse headache (medication-overuse headache), as a general rule:

- If you develop a headache or migraine attack, it is OK to take two or three doses over a day or so. However, you should not take painkillers or triptans for headache or migraine attacks on more than two days in any week.
- Consider using preventative (prophylactic) treatment to stop the headaches or migraine attacks.
- Codeine and tablets containing codeine, such as co-codamol, are best avoided altogether. They are more likely than other painkillers to cause medication-overuse headache.
- You might have to decide not to treat some headaches or migraine attacks. You may just have to wait for them to go if you have already used up the recommended quota of painkillers or triptans in the previous few days.

See a doctor if frequent headaches do not go, or if they return again in the future.

Further reading & references

- Diagnosis and Management of Migraine, Tension-Type, Cluster and Medication-Overuse Headache; British Association for the Study of Headache (BASH) Guidelines, (2010 - reviewed 2014)
- EFNS guideline on the drug treatment of migraine – revised report of an EFNS task force; European Federation of Neurological Societies (August 2009)
- Headache - assessment; NICE CKS, October 2017 (UK access only)
- Headache - medication overuse; NICE CKS, November 2017 (UK access only)

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