

Medication Overuse Headache

Medication Overuse Headache: Navigating a Slippery Slope

By: Jonathan H. Smith, MD

Key Points

- When you start taking more pain medicine because of increasing headaches, you enter a slippery slope which can lead to a dangerous pattern of worsening headaches.
- The risk of medication-overuse headache is greatest with narcotic and butalbital-containing medications. However, triptans, ergotamines, and certain over-the-counter pain medicines also carry a risk.
- An important part of the treatment is withdrawal of the pain medicine. While this can be daunting to face, the majority of patients experience significant relief of pain. The best chances of success are through a structured plan with your physician.
- Following successful treatment, regular follow-up with your provider is important to ensure long-term success.

Overview

Taking any pain medication too frequently, especially narcotic-, and butalbital-containing pills, can cause a worsening pattern of headaches. This concept of medication-overuse headache is very counterintuitive to many patients and health care providers alike.

"Rebound headache" is an outdated and confusing term for this problem because the increased headaches do not necessarily occur as the dose is wearing off.

Common signs in individuals overusing pain medications

While taking pain medications on more than 2 days per week...	Headaches are becoming more intense, more frequent, and more difficult-to-treat
	My preventative medication is either not working, or no longer working
	I am needing increasing numbers and strengths of pain medications, emergency room trips, and hospitalizations

If you are having increasing amounts of headache, and are needing pain medications more than 2 days per week, you would benefit from a consultation to determine your underlying diagnosis, and develop a successful treatment strategy.

Frequently asked questions

1. Why would pain medicine cause headache to be worse?

Pain medications have complicated actions on brain functioning. Current research suggests that frequent pain medicine use can actually lower your threshold for experiencing pain, and reinforce the pathways that process pain.

2. What is the treatment of medication-overuse headache? If I limit my use of pain medicine, what should I do when I have a headache?

The majority of patients experience dramatic improvements following withdrawal of pain medicines. Some medications can be stopped immediately, but some may need to be tapered off. Always discuss with your physician the most appropriate way to discontinue your medication since abruptly stopping specific medications can be dangerous. The success of treatment can be further increased if there is a comprehensive management plan, often including a daily preventative medication. The evaluation should address why headaches were becoming more frequent to begin with. Preventative medications are often even more helpful when the brain is not being exposed to overused pain medications.

If you are still having more headaches than your treatment plan allows for acute treatment, further investigation may be required. Many patients find substantial benefit from non-medication strategies as well, which also allows for less reliance on pain medicine.

3. Can taking pain medicine for other reasons besides headache contribute to medication-overuse headache?

Many patients with headache also take pain medications for other reasons besides headache. These medicines used for non-headache pain also contribute to the risk of

medication-overuse headache.

4. Does my doctor think I am a drug addict because I am being asked to limit my use of pain medicine?

Chronic headaches from many causes are legitimate disorders which can result in severe pain and disability. Physicians understand that you are taking pain medication for a good reason - because you are experiencing pain. While a request to reduce pain medication may seem accusatory, this is simply in an effort to achieve pain relief.

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Key Points

- Medication-overuse headache (MOH) may occur in people who have frequent migraine, cluster, or tension-type headaches, which leads them to overuse pain medications hence causing a vicious cycle in which frequent headaches cause the person to take medication frequently (often non-prescription medication), which then causes a rebound headache as the medication wears off, causing more medication use.
- Medication overuse is a risk factor and common cause for chronic daily headache
- Medication overuse headache has been found to render headache refractory to both pharmacological and non pharmacological prophylactic medications and also reduce the efficacy of acute abortive therapy for migraines.
- Frequent use of analgesic medication is found to be the most common cause of medication overuse headache.
- There is a risk of development of medication overuse headache in migreneurs even when the medication is used for other medical problems.
- A combination of pharmacological, non-pharmacological, behavioral and physical therapy interventions are usually necessary for treatment of medication overuse headaches along with the discontinuation of medication overuse which is the most effective method.

Introduction

Medication Overuse headaches have previously been termed rebound headaches, drug-induced headache and medication misuse headaches. It is the most common cause of chronic daily headaches. Medication overuse headaches are experienced more than 15 days a month for at least 3 months and have developed or markedly worsened during medication overuse.

According to the International Classification of Headache Disorders, Second Edition (ICHD-II) a diagnosis of medication overuse headache is made when:

1. The consumption of acute medication is more than the standard dosed prescribed.
2. Patients have headaches more than 15 days a month for than 3 months.
3. Secondary disorders that may explain the headache are excluded clinically or through investigation.

Symptoms

Medication overuse headaches can present as follows

- i. Occur every day, often waking the patient early in the morning
- ii. Improve with analgesics but then return as the medication wears off
- iii. Persist throughout the day
- iv. Worsen with physical or mental exertion

Other signs and symptoms may include:

- i. Nausea
- ii. Anxiety
- iii. Restlessness and difficulty concentrating
- iv. Memory problems
- v. Irritability
- vi. Depression

What is medication overuse?

Overuse is defined in terms of treatment days per month and depends on the drug. The most commonly used drugs include analgesics in combination with barbiturates or other non-narcotic substances, simple analgesics, opioids, triptans and ergotamine. Patients who have have headaches especially migraines have a tendency to develop medication overuse headaches even if they are using the analgesics for other medical conditions.

1. **Simple analgesics:** Common medications such as aspirin, acetaminophen, NSAIDS (Ibuprofen, others) may contribute to rebound headaches especially when the patient exceeds the recommended daily dosages. These medications cause rebound headaches when used for more than 15 days in a month.
2. **Combination pain relievers:** Over-the-counter pain relievers that contain a combination of caffeine, aspirin and acetaminophen or butalbital commonly cause medication overuse headache as well. All of these medications are high risk for the development of medication-overuse headache if taken for more than 10 days in a month.
3. **Triptans and Ergotamine:** Triptans and Ergotamines also have a moderate risk of causing medication overuse headache when used for more than 10 days in a month. The relapse rate is comparatively less when compared to other medications like combination or simple analgesics.
4. **Opioid medications:** Medication overuse headaches occur frequently if opioid use is exceeded to more than 10 days in a month.
5. **Caffeine use:** Patients who drink beverages with caffeine in large amounts are also at a risk for development of rebound headaches. It is important to limit the amount of

caffeine to 200mg per day.

Diagnosis

The diagnosis for medication overuse headache is usually made from the clinical history and depending on the amount of use of the medications. The physician may consider performing extra tests like imaging studies and lab work especially if the quality of the headaches changes to rule out any other secondary cause.

Treatment

Medication overuse headaches are difficult to treat. One of the most important requirements for the effective treatment of these headaches is to break the headache cycle.

Discontinuation of the medication is usually found to be the most effective method. Apart from discontinuation, a combination of pharmacological therapy (in the form of preventatives, intravenous treatments), non-pharmacological therapy, biofeedback and targeted physical therapy is needed for improvement in the patients symptoms. Support groups and behavioral medication techniques have also been found necessary for the success of the treatment in the symptoms.

It is important for the patient to know that when a medication which was being overused is discontinued, they may undergo a period where their headaches will get worse. Some other symptoms caused by the withdrawal of the medication can include nausea, vomiting, insomnia, restlessness or constipation. The headaches eventually get better.

The physician decides how the patient would need to stop the medication- in the form of a taper (especially butalbital combinations or opioids) or just discontinue them. It may take a couple of months to six months to eventually break the headache cycle.

Various medications are also prescribed when the patient is being tapered of the medications and occasionally a brief course of steroids may be used. Ambulatory intravenous medications may be used to break the headache cycle. Commonly used medications include intravenous dihydroergotamine (DHE) along with anti nausea medications like zofran, intravenous steroids, muscle relaxants and ketorolac.

Sometimes under certain circumstances, inpatient treatment may be considered so that the medication can be tapered in a controlled environment and prolonged intravenous medications can be used to break the headache cycle. A short hospital stay is usually recommended if the patient has not been able to taper of the medications or is on certain medications like opioids or barbiturates.

Other outpatient therapies include biofeedback, psychological counseling and physical therapy which help effectively working on changing lifestyle and incorporate non pharmacological therapies for the management of headaches. Biofeedback teaches the patient to control certain responses to the body to effectively help in reducing pain. The patient learns how to control muscle tension and breathing to enter in a relaxed state which may help to better cope with pain.

Once the headache cycle is broken or is under better control, various preventative medications are used to control the frequency and intensity of headaches. The physician will decide the type of medication depending on the type headache the patient suffers from. Botulinum toxin which is an effective treatment which has been recently approved for treatment of chronic migraines may also be considered for the management of the

headaches. Certain multivitamins and minerals have also shown efficacy in controlling migraines.

Conclusion

Medication overuse headaches are caused by frequent use of abortive medications and are well known to cause chronic daily headaches. Treatment usually is prolonged and extensive. It usually requires pharmacological and non –pharmacological therapies to effectively break the headache cycle. Hospitalization is rarely required.

It is important to know that intake of medications for acute treatment should be limited to less than twice a week. Some methods which can prevent the onset of medication overuse headache include following instructions on how to take medications, avoid use of opioid medications and butalbital combination medications and limit use of simple analgesics to less than 15 days a month and triptans less than 10 days a month.

Patients should remember to contact their physicians and let them know if they need to take medications for acute treatment frequently so that the appropriate management can be done and the onset of medication overuse headaches can be avoided.

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