

## Information for Patients

### Acute Therapy: Why Not Over-the-Counter or Other Nonspecific Options? Luzma Cardona MD

#### Key points:

1. Over-the-counter (OTC) medications are appropriate choices to treat headaches if they work well and are not overused.
2. Prescription medicines developed for migraine are a better choice when over-the-counter medicines fail to relieve headache or OTC use is more than 2 days a week.
3. Read labels and be familiar with active ingredients.
4. Be careful with medicines that contain more than one ingredient.

Most people with headache use over-the-counter (OTC) medicines at one point or another. This is because they are easy to obtain and their cost is low compared to prescription medicine. In fact, by the time the average patient reaches a headache specialist, they have tried on average more than two OTC treatments. OTCs are sometimes called “non-specific” medicines because they work for many different types of pain, not just migraine or other types of headache. Research shows that on average headache sufferers received 4.5 medicines over more than 10 years before receiving a medicine developed specifically for migraine from a health care provider. Table 1 lists some of the most commonly used OTC medications for headache and their active ingredients.

Table 1 Some nonprescription medicines commonly used to treat headache

Brand name	Ingredients (per tablet or capsule)
Aleve	Naproxen sodium 220mg
Advil	Ibuprofen 200mg
Bayer	Enteric coated Aspirin 325mg
Anacin	Aspirin 400mg, Caffeine 32 mg
Excedrin migraine	Aspirin 250mg, Acetaminophen 250mg, caffeine 65mg*
Excedrin tension headache	Acetaminophen 500mg, caffeine 65mg*
Tylenol regular strength	Acetaminophen 325mg
Motrin IB	Ibuprofen 200mg
Sudafed/Excedrin sinus	Pseudoephedrine or Phenylephrine

\* Atypical 8 ounce serving of brewed coffee contains at least 100mg of caffeine

Prescription medicines for headache fall into four main categories: 1) nonsteroidal anti-inflammatory drugs like aspirin, usually called “NSAIDs”; 2) morphine-like narcotic drugs, usually called “opioids”; 3) butalbital and isometheptene mucate containing compounds and 4) triptan or ergotamine medications. Triptans and ergotamine-type medicines are particularly effective for migraine or cluster headache. Butalbital and isometheptene mucate products are still more commonly written than most headache specialists prefer. They have little to no proven evidence of benefit for migraine or headache in general. The other two categories of drugs, NSAIDs and opioids, are general pain relievers used for many different kinds of pain. Some NSAIDs are sold over-the-counter, but more are available, and in higher doses, as prescription drugs.

#### Concerns with OTC and Prescription Non-specific Agents

The combination of aspirin, acetaminophen and caffeine (commonly sold under the brand name of Excedrin) is a particularly popular medicine, especially among migraine patients. Interestingly, the products sold as Excedrin Migraine, Excedrin Menstrual and Excedrin Tension Headache contain identical active ingredients even though advertised for different conditions!

People with headaches frequently use OTC medicines containing decongestants, which are often sold to treat colds or sinus. Heavy advertising encourages the belief that “sinus headache” is a common problem. Thus headache sufferers may believe that their headaches result from sinus problems. This is especially likely if their headache symptoms include forehead pain or facial pressure over the area of the sinuses. Research shows, though, that about 90% of these people have migraine, not sinus problems. Patients do not realize that the decongestants in these “sinus” medicines cause blood vessels to shrink. This action can to some extent help migraine pain.

When OTC agents work reliably and are not overused, they can be the only treatment some people with headache require. In some cases, though, OTC medicines may actually make headaches worse or lead to other problems. Most OTC medicines are suspected of causing Medication Overuse Headache (MOH) if taken more than 2 days a week. Caffeine-containing medicines appear especially likely to cause MOH. The box describes common characteristics of MOH.

#### What is Medication Overuse Headache (MOH)?

- Sometimes called “rebound” headache
- Too frequent use of pain medicines for any reason can lead to rebound headache.
- Most likely to occur in people who are already prone to headache
- The location and type of pain may vary and do not help much in diagnosing the cause
- Headaches due to medication overuse begin or worsen along with steady or increased use of the overused drug
- Medication overuse headache improves when you stop the overused medicine(s)

Over-the-counter and prescription medications that contain more than one ingredient are a special worry. Table 2 summarizes several concerns. People often use more than one OTC or prescription with similar ingredients. For example, some medicines for “sinus” headache contain acetaminophen. People may use this “sinus” drug along with other medicines advertised for pain, which also contain acetaminophen. This can occur with other ingredients as well. A prolonged headache for which someone takes repeated doses of medicine is a particular worrisome situation, since it could lead to an unintended overdose. This is an especially serious problem with acetaminophen. In fact, liver damage from acetaminophen overdose is the leading reason for liver transplants in the United States.

Table 2 Comparison of OTC & prescription non-specific to more specific migraine drugs

Characteristic	Nonspecific Prescription	OTC & Migraine-Specific (Prescription US, Behind the Counter in some Countries)
Price	Inexpensive	Expensive
Drowsiness	May cause drowsiness	Typically do not cause drowsiness
Risk for damage to bowels or kidneys	Moderate to High when overused	Low
Types	Combination OTCs	Triptans

	Combination prescription drugs Narcotics/Opioids Butalbital compounds Isometheptene mucate	Dihydroergotamine Ergotamine-type medications
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Table 3 summarizes additional things to consider when deciding if over-the-counter medicines or non-specific prescription drugs are a good choice for treating your headaches. As a general rule, it is time to visit your doctor or other medical care provider to discuss more specific options when OTC medicines are not reliably effective. Indications of ineffectiveness include partial instead of complete pain relief, multiple side effects, requiring medicine more than two days a week or the need to take many doses before achieving headache relief.

**Table 3 Are over-the-counter medicines okay to use for my headache?**

	Probably okay to use*	May not be okay
<b>Pain relief</b>	Good: pain is alleviated or greatly improved	Minimal: mild or partial relief of pain
<b>Consistency/reliability</b>	Good: works all the time	Variable: sometimes does not work , can't predict effect
<b>Side effects</b>	Few or none	Multiple or long-lasting
<b>Frequency of use</b>	Never more than two days a week	More than two days a week on average
<b>Duration of use</b>	Never more than listed on the label	Sometimes more frequent than listed on the label
<b>Your general health</b>	No major health problems or daily medications	Health problems such as ulcers, kidney or liver troubles; taking lots of medications for other conditions

\* It is always a good idea to check with your health care provider about any medicines you are taking, even OTCs. You may have other conditions that affect whether these medicines are right for you.

### Customizing Your Treatment

The types and doses of medications that are included in some combination drugs do not always make sense. For example, there is no particularly good reason to mix aspirin and acetaminophen to treat a single headache, since they work against pain in a similar way. Experts have long suspected that this mixture is particularly dangerous to the kidneys. Yet Excedrin contains both of these drugs plus caffeine. Acetaminophen, which is common to many OTCs and prescription drugs is contained in the most common opioid prescribed, known as Vicodin™ (hydrocodone). A recent review of a long term study, known as the frequent headache study, reported on medicine use. For past use, chronic daily headache was associated with OTC/caffeine combination products and narcotics/opioids and less with aspirin or ibuprofen. Lastly, the dose of certain medicines, such as caffeine, in some combination products may not always be ideal to treat headache. Prescription butalbital combination analgesics (BCA) are an example.

If a combination of medicines is truly desirable, you get more flexibility by buying the ingredients separately. Then you can combine the single-ingredient medicines in just the right way for a particular headache. For example, you might decide to use caffeine and aspirin to treat a headache. Your choices include using a fixed combination product such as Excedrin, Anacin, or Fiorinal – but they may contain additional ingredients that you do not need, or doses that are not right for you. On the other hand, with just a bit of effort you can customize your treatment, perhaps using a caffeine tablet and aspirin. Excedrin provides a reasonable amount of caffeine but the dose of aspirin or acetaminophen it contains is probably less than desirable for a difficult-to-treat migraine. In addition, you get exposure to a drug you didn't need to use with the combination associated with unnecessary risks. As another example, Anacin contains aspirin and caffeine, but the dose of the latter is lower than generally recommended for headaches. Fiorinal requires a prescription. It is one of several barbiturate combination analgesics (BCA). It contains a drug you might not need - butalbital - which can lead to drug dependence and addictive behavior especially with regular use. You will need two tablets to achieve the correct dose of caffeine, but the dose of aspirin will be lower than ideal despite the fact that you may be drowsy from the BCA. A published guideline states BCAs should be avoided as there is no reason to choose such a combination product when a simpler and often less expensive analgesic is available. The alternatives may be safer by reducing potential for addiction, additive side effects or toxicities and with less risk to produce more frequent headaches.

Recent research suggest that only 5 days of butalbital combination analgesic use per month in women risks creating chronic daily headache. Instead for these reasons, you may do better in treating your headaches by buying separate medicines and combining them in a way that is right for you. Caffeine supplements typically contain 200mg of caffeine per tablet. Many patients use 100mg (½ tablet) or take caffeine in the form of a 6-8 ounce cup of coffee. They may combine this with aspirin in a dose suggested by their health care provider. If you choose this option, be careful not to overuse either drug. In general, this means limiting the use of any medicine to a maximum of 2 days per week on average or 9 days per month at a recommended dose. More than this frequency of use suggests you need to strongly consider one or more form of prevention to get the job done right.

### Getting the Job Done Right

Know the job is done right when using acute therapy by following suggestions of Migraine-ACT or Migraine-Assessing Current Therapy. This valid tool asks whether pain is gone with normal daily activity present within 2 hours. Also, are you comfortable with the treatment and can you go on with your day normally? Finally does it work consistently with one time treatment and done, not treat and retreatment needed. Consider these "the get the job done right" standard.

### Conclusion

Whether you use over-the-counter or prescription drugs to treat your headaches, a good rule of thumb is to use the least amount of medicine needed to get the job done right. For most people, use of an adequate dose of a reliable medicine early in a headache minimizes the amount and type of medication needed. Headache treatment is generally more effective when it is taken before pain reaches a moderate or severe level. It is also important to know what is in your medications, in particular whether the same drug is in more than one of your medicines. Be careful with combination drugs. If you intend to use combinations, discuss with your doctor or health care provider whether your own combination treatment is right for you.

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