Migraine Trigger Guide:

Caffeine

**Explanation**

Caffeine is a widely used drug that increases alertness, decreases fatigue and improves muscle coordination.

Though coffee comes to mind as the most common source of caffeine, it's also naturally found in tea, chocolate, and it is often added to soft drinks and non-prescription drugs, like pain-relievers and cold remedies.

Caffeine is also addictive. The body quickly absorbs caffeine and it moves rapidly to the brain. It doesn't stay in the bloodstream, but is removed via urine.

People vary in their sensitivity to caffeine.

If used excessively, caffeine can be over stimulating and cause anxiety, sleep problems, muscle twitching, or abdominal pain.

Caffeine is a common ingredient in many prescription and over-the-counter headache medications (see list below).

Some sources suggest that caffeine additives can assist pain relievers by up to 40% in treating headaches\(^1\). Caffeine can help the body absorb headache treatments faster. In some instances it may allow you to take less medication.

However, caffeine can also be harmful for those with migraine. It can cause withdrawal or rebound headaches.

The migraine brain prefers balance and routine. It craves consistency. As with all other aspects of migraine management, consistency is the key to handling your caffeine intake.

**Trigger causes**

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Often headaches associated with caffeine occur when a change to routine occurs:

- An individual may experience withdrawal symptoms if they don't have their typical quantity of caffeine (i.e. if they miss their morning cup).
- An individual may have excessive caffeine within a period of time which can also trigger an attack.
- Caffeine dependence:
  - Regular caffeine consumption leads to physical dependence on caffeine, which manifests as withdrawal symptoms when a caffeine user abruptly stops using caffeine. A diffuse throbbing headache is a hallmark feature of caffeine withdrawal.
  - Heavy caffeine use is not required to experience caffeine withdrawal headaches or migraines. It varies from person to person, but even as little as a small cup of coffee (100 mg of caffeine) each day could lead to withdrawal if someone stops caffeine abruptly.

Sources of caffeine to be aware of:

- **Beverages**
  - Coffee
  - Tea
  - Chocolate flavored drinks
  - Cocoa mix, malt powder, chocolate flavoring
  - Cola and other sodas, like Mountain Dew or Surge (regular and diet)
  - Energy drinks
  - Note: Caffeine-free and decaffeinated beverages also contain caffeine in small quantities.

- **Foods**
  - All chocolate products including brownies, cake, and éclairs.
  - Chocolate ice cream or pudding
  - Kola nuts

- **Medications**
  - Anacin—Caffeine and Aspirin
  - Excedrin Migraine—Caffeine, Aspirin and acetaminophen
  - Midol—Caffeine, acetaminophen and pyrilamine maleate
  - BC Powder—Caffeine and Aspirin
  - Norgesic—prescription containing Caffeine, Aspirin and orphenadrine
  - Fioricet—prescription containing Caffeine, acetaminophen and butalbital
For example, an eight ounce cup of brewed coffee contains 135 mg caffeine, eight ounces of black tea has 35-40 mg, 12 ounces of Coca-Cola has 45 mg, and Excedrin (Excedrin migraine has the same ingredients) contains 65 mg.

A quick word about artificial sweeteners: If you use these in your coffee or usually drink diet soda, be aware that these can be a separate migraine trigger. You may want to avoid ingesting them when you have your routine cup of coffee or soda.

**How do you know if Caffeine is an issue?**

If you:

- Experience withdrawal headaches when you miss your regular caffeine drink.
- Experience rebound headaches or medication overuse headaches
- Rebound headache is a condition that develops from the overuse or misuse of any headache medication, including caffeine-containing medication. While caffeine-containing drugs can be beneficial, these medications, combined with consuming too much caffeine (coffee, tea, soft drinks, or chocolate) from other sources, may make you more vulnerable to getting rebound headaches.
- Relief from rebound headaches can only be accomplished by completely quitting all medication; however, this should only be done under the supervision of a doctor.
- Consume 4-5 servings of caffeine per day including teas, coffees, and sodas. Some energy drinks contain double doses.
  - Excessive consumption of caffeine may contribute to the onset of a migraine attack. You could try not having more than 4 cups of caffeinated tea, coffee or cola in a day.
  - Some people find that suddenly stopping caffeine altogether can also be a trigger. If you suspect this, you may wish to cut down on caffeine more gradually.
  - Some people find that consuming less caffeine on the weekend can exacerbate migraine attacks. Remember that caffeine can be found in many products including chocolate and over the counter painkillers.

**Options to try**

Caffeine is a double-edged sword and you should consider whether you require caffeine regularly in your diet. Caffeine:

- Can help relieve headache pain for many, yet for some individuals, consuming caffeine on a regular basis appears to make them more susceptible to migraine triggers. Individuals with occasional migraines
may find it beneficial to limit caffeine intake to no more than two days a week.

- Often regular caffeine intake causes a ‘baseline’ of caffeine that your body expects and desires to feel ‘normal’. But once you have removed the ‘need’ many find that they no longer require caffeine to feel normal.
- If you are considering eliminating caffeine from your diet, then do so gradually to avoid a migraine in the process. Wait until you are experiencing a ‘good day’ to lower your caffeine intake.
- This is an example of how to lower your caffeine from two coffees per day to zero.
  - Replace one coffee with a black tea. Black tea has approx half the caffeine as coffee.
  - Then after one week or more replace the second coffee with another black tea. So you transition over 2 weeks to 2 black teas from 2 coffees.
  - Then at least a week later, try replacing one of the black teas with green tea, then when you have adjusted to this new level, replace both with green teas.
  - Herbal teas are not caffeinated so you may select a herbal tea to gradually replace the green tea which still contains some caffeine. For example, camomile tea.

- The key is to take your time, lower your intake on “good days” and allow enough time to adjust to your new level. You may feel like you need the caffeine “boost” in the morning or afternoons when you were previously accustomed - this is just the withdrawal symptom. These will fade as your body returns to normal without caffeine. Decaffeinated teas may also be used to help step-down from caffeinated teas – but these still contain caffeine. Some herbal teas are a good option if you still seek a hot beverage at certain times of the day.
- If you experience a migraine from the withdrawal then pause at that level and recommence once you recover. The key is to take your time and gradually reduce your caffeine intake.

**Watch-outs**

“If someone is headache-prone, they should avoid using caffeine regularly.”
Laura M. Juliano, director of Behavioral Pharmacology and Health Promotion at American University, Washington, DC.

A lot of people drink coffee during the week, and then don’t have it on the weekends, and they get a headache.
High caffeine consumption is a risk factor for progression to chronic migraine\(^2\). Studies show that chronic headache patients were more likely to have high caffeine exposure prior to chronic headache onset compared with episodic headache controls.

You can avoid caffeine withdrawal by limiting your daily consumption, being aware of the sources of caffeine, and by gradually decreasing the consumption rather than ending use abruptly.

Because of the risk of withdrawal, people should not take caffeine-containing pain relievers on a daily basis.

**More reasons to manage this trigger**

People react differently to caffeine. When too much is consumed, the following side effects might occur:

- Headache
- Difficulty sleeping
- Anxiety
- Irritability
- Muscle twitching/tremors
- Abdominal pain
- Abnormal heart rhythms/palpitations
- Excessive urination
- Nausea and/vomiting
- Restlessness
- Depression
- Indigestion
- Caffeine may also induce insomnia

Women who are pregnant, may become pregnant, or breastfeeding shouldn't take large doses of caffeine. It might slow fetal growth, particularly at high doses. It may also be harmful prior to conception. High doses may also increase the risk of miscarriage.

Smokers metabolize caffeine more quickly.

Caffeine is addictive, so if it is stopped abruptly withdrawal symptoms might occur. It is best to gradually discontinue use.

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