

From Your Belly to the Beast

How Diet Affects Migraines

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ABSTRACT

Migraine headaches afflict more than 10% of the general population. The purpose of this research was to find out how one's diet can affect migraine headaches. Although the exact mechanism involved with the triggering of a migraine attack is not known, I hypothesize that there are certain foods that trigger migraines in some individuals. The Internet and peer-reviewed on-line journals were used to explore this hypothesis. Researching the effects of different chemicals that are commonly found in foods helped identify possible migraine triggers. There are many known, such as chocolate, cheese, and caffeinated beverages. By altering what is consumed, the number of future migraine attacks may be reduced.

INTRODUCTION

More than 10% of the general population suffers from migraines and this number is on the rise (1). These headaches can be disabling and interfere with an individual's everyday activities. Migraines are headaches that are characterized as severe pain that is usually isolated to one side of the head. Quite often the pain is described as throbbing or pulsating. Sensitivity to light and sound is often accompanied with migraines, and in some people nausea or vomiting. Migraine attacks can last between 4 and 72 hours. Close to 20% of migraine sufferers experience aura, which is a warning associated with the migraine, before the on-set of pain. This usually involves visual disturbances and flashing lights (2-4).

Researchers have not identified what mechanisms activate a migraine. There are different theories as to what may trigger them. Some researchers say that migraines are caused by changes in the size of blood vessels and the levels of neurotransmitter substances in the brain (5). Many researchers also believe that changes in the trigeminal nerve system cause migraines. The trigeminal nerve system is a major pain pathway in the brain (6).

Despite the fact that the cause of migraines is not known, there are certain ways that one can alter his or her lifestyle to aid in the prevention of migraines. There are a variety of triggers that may make one more susceptible to developing a migraine. It could be beneficial for an individual to avoid these migraine-producing triggers. These triggers may include lack of sleep, stress, changes in hormonal levels, irregularity of meals, and the consumption of certain foods (3,6). One thing that can easily be changed to help with migraine prevention is one's diet. Avoidance of certain foods that have been identified as common triggers may help reduce the occurrences of migraines.

METHOD

The research to find out about the effects food has on migraines came from the Internet and peer-reviewed on-line journals. First it was necessary to get a basic understanding of migraines and what theories exist to explain their origin. This information was gathered from web sites that focused directly on migraines and from neurological and biological journals. Once this information was obtained, further research identified specific foods considered likely to trigger migraine attacks through action of specific chemicals.

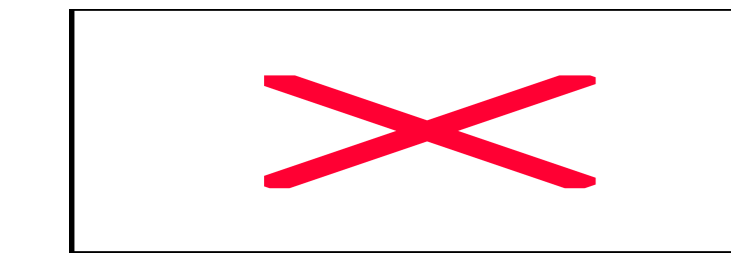
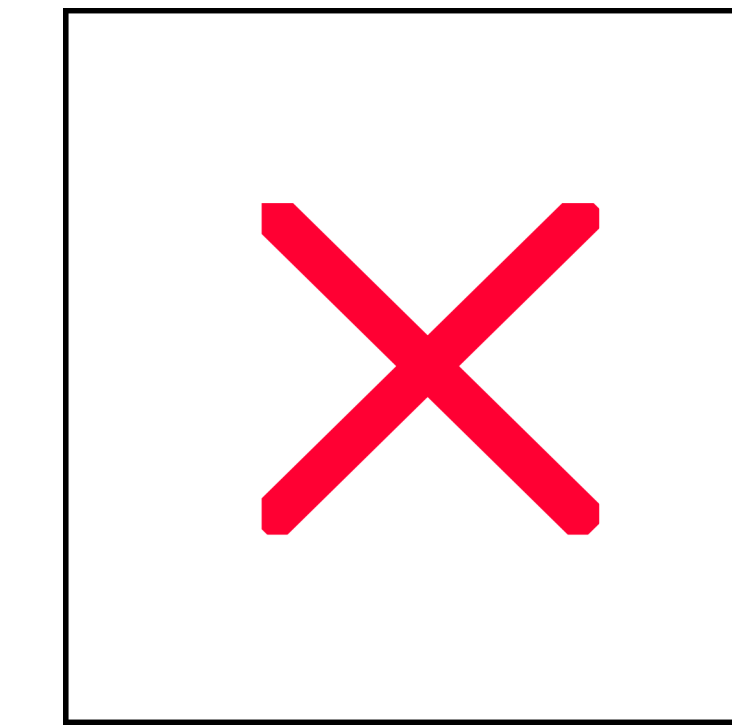
DISCUSSION

Table 1 lists foods that have been reported to trigger migraines and the chemicals that are thought to be responsible.

Table 1: Foods That Trigger Migraine Headaches

Food	Chemical Trigger
Cheese	Tyramine
Chocolate	Phenylethylamine, theobromine
Citrus fruits	Phenolic amines, octopamine
Hot dogs, ham, cured meats	Nitrites, nitric oxide
Dairy products, yogurt	Allergenic proteins (casein, etc.)
Fatty and fried foods	Linoleic and oleic fatty acids
Asian, frozen, snack foods	Monosodium glutamate (MSG)
Coffee, tea, cola	Caffeine, caffeine withdrawal
Food dyes, additives	Tartazine, sulfites
Artificial sweetener	Aspartame
Wine, Beer	Histamine, tyramine, sulfites
Fasting	Stress hormone release, hypoglycemia

From: Millichap JG, Yee MM (8).



CONCLUSION

Through the research that was conducted, it was found that there is a connection between one's diet and migraines. The foods that are discussed in Table 1 are considered likely triggers for migraines. As the research shows, there are certain chemicals associated with different foods that interact with the body and may be involved in the mechanism of the migraine attack. If triggers are removed from the diet, there could be a reduction in the number of attacks. However, it is not generally advisable to eliminate all potential food triggers from one's diet. It is still encouraged for an individual to have a well-balanced diet (8). Any dietary modification for medical purposes should be discussed with a health professional.

Not everyone's body reacts the same way to chemicals that are present in food. This makes it difficult for people to identify what triggers their migraines. Many researchers suggest that an individual should keep a migraine diary. At the first signs of developing a migraine, a person should record what is going on at that moment, what was eaten that day, along with physical activity, stress, and amount of sleep from the previous night. A person should also note when the pain started, how long it lasted, the location and type of pain, as well as any other symptoms that are present (9). If a migraine diary is kept for several weeks, patterns will begin to appear and people will be able to figure out what triggers their migraines.

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