

## Headache and diet

According to some studies, what we eat and when we eat it plays a significant role in headache and migraine. Overactivity of the arteries in the head has been found to cause pain, and wildly fluctuating blood sugar levels can prompt these vessels to spasm in susceptible people. Caffeine, a compound commonly found in coffee, tea and chocolate, has been linked to headache. Researchers believe that people who are prone to headache and migraine may be sensitive to the effects of caffeine. Limiting drinks or foods containing caffeine is generally recommended. Food additives and naturally occurring food chemicals can also trigger headache in some people. If you suspect that your headaches may be linked to your diet, it is important to seek medical attention so that your sensitivities can be properly diagnosed.

### Arteries are affected by insulin

Most cells in the body need to burn glucose with oxygen to produce energy. The digestive system breaks down the carbohydrates we eat into glucose. This simple sugar is then transported to each cell via the bloodstream. A gland of the endocrine system called the pancreas secretes a hormone called insulin, which helps the glucose to migrate from the blood into the cells. If the food eaten is absorbed quickly into the bloodstream, then the pancreas has to respond with a strong hit of insulin. The sudden drop in blood sugars seems to encourage the arteries in the head to constrict. During a migraine, visual disturbances such as the characteristic aura may be due to this arterial constriction.

### Hypoglycaemia means low blood sugar

If you skip a meal, your blood sugar level may drop too low for your brain to function comfortably. In order to boost the amount of glucose to the brain, the body releases hormones which may also cause an increase in blood pressure because they narrow the arteries. This narrowing of the arteries can contribute to headache and migraine.

### Caffeine withdrawal

The chemical adenosine helps to regulate the diameter of the arteries inside the head. Caffeine is structurally similar to adenosine and counteracts it by constricting the arteries. To compensate, your body produces even more adenosine. When you stop consuming caffeine, such as during sleep, the high levels of adenosine will make your arteries dilate. The excessive blood flow then causes a throbbing headache, which only a cup of coffee can ease.

### Foods can cause headache

Some people who suffer from frequent headache and migraine may be sensitive to certain food chemicals, both naturally occurring and artificial. Common food chemicals that have been found to affect the arteries of the head include:

- **Monosodium glutamate (MSG)** - a common flavour enhancer, but also found naturally in such foods as tomatoes.
- **Nitrites** - these preservatives are found in processed meats and some cheeses.
- **Amines** - common compounds found in a wide range of foods, including spinach, tomato, potato, small whole fish, tuna, liver, dark chocolate and alcoholic drinks.

### Treatment options

It can be challenging to discover the exact food or foods that may contribute to headache and migraine. It is best to consult health care professionals to ensure an appropriate diagnosis and course of action. Generally speaking, treatment options can include:

- **Blood sugar headaches** - avoid high glycaemic index foods, or at least combine them with low glycaemic foods to lessen their impact. Keep your blood sugar levels constant by eating regularly.

- **Caffeine headaches** - don't quit suddenly or else the withdrawal will cause severe headaches. Your body needs time to adapt. Gradually reduce the amount of caffeine you consume over a period of days, weeks or even months.
- **Food chemicals** - a health professional will devise ways to test your sensitivities to various foods. It is important not to self-diagnose, because you may restrict your eating unnecessarily, or fail to find all of your dietary triggers.

### Where to get help

- Your doctor
- An accredited practising dietitian, contact the Dietitians Association of Australia
- Naturopath.

### Things to remember

- Large fluctuations in blood sugar levels can cause the arteries to spasm, leading to headache.
- Consuming a lot of caffeine regularly can cause withdrawal headaches in susceptible people.
- Sensitivities to food chemicals need to be assessed by a qualified health practitioner.

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