Migraine should not be confused with a headache.

Headache or cephalalgia is a very common and widespread symptom among the general population. There are 165 types of headaches. Migraine is only one of these and it affects between 12 and 17% of the population.

Migraine is an illness and as such, it should be treated by specialists. It is characterised by *episodic attacks of a throbbing headache with a moderate to severe intensity, generally on one side of the head, and which can last for between 4 and 72 hours*. It is commonly accompanied by *nausea, vomiting, photophobia* or *phonophobia*, becoming more intense with physical activity.

In some patients, a migraine attack is preceded by neurological symptoms, which are generally visual and are known as “aura”.

This illness modifies the economic, social and family life of sufferers, greatly altering their working life and life outside of work and having a profound effect on their quality of life.

Can migraine be caused by histamine in food?

Histamine is an essential molecule present in all food in our daily diet to some extent or another. It is also synthesised by our own body either directly or induced by food with a low histamine content.

The consumption of histamine food or food which releases endogenous histamine does not lead to a problem in itself, as in normal conditions histamine is broken down and metabolised in the small intestine by the DiAmine Oxidase (DAO) enzyme which our body produces. Whenever there is a deficit of this DAO enzyme, however, histamine is not eliminated but stored, causing various conditions, the most incapacitating of which is migraine.

It is important to know that despite the similarity between the symptoms, we are NOT dealing with an allergy, but food-induced histaminosis.

What food contains histamine?

Food which has been subjected to maturation processes or prolonged storage and other food which acts as histamine releasers.

- Alcohol, especially red wine and cava.
- Cheese.
- Raw cold meats (chorizo, salami, pancetta).
- Fish, shellfish and fish sauces.
- Some vegetables (aubergines, tomatoes and spinach).
- Some fruit (strawberries, pineapple and bananas).
- Chocolate.
Reactions stemming from food-induced histamine.

When histamine accumulates and is not eliminated due to a DAO enzyme deficit, the onset of a migraine attack or other symptoms is not immediate. There isn’t a direct time relation between the intake of food with a high histamine content and the symptoms.

Reactions, other than migraine, which occur include:

- **Intestinal disorders** (diarrhoea, constipation, bloating, flatulence)
- **Dry or atopic skin**
- **Back pain and/or muscle spasms.**
- **Fatigue**
- **Overweight**
- **Discomfort, nausea, tachycardia**
- **Excessive salivation when sleeping**

**Migratest® is a new diagnosis test for measuring the DAO enzyme level.**

Due to genetic causes, some people and often members of the same immediate family, do not have or produce a lot of DiAmine Oxidase (DAO), and this causes excess histamine not to be neutralised and hence results in a migraine being generated. In addition, the use of medication mostly inhibits DAO functioning, such as:

- Analgesics
- Diuretics
- Antibiotics
- Antihistamines
- Antibiotics
- Antihistamines
- Antidysrhythmics
- Antidiasthmatics
- Mucolytics
- Antidepressants
- Antidysrhythmics
- Tranquilisers

95% of migraine patients have reduced DAO activity, and in 49% of the cases migraine patients show a very reduced activity value for the DAO enzyme \(^{(1)}\).

- Migraine is more common in women than in men and DAO activity is also lower in women.

- DAO activity during pregnancy can increase by up to 500 times, due to the placenta’s production of DAO, which explains the subsiding of migraines during pregnancy.

**Migratest®** is an analytic test performed in the laboratory using the ELISA method to measure the level of the DAO enzyme in the blood and thus determine if the cause of the migraine is due to a DAO deficit.

**SAMPLE REQUIRED**

1 mL serum.

**RECOMMENDATIONS**

Fasting for at least 8 hours prior to blood extraction.

Some medication inhibits DAO enzyme action, please check with your doctor.

Send sample refrigerated and/or preserve by freezing.

**RESULTADO**

Normal DAO Activity = 80 HDU/mL (Histamine Degradation Units)

---

\(^{(1)}\) Faculty of Nutrition and Bromatology at the University of Barcelona May 2010.