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The food origin of migraine as a result of Diamine Oxidase (DAO) enzyme deficiency

Adriana Duelo

International Society of DAO Deficiency, Spain

Migraine is considered one of the most common secondary headaches. It affects between 12% and 17% of the adult population in western countries, with little variation from the rest of the world. There are several etiological theories, and amongst them: food. The relation between food and migraine has always been taken into account, but from a distant perspective based on what patients have described from their own experience. Histamine is considered a chemical mediator of migraine. The degradation is done along two different pathways. One of the enzymes that allow this process is diamine oxidase (DAO). Nowadays we can affirm thanks to different clinical studies from these latest years, in particular the last one presented in September 2013 in the International Congress of Neurology in Vienna by Dr. Joan Izquierdo that people with low DAO enzyme activity cannot break down exogenous histamine from food. This molecule in excess can cause migraine and other symptomatology as atopic skin, intestinal disorders, and fatigue, among others. After confirming that 87% of people with migraine have DAO enzyme deficiency, the answer has arrived as to which kind of nutritional treatment professionals should apply. It is necessary to measure the activity of this enzyme in patients with migraine, and then if the result is positive they should start a low histamine diet supplemented with the enzyme, which is effective and safe as a preventive therapy for migraine. Author has made an observational study in his private clinic evaluating 100 migraine sufferers with this metabolic disorder following a low histamine diet supplemented with DAO enzyme. 82% of them have improved their quality of life reducing the number of migraine attacks and their intensity.

Biography

Adriana Duelo, BS in Human Nutrition and Dietetics from Ramon Llull University of Barcelona did her final project report on the food origin of migraine. She is a member of the Scientific Committee in the International Society of DAO Deficiency; she has collaborated with the Nutritional Support Unit at the Hospital Vall d'Hebron and in the pharma company Sanofi Diabetes Department in Spain. At the same time, she has participated as a nutritionist in different protocol and clinical studies of DAO deficiency. Currently she is developing her professional activity as a clinical dietitian, specialized in nutritional treatment of DAO enzyme deficiency and its associated symptoms.

aduelo@adrianaaduelo.com