

Histamine Intolerance – learn from the best – Yasmina Ykelenstam

I have included this article by Yasmina on my website to help those patients who do not know about her expertise, to use as a personal reference, and to heal. Yasmina has published many articles and books about Histamine intolerance. Genetic testing may be something you are interested in and below Yasmina provides an excellent understanding about what your genes may be telling you. Additionally, and most importantly, Yasmina will help you work with your environment and your diet to help your genes to work as well for you as possible. I use this article as my personal reference. Please enjoy Yasmina!

The Genetics of Histamine Intolerance.

By Yasmina Ykelenstam



Are genetics involved in histamine intolerance? The research says, “yes.” However, genes aren’t the be all and end all when it comes to this state or condition. There are many things we can do to turn off the effects of genes and live with good health and vitality. This post will be most useful to those who have

done genetic testing through 23 and Me or another service. Be sure to postmark this information otherwise.

GENETIC MUTATIONS (SNPs) & HISTAMINE INTOLERANCE

There are certain variations of DNA building blocks that can set you up for histamine issues. These Single Nucleotide Polymorphisms, or SNPs (pronounced “snips”), have been the subject of much research in recent years as we try to understand what makes one person react to particular drug, environmental exposure, food, et cetera, and another not to react. It’s what makes us all unique, biologically.

Histamine is a regular part of our immune response as well as our nervous systems –acting as a neurotransmitter. It becomes a problem when it doesn’t get broken down, and high levels accumulate in the body. There are two enzymes that control the breakdown of histamine in the body: HNMT (histamine N-methyltransferase) and DAO (diamine oxidase).

If there are genetic mutations (SNPs) in these genes, histamine may not be broken down properly, leading to a build-up and the resulting unpleasant symptoms.

SNPs IN THE HNMT GENE

Histamine levels are regulated in part by the enzyme, Histamine N-methyltransferase (HNMT). The HNMT activity is encoded in the gene called C939T. Having the variation AA causes increased histamine levels in the body.

SNPs IN AOC1 (DIAMINE OXIDASE) GENE

Diamine Oxidase (DAO), as I have spoken of before, is the enzyme that helps break down histamine. An allele is an alternative form of a gene that comes from a mutation. Each “T” allele that you have within the AOC1 gene indicates reduced DAO activity.

Even if you find out you’re TT for AOC1 and have severely reduced DAO enzymes, you can boost it to an extent, with food. I learned through my research that there

are [certain foods that naturally boost DAO levels](#), and so I created recipes around those foods which you'll find in my [28 Histamine Reset and cookbooks](#).

SNPs IN THE HDC GENE

The HDC gene encodes for the enzyme, histidine decarboxylase (also HDC), which produces histamine from the amino acid, histidine. SNPs in this gene could change how easily histamine is produced from histidine. In two separate studies, allergic rhinitis was more common in individuals with a SNP in this gene.

SNPs IN THE MAO GENE

Monoamine Oxidase (MAO) is an enzyme that breaks down N-methylhistamine to N-methylimidazole acetic acid. SNPs in the gene that encodes for this enzyme can cause histamine levels to stay high rather than be degraded.

SNPs IN THE MTHFR GENE

This widely discussed gene is vital for regulating methylation, an important process in the body which is involved in detoxification, the immune response, inflammation, brain chemistry, energy production, and repair. The MTHFR gene encodes an enzyme by the same name, Methylene tetrahydrofolate reductase (MTHFR). This enzyme is also needed to reduce histamine in the body.

The A1298 mutation in the MTHFR enzyme lessens the conversion of BH2 to BH4. Less BH4 lowers nitric oxide (NO) formation, which may result in increased mast cell degranulation and histamine flares.

GENES AREN'T EVERYTHING

Keep in mind, though, that while there are certain genetic SNPs that can predispose you to histamine intolerance or any number of other diseases, illnesses, syndromes, or intolerances, there are other factors involved.

While genes may load the gun, environmental factors pull the trigger. Epigenetics has been a major subject of interest in recent years. Epigenetics is the study of how external factors affect the ways genes function –turning them on or off. Nutrigenomics refers specifically to the effect of food on our genes. There are a

lot of things that we can do about our environmental (diet and lifestyle) factors that can help to offset our genetic susceptibilities.

Chances are, you've removed toxic personal care and cleaning products from your life already. Discovering which foods are helpful or harmful is the next step. Reducing histamine producing foods and adding in those that are anti-inflammatory or raise your levels of DAO can go a long way toward swinging your environment more in the direction of healing.

For a comprehensive and step-by-step guide on how to use your dietary and lifestyle choices to offset your genes and heal from histamine intolerance, including supplement recommendations, check out my [28-Day Histamine Reset](https://healinghistamine.com/the-histamine-reset/).
<https://healinghistamine.com/the-histamine-reset/>

For an excellent overview of genetics I highly recommend Dr. Ben Lynch's 'Dirty Genes' book now for sale on Amazon.

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