CELIAC DISEAE AND GENETICS

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WELCOME

Hi There,

I'M BONNIE

I am a **certified health coach** in Celiac disease and gluten intolerance. I have Celiac Disease. So believe me when I say I know how to help you!

I am an accredited DNAylsis practitioner in nutrigenetics and pharmacogenetics. This particular presentation is based on my training as well as personal research into this particular fascinating field.

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WHAT IS NUTRIGENETICS?

We are all born with genetics that don't change in our lifetime. However, we can **influence** the way our genes express themselves through certain factors.

Nutrigenetics refers to using nutrition in a personal way that is specifically tailored according to your nutritional needs as indicated by your genetics.

These **recommendations** take into account different responses to certain nutrients that arise due to the interaction between nutrients and biological processes.

We can influence how our genes behave through diet, lifestyle, environment, nutrition and exercise and any external factor that could influence our genetics to express themselves in a certain way. This also includes things like stressors, trauma, PTSD and so on.

THE HLA AND MHC CLASSES

This information is not meant to cure, treat or diagnose any condition. Nor should it be treated as health care.
It is purely for **educational purposes.**

While I am trained in nutrigenetics, most of it is from my own research into medical journal papers and studies that I love to read. I will include links for you in the PDF which you can go and read yourself.

Okay let's get started...

Celiac Disease is an hereditary autoimmune condition.

The Genes that are used as markers for Celiac Disease belong to the **HLA Class** (known as **human leukocyte antigen**.)
They are a system of genes found on chromosome 6 which encode cell surface proteins that regulate the immune system.

HLA class 1 genes correspond to MHC class 1 genes.

MHC stands for **major histocompatibility complex** and they are essential for the adaptive immune system.

An example is if the cell is infected by a virus, the HLA system brings fragments of the virus to the surface of the cell so that the cell can be destroyed by the immune system.

The HLA class 2 genes correspond to MHC class 2 genes and it's these that make someone sus-cep-table to Celiac disease.

Other cell receptor proteins in his MHC class 2 are
DP, DM, DO, DQ, and DR.

A NOTE OF DR

These particular antigens stimulate the multiplication of **T-helper cells** (also called CD4-positive T cells), which in turn stimulate antibody-producing **B-cells** to produce antibodies to that specific antigen as in the case of Celiac Disease.

the reason I wanted to mention this is because although the genetic markers are HLA DQ2 and HLA DQ8, you may come across the **DR genes**. Studies and research are finding there is a correlation between certain DR and DQ genes that make one more susceptible to Celiac.

Although they are not used as markers as such, it's not unheard of for some medical health care providers to tell you to get your DR and DQ checked.

So if that happens you know the connection. The DR and DQ genes are both part of this HLA/MHC system which ultimately is responsible for the regulation of the immune system.

HLA-DQ2 AND HLA-DQ8

Everyone has a copy from their mother and a copy from their father. These copies can come in different versions called alleles.

The HLA gene alleles that predispose a person to celiac disease are called **DQ2 and DQ8.**

It's possible for a person to have one copy of HLA-DQ2 knows as **heterozygous** or two copies of HLA-DQ2 known as **homozygous**.

In the case of having only one copy of DQ2 or DQ8 there is a risk of about 3% of being predisposed to celiac disease, whereas people who have two copies of either have a risk of 10%.

Almost all people with celiac disease have at least one DQ2 or DQ8 copy. More than 95% of people affected by celiac disease are carriers of DQ2, while 5% are carriers of DQ8.

HLA-DQ2

Let's talk about each gene variant a little.

DQ2 has serotypes under it.
The two most common ones are 2.2 and 2.5.

I thought to mention this as might show on your genetic test and this is just showing you which subvariant you have.

the highest risk is represented by the DQ2.5 which is homozygous genotype.(so remember that means you have two copies)

HLA-DQ8

This variant is linked mostly to **type 1 diabetes and celiac diease** and an increased risk for **rheumatoid arthritis**.

So remember it is not saying you will develop type 1 diabetes, arthritis or celiac disease but rather your have the **predisposition** or risk for developing it.

Only 5% of people who are affected by celiac are carries of the DQ8.

RISK

Different studies have shown that if you have Celiac disease, the risk of your first degree relatives is **7.5-10 %** and varies considerably depending on the degree of kinship (e.g., sisters and daughters have higher risk than fathers and sons)

So it is good if your family members test positive for the Celiac genes to monitor them for any display of **symptoms** and especially in children, get their **serology tested** from time to time.

WHY GENETIC TESTING?

Why get genetic testing?

Genetic testing can only be used to **rule out** Celiac disease but will not definitively confirm it.

Genetic testing tells you what you are **predisposed** to, so you have the predisposition to develop Celiac, it does not mean you have it.

If you think you might have celiac disease and you HAVE one of the genetic markers, **your doctor will need to perform more tests.**

Sometimes genetic testing is used when other serology or histology testing is inaccurate or inconclusive.

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The comprehensive **DNA Risk HLA-Related Autoimmunity** (HLA test) looks at gene variants related to common autoimmune diseases and provides healthcare practitioners 'diagnostic insight' for patients already suffering from an autoimmune disorder, or who are identified as at risk due to a family history of disease and exposure to environmental risk factors.

It's **Ideal for individuals suffering from an autoimmune disorder because if you have one autoimmune condition, more are likely to follow** or where an autoimmune disorder is **suspected** like in the case of Celiac Disease.

Individuals identified as being at risk due to a **family history** of disease and/or exposure to **environmental risk factors** should also consider this test.

As an accredited practitioner, your test results are sent directly to me and then we arrange a **feedback consultation** in which I give explain your results to you.

You will also receive your test results. You can then show these genetic results to your relevant healthcare practitioner when you are pursuing serology or histology testing.

So my job is to be the facilitator between the genetic testing company and you. In South Africa it is known as DNALysis and in other countries as DNA life. This is available in most countries.

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THE AUTOIMMUNE DISEASES DISCUSSED IN THE REPORT INCLUDE:

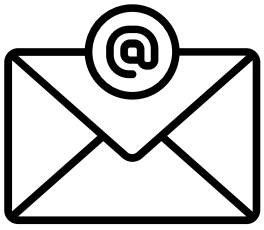
- Alopecia areata (AA)
- Ankylosing spondylitis (AS)
- Coeliac disease (CD)
- Graves' disease (GD)
- Hashimoto thyroiditis (HT)
- IgA nephropathy (IgAN)
- Lyme borreliosis
- Multiple sclerosis (MS)
- Rheumatoid arthritis (RA)
- Systemic lupus erythematosus (SLE)
- Vitiligo
- Idiopathic membranous nephropathy (IMN)

It is good to note that those who have an autoimmune condition are at risk of developing other autoimmune conditions too. One that is on this list that is closely linked to celiac is **Hashimoto Thyroiditis.**

Contact me for more information of getting your Genetic testing

Please feel free to reach out to me to find out more information. This test and many more are available to anyone worldwide. All feedback consultations are done via zoom.

Please also sign up for the newsletter to keep up to date on all webinars and presentations on the Gluten Dilemma, I have many more paid and free ones coming as well as one dedicated to genetics and how you can optimize your overall health.



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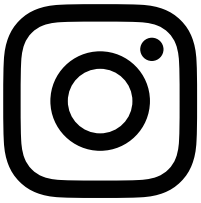

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