

# TESTING

Since symptoms can be similar between NCSG and Celiac Disease, it is very important to get **serology** testing done. This is where you would start. You must be on a normal gluten containing diet when you get this blood test done. This is because your body needs to be creating the antibodies that are reacting to gluten. When you remove gluten from your diet, the level of antibodies begin to die down. One study showed that antibody's fell within one month of having started a Gluten-free diet.

The main blood test regarded as the gold standard is the **tTG-IgA test**. It looks for antibodies called tissue transglutaminase IgA in people who are eating gluten. The tTg-IgA test is positive in **98% of people** who have celiac disease.

In South Africa, this blood test is known as the **Coelic screen** (which includes tTG-IgA +Gliadin IgG). In Celiac Disease, the body produces antibodies called transglutaminase (TTG) These will be high in someone who tests positive for Celiac Disease. IgA (Immunoglobulin A) is also tested to rule out IgA deficiency. **IgA deficiency** is a genetic immunodeficiency condition in which individuals do not make or have very low blood levels of IgA antibodies. This is also linked to Rheumatoid arthritis and lupus.

If the blood test is negative, it could be because you are Non-Celiac gluten sensitive or you could have another condition in which symptoms are similar such as Amylase trypsin Inhibitor (ATI); FODMAP sensitivity; Cross reactivity or other factors contributing to IBS like symptoms that present similar to Gluten intolerance.

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It is good to note that diagnosis differs from Country to country as well as between medical practitioners. In South Africa, Ampath states the following:

## Coeliac disease

The definitive diagnosis is usually identification of villous atrophy by examination of small intestinal biopsy followed by a clear improvement once the patient is on a gluten-free diet.

- Total IgA
- Endomysial IgA
- Tissue Transglutaminase IgA
- Gliadin IgA
- If total IgA <0.3 g/l do:
  - Endomysial IgG
  - Tissue Transglutaminase IgG
  - Gliadin IgG
- HLA DQ2 / HLA DQ8

Positive anti-tissue transglutaminase (TTG) antibodies and endomysial antibodies (EMA) are associated with a high probability for Coeliac Disease.

HLA DQ2 / DQ8 typing is a useful tool to determine if the patient is genetically susceptible to Coeliac Disease (CD). If HLA DQ2 / DQ8 testing is negative, CD is excluded or highly unlikely. The HLA DQ2 allele is found in 90 – 95% of individuals with CD and the remaining 5 –10% possess the HLA DQ8 allele.

In symptomatic patients with high anti-TTG IgA levels (> 10x ULN), verified by EMA positivity and who are HLA DQ2 and / or HLA DQ8 positive, histological assessment may be omitted.

If a diagnosis of CD has been made, a gluten-free diet (GFD) should be instituted. Follow up regularly for symptom improvement and normalisation of CD-specific antibodies – in general this is achieved within 12 months of starting a GFD.

In Ampath's case, the diagnostic method would be first to test Total IgA, EMA, tTg-IgA, Gliadin IgA and **optional Genetic testing if some tests prove inconclusive**. Sometimes a positive TTG and EMA test is enough for some practitioners. Other times, in those whose serology testing shows positive, and who carry the HLA genes, histological (the study of tissues and cells under a microscope as in the procedure of endoscopy/gastroscopy with biopsy) can be omitted.

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It is good to note that the blood tests you will be required to do differs from Country to country as well as between medical practitioners.

Here are a list of possible Tests you can get done:

Tissue Transglutaminase IgA antibody (tTG)

Deamidated Gliadin Peptide IgA/IgG antibody (DGP)

Anti Emdomysial Antibody (EMA IgA (this is an earlier version of the tTG and is starting to fall away)).

Total IgA - also used to detect IgA deficiency

tTG-IgG / tTG-IgA

## EXAMPLES OF TESTING

### CASE 1

Person tested positive for HLA DQ2a nd DQ8 but tTG and DGP was negative

option: get further blood tests done such as IgA, tTG-IgA and endoscopy.

### CASE 2

Person tested low for IgA but had a positive ANA that was speckled.

option: low IgA could indicated IgA deficiency but since ANA shows the immune system is making antibodies, it could indicate another condition like lupus. could check for tTG-IgG.

### CASE 3

tTG-IgA and tTG-IgG negative

DGP-IgA positive

DGP-IgG negative

Could test IgE for wheat allergy and further genetic testing to rule out Celiac Disease.

BOUNTIFULLY HEALTHY

# IF YOU TEST POSITIVE...

If you test positive for the blood test, you may be required/asked to do a biopsy of the intestinal wall. This is done via an **endoscopy**. An endoscope is a flexible tube with an attached camera that allows your doctor to see what is going on inside of you. Your doctor can use forceps and scissors on the endoscope to operate or remove tissue for biopsy. The tissue is examined to check for damage to the hairlike projections that line the intestinal wall called villi.

It can help to know how damaged your intestine is so that you can take steps to repair and rebuild it. Your **gastroenterologist** will most likely refer you to a dietician or nutritionist who specializes in Celiac Disease or gut related damage so that you can get the best care.

An experienced **health coach** in Celiac disease can also assist along with your health care team. This is because unless a health coach is also a dietician or nutritionist, they are limited in being able to help with meal plans and cannot prescribe supplements. However, a health coach who has lived with this condition herself can help you in the **transitioning, adapting and challenges** you will encounter that perhaps someone who has not been through this themselves, will not know how to assist you. That is why a health coach **works WITH other health care providers** so that you can get all the help you need in every avenue.

Changing your lifestyle for LIFE can be very emotionally and mentally taxing and some even experience a form of grief as well as develop social anxiety and depression.

## IF YOU TEST POSITIVE...

As a health coach I help people with this part of the process to make the necessary **practical adjustments in food**. I also assist you in coping with the **emotional strain, social anxiety and difficulties around transitioning**.

It is important you get the right medical care after diagnosis. As it does not end at a blood test and biopsy. **Nutritional labs** needs to be done to check nutrient deficiencies ( Vitamin B12, Vitamin D, Vitamin A, C, Iron, ferritin) and these should be done every year for the **rest of your life**.

It is also good to note that Celiac Disease can cause or lead to other **autoimmune conditions**. It can affect many parts of the body and systems such as the endocrine system (adrenals, hormones, glands). The gallbladder and pancreas. The liver and kidneys. Other conditions often associated with it are rheumatoid arthritis, dermatitis herpiformis, thyroid disease, kidney stones as well as osteoarthritis. Contact me for a **HLA-Autoimmune risk DNA test** that covers testing for risk of 12 different autoimmune conditions including celiac disease.

**A note on children:** It is especially important not to ignore symptoms in children. delayed medical intervention can result in **severe malnutrition, delayed growth, delayed puberty and in girls delayed menses**. In some cases growth and development are permanently set back, depending on the damage caused. As a parent who has been through this with my daughter, I understand how hard it is to cope with and to see your child struggle. Personally I think it is harder because of the social aspect they face on a daily basis at school. Feeling left out and different with school lunches, parties and cake sales etc. If you are a parent facing this, both you and your child (depending on their age) can benefit from health coaching to get the education, support and guidance you need.