# Dr. Iwona Wrobel Interview

#### What causes celiac disease?

If you do not have the 2 genetics then you will not have celiac disease. 4 in 10 have the genes. 2 out of 100 develop celiac disease.

#### Once the villi are damaged from celiac disease can they recover back to normal?

The villi recover completely if you follow a strict gluten free diet. Even if the villi are completely flat they can still recover over several months. Biopsy and endoscopies are used to check the health of villi.

#### How do genetics affect the likelihood of developing celiac disease?

HLA - DQ2 and HLA - DQ8 can be subdivided into multiple different genes. Every person has a different part of the genetic where the gluten hits it and gives them an autoimmune reaction. The position of these genes determines if you have celiac disease or not. They have to be positioned in a certain way for the gluten to trigger it.

## How does switching to a gluten-free diet affect the overall nutritional intake of individuals with celiac disease?

People following a gluten free diet, typically are intaking less grains and are missing fibre in their diet. Vitamin B complex is very popular to be missing when being on a diet with no gluten. These are some of the reasons as to why people with celiac disease get recommended to take multivitamins.

# Can you detect whether or not you are going to develop celiac disease in the future?

If a person is curious about whether or not they have celiac disease, they can take a genetic test to look at their genes. If they have the two genes and they are in the position that could cause celiac disease, then they would have a chance of developing it, but if they do not have any of the two genes, or they are positioned differently then there is no chance they will develop celiac.

#### Why are the numbers of people getting diagnosed with celiac disease growing?

The largest difference is the ability to diagnose and how it has advanced over time. A couple of decades ago, only 1 in 1000 would have celiac disease, as they would only test them if somebody said they need to get screened for celiac disease or want a test to check for different medical conditions. Now, the average number of people that are getting diagnosed is 2 in 100, because now the screening is usually included in bloodwork. The environment compared to now and before is very different, with higher pollution and other chemicals being used and emitted everyday. This is another reason that is causing more people to get diagnosed.

# Does nationality or age affect the number of people that are diagnosed with celiac disease?

Something that doctors had noticed is that people with European ancestry had a higher incidence than other nationalities, although they realized over time that other continents are getting just as high in incidence with celiac disease. It has been shown that kids are currently getting diagnosed more frequently than adults and seniors. Typically, girls get diagnosed at an earlier age compared to boys and it tends to be that slightly more females are diagnosed with celiac disease.

# Is there any other treatment for celiac disease other than going on a gluten free diet?

Researchers are currently trying to look into why the body responds to gluten in a way like how it does to a person with celiac. They figured out that gluten brings the immune cells to the bottom of the villi and these cells produce antibodies and chemicals, causing the villi to fall. They first looked into trying to modify gluten, so that it would be harder for the body to recognize. Secondly, they looked into, if there is a way that the body will be able to break down the gluten before it reaches the villi. Currently, there is no medication, but everyday they are getting closer to finding a permanent cure without going on a gluten free diet.

### How do villi absorb nutrients?

The villi collect the nutrients, and it then goes into the capillaries, which takes it to blood vessels. Capillaries spread the nutrients throughout the entire body.