

GENETIC TESTING for CELIAC DISEASE

Celiac disease is an autoimmune disorder. For someone with this condition, the immune system reacts to the presence of gluten in the diet. Gluten is a protein in grains such as wheat, barley, and rye. Over time, exposure to gluten causes damage to the small intestine. Celiac disease affects people of all ages, from infancy to adulthood, and tends to run in families.

About 1% of the population has celiac disease, but over 40% of the population may be genetically susceptible to this condition. Having a genetic susceptibility does not mean you have celiac disease or that you need to follow a gluten-free diet.

What can genetic testing for celiac disease tell me?

Genetic testing can look for genes that make it possible to develop celiac disease. The two genes seen in celiac disease are part of the immune system and are called HLA-DQ2 and HLA-DQ8. HLA genes help your body recognize foreign invaders, such as viruses and bacteria. Having either of these HLA types (DQ2 or DQ8) makes a person more likely to develop celiac disease. One in 20 people who carry DQ2 and 1 in 150 with DQ8 have celiac disease. Although many people carry these HLA types, most people with these genes will never have celiac disease and do not need to avoid gluten.

It is important to know that **genetic testing cannot diagnose celiac disease or tell you if you will develop this condition in the future.**

A diagnosis of celiac disease is made by antibody testing, intestinal biopsy and clinical symptoms. Antibody testing measures the body's immune reaction to gluten. An intestinal biopsy takes a tissue sample from the small intestine to look for damage caused by celiac disease. Both antibody testing and intestinal biopsy can only diagnose celiac disease when gluten is still part of the diet.

Genetic testing is sometimes done when antibody testing and intestinal biopsy results are unclear. If a person does not carry either DQ2 or DQ8, it virtually rules out a diagnosis of celiac disease and indicates an extremely low risk for ever developing the disease. If genetic testing shows you have either of the risk genes, it means it is *possible* for you to develop celiac disease. However, it does not mean you actually have celiac disease.

*For more information search for “**celiac disease**” on My Doctor Online:*

<http://mydoctor.kaiserpermanente.org>

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