



# Antibody Blood Tests

Researchers have discovered that people with celiac disease who eat gluten have higher than normal levels of certain antibodies in their blood. Antibodies are produced by the immune system in response to substances that the body perceives to be threatening. Think of antibodies as a sending out a warning signal to the body—only in the case of an autoimmune disorder like celiac disease, the warning signal sounds for something that is supposed to be safe—the proteins in wheat, rye and barley that are generically known as “gluten.”

## Antibody Testing: Only A First Step

To help diagnose celiac disease, physicians first test blood to measure levels of certain antibodies. These antibodies are anti-endomysium and anti-tissue transglutaminase. A positive antibody test indicates only that a person needs a biopsy; it is not a diagnosis in and of itself.

Antibody tests measure your immune system’s response to gluten in the food you eat. Your doctor may order a panel of tests to aid in diagnosis, or order one or several to see if you may need further evaluation. The blood for these tests are usually sent to one of only a few labs in the country that are best suited for conducting the test and interpreting the results. These laboratories include Prometheus Labs, Quest Diagnostics and the Mayo Clinic.

## Which tests do I need?

If my positive antibody test suggests I may have celiac disease, how do I find out for sure?

If antibody tests and/or symptoms suggest celiac disease, the physician needs to establish the diagnosis by obtaining tiny pieces of tissue from the small intestine to check for damage to the villi. This is done in an endoscopic biopsy procedure. The physician eases a long, thin tube called an endoscope through the mouth and stomach into the small intestine, and then takes samples of the tissue using instruments passed through the endoscope.

Biopsy of the small intestine is the only way to diagnose celiac disease.

## Why is it necessary to have the endoscopic biopsy?

It is important to know that the blood testing can only confirm that you do not have celiac disease. This is why the biopsy is necessary if your test results are positive, to confirm the results. It is important to definitively establish the presence of celiac disease and rule out the presence of other conditions, including food allergies, a far more common condition.

## What do I do if I have a negative blood test (or panel) but I'm still having symptoms?

While it is rare, it is possible for patients to have a negative antibody test results and still have celiac disease. IgA deficiency is one example where this could occur. Further medical evaluation is important for anyone who is still experiencing symptoms, to establish the diagnosis or to rule out celiac disease as a part of establishing another diagnosis.

## Find Out For Sure

Antibody tests are only accurate when a patient is on a gluten-containing diet. Those concerned about celiac disease are strongly discouraged from starting a gluten-free diet without having had a firm diagnosis. Any change in the diet, even for as little as a month, can complicate the diagnostic process.

## Screening Test:

anti-tissue transglutaminase (tTG-IgA)

A screening test is commonly used when an individual is in a risk group for celiac disease, whether or not he/she has symptoms. This test is usually the one offered for celiac screening events, as it is the most sensitive test available.

## Other Tests:

- Total Serum IgA to test for IgA deficiency (this health condition can affect accuracy of antibody test)
- Anti-endomysial antibody test (EMA-IgA)  
EMA-IgA are very specific for celiac disease but they are not as sensitive as the tTG-IgA.
- HLA-DQ2 and HLA-DQ8 gene tests for celiac disease

The "gene tests" are not antibodies: they can be used to exclude celiac disease (if negative) in doubtful cases

NOTE: Anti-gliadin Antibodies (AGA-IgG and AGA-IgA) are no longer used to test for celiac disease due to a low level of accuracy in people who have not yet been diagnosed.

**For more information contact the University of Chicago Celiac Disease Center at 773.702.7593 or [www.CeliacDisease.net](http://www.CeliacDisease.net).**

## Does this apply to you?

It is important to note that some people with Type 1 Diabetes, Hashimoto's thyroiditis and autoimmune liver conditions can have a falsely positive tissue transglutaminase test. For this reason, it is important that tTG test results in people with these conditions be checked with the EMA test. The physician may nevertheless want to obtain an intestinal biopsy if clinically indicated, even if EMA are negative.

## One More Thing...

People with IgA deficiency require a different version of the antibody tests listed above. The tTG and EMA tests have IgG versions and these tests will then be accurate for someone with IgA deficiency. IgA deficiency is diagnosed when someone has a total serum IgA test and the results are very close to zero. This is not a test for celiac disease, but a means to make a more accurate diagnosis.



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