

About.com > About Health > Thyroid Disease > Conditions Common in Thyroid Patients or Related to Thyroid Disease

## Cyrex Array Three: A Better Test for Gluten Sensitivity?



By Mary Shomon  
Thyroid Disease Expert

f SHARE

p PIN

+

Ads Celiac Disease Thyroid Gluten Celiac Diet Celiac Symptoms Symptoms Hypothyroidism Under Thyroid Symptoms Hearing Problem Symptoms



The new Cyrex 3 test helps identify both celiac disease and non-celiac gluten sensitivity. David Silverman/Getty Images News/Getty Images

A new laboratory test offers clinicians a screening tool to identify gluten reactivity—an important factor when considering a diagnosis of [Celiac disease](#), or *non-Celiac gluten sensitivity*. [Celiac disease](#) and gluten sensitivity are associated with an increased risk of [autoimmune diseases](#), including [thyroid](#)

[conditions](#) like [Hashimoto's disease](#) and [Graves' disease](#).

[Celiac disease \(CD\)](#) is a confounding, frustrating condition that occurs when your immune system identifies gluten as an antigen.

The resulting inflammatory response from your immune system can bring on a cascade of symptoms and potential tissue damage.

Symptoms similar to those produced by Celiac disease are experienced with [non-Celiac gluten sensitivity \(NCGS\)](#). There is an important difference between symptoms caused by an immune response—or a physical intolerance for gluten products. Because of the inflammatory immune response associated with Celiac disease—knowing what you are up against—is important.

In June of 2015, Cyrex Laboratories launched its [Array 3 Wheat/Gluten Proteome Reactivity and Autoimmunity](#) test panel. Cyrex is a clinical immunology laboratory specializing in functional immunology and autoimmunity. The test aims to provide healthcare professionals with accurate results for identifying gluten sensitivity and autoimmune reactivity.

We caught up with Ms. Jama Lambert, Director of Education at Cyrex Laboratories, to talk about the new test.

## **Celiac Disease or Non-Celiac Gluten Sensitivity?**

There are already several [Celiac screening tests](#) on the market.

Two common ones - the [tTG-IgA test](#) and the [DGP IgA and IgG](#) -- measure antibodies synthesized by the immune system when antagonized by different proteins. The first, TTG, is tissue [transglutaminase](#), an enzyme released in the small intestine during an active autoimmune response. The second, DGP, is a protein found in gliadins, and is abundantly present in cereal grains.

Symptomatic patients who react to proteins outside this narrow band can receive false negative results [and be misdiagnosed](#)—leaving them at risk for untreated symptoms of an autoimmune reaction to the gluten they continue to consume.

## **How Does the Cyrex 3 Array Differ From These Two Tests?**

According to Cyrex's Jana Lambert:

*The standard Celiac screening test usually includes tissue transglutaminase – 2 IgA. Cyrex Array 3 contains tTG2 IgA as well as tTG2 IgG. The DGP measure of deamidated gliadin is one of the of the gluten proteins assessed on the Array 3. Studies have shown that 50 percent of celiac patients do not react to this one protein from wheat. Instead, they react to protein that is not assessed. If measuring only this one protein from wheat, such a patient would get a false negative result.*

*Wheat is made up of over 100 proteins, yet [the standard blood work for Celiac disease](#) assesses only one protein from wheat.*

*Since 2002, researchers have called for an expansion of the assessment for gluten reactivity because 50 percent of Celiacs do not react to that one protein. Papers, by [Camarca](#), [Vader](#), and [Vojdani](#) et al., outline the proteins of wheat to which Celiac patients reacted rather than deamidated alpha-gliadin-33-mer.*

*Cyrex Laboratories looked at what those researchers were finding to be the most antigenic to humans and put those proteins on Array 3. By assessing multiple proteins from wheat, Array 3 has increased sensitivity for identifying wheat/gluten reactivity, and greatly reduced the chance of getting a false negative result. A false negative is when the test comes back negative (not reactive) but the patient actually does have a reactivity to, in this case, gluten proteins.*

The big differentiator with the Cyrex Array 3 is, therefore, the ability to identify gluten reactivity *and* effectively measure antibody production against multiple—in this case, eight—wheat proteins, peptides and enzymes.

## **Can the Array 3 Panel Replace Multiple Screening Tests for Celiac Disease?**

According to Lambert, the Array 3 tests for the traditional wheat protein and transglutaminase evaluated in other tests, plus it provides an expanded look at other gluten family proteins, additional transglutaminases and markers of known triggers of autoimmunity/tissue damage.

Array 3 also tests for more than traditional Celiac disease in that it can help a practitioner differentiate between possible Celiac disease and non-celiac gluten-sensitivity. Not every person's gluten-reactivity manifests as Celiac disease—some patients have dermatitis herpetiformis or psoriasis, while others may have gluten ataxia. Assessment of the various transglutaminases helps to identify these types of reactivity.

Array 3 includes transglutaminase-3 and transglutaminase-6, respectively as well as two additional markers that can identify triggers of autoimmunity and intestinal damage, namely Wheat Germ Agglutinin and the Gliadin-Transglutaminase Complex.

## **What About Non-Celiac Gluten Sensitivity?**

According to the [National Foundation for Celiac Awareness \(NFCA\)](#), about 18 million people suffer from non-Celiac gluten sensitivity, about six times as many people who suffer CD. There is no known causal mechanism for either condition.

The purpose of Array 3, according to Lambert, is:

*...to help clinicians identify gluten-reactivity in their patients. The clinician can use these test results in conjunction with other pertinent clinical information to determine if the patient has possible Celiac disease, non-celiac gluten-sensitivity, autoimmune reactivity and/or intestinal damage."*

According to Dr. David Perlmutter, MD, FACN, and author of the *New York Times*' best seller *Grain Brain*:

*The Cyrex Array 3 offers the most comprehensive analysis available for determining gluten sensitivity, this array has proven incredibly valuable in my practice by providing in-depth information about an issue that has wide clinical implications.*

## **Understanding the Fine Print**

The Array 3 is not a diagnostic tool. A healthcare provider can use the results of Array 3, along with other clinical information, to make an assessment about the possibility of CD, non-Celiac gluten sensitivity, and autoimmune reactivity.

If you want to learn more, or are interested in using the Array 3, here are some tips:

- Talk to your physician about the test, and whether it might be right for you. The [test is available](#) through Cyrex Laboratories, where your doctor can open an [account](#) to order the test for you.
- Patients obtain the collection kit from their ordering physician with a requisition form. Shipping is free. The patient obtains a blood draw from a lab. Unless the facility is under contract with Cyrex, the fee for the blood draw is paid by the patient.
- Results are delivered to your doctor through their Cyrex account to discuss with you.
- Cyrex Laboratories does not currently have a contract relationship with any healthcare provider, including Medicare. The cost of the Array 3 test is \$325.00. Upon payment, you can submit your receipt to your insurance provider for potential reimbursement.

For a serious, damaging autoimmune condition like Celiac disease that responds to -- and can in many cases be completely resolved with dietary changes - time is of the essence in diagnosis. Responsive tests like the Array 3, in conjunction with other screening tools and methods, may help you learn more quickly what you can do to regain your health and wellbeing.