

## Array 1: Gluten Sensitivity Screen

### **A simple, affordable way to screen for Celiac Disease and Gluten Sensitivity using saliva.**

In the Journal of Pediatric Gastroenterology and Nutrition, this test has just been shown to be as effective as the current blood tests (which are not fool-proof), yet it's an affordable screen. We recommend it be considered for Patients who:

- Are suspected of having **mucosal abnormalities** (The mucosal lining is the tissue which lines various passages and cavities exposed to the air - such as the mouth, nose, GI tract, vagina, and the lungs. It is the first, the earliest response of the immune system to allergenic foods.)
- Are **suspected** of having Gluten Sensitivity or Celiac Disease
- Have **relatives** with Gluten Sensitivity or Celiac Disease
- Have a **family history** of autoimmune Disorders
- Those unable or who refuse to do a more comprehensive blood test
- Patients not responding as expected to **any** health concern

The saliva is the best way to detect gluten sensitivity early, even before symptoms manifest. The gut has to be severely damaged in order for a blood test to be dependable. Because it uses a saliva sample, this test is easy to use with children. This is a great test for people who have a family history of any autoimmune disease, even if they're asymptomatic (no symptoms). Since so many autoimmune diseases are triggered by gluten, this test shows the patient that a gluten-free diet may help prevent him or her from going down the same path as other family members that may be experiencing disease.

#### **The Gluten Sensitivity Screen includes:**

**Total secretory IgA.** Antibodies are used in testing to determine whether the immune system is reacting to something. Secretory IgA, a type of antibody, is a 'First Line of Defense'. Its job is to keep invading pathogens, such as viruses, bacteria and food proteins from attaching to the gut lining. When the layer of mucosa that protects the lining of the digestive tract breaks down or becomes dysfunctional, total secretory IgA may be too low or too high. This means you could have too few or too many antibodies to test properly, even though you are gluten sensitive. This marker screens for that.

**Gliadin IgA + IgM antibodies.** IgA antibodies are used to screen for gluten sensitivity. However, if IgA antibodies are low due to weak immunity, another type of antibody called IgM will be high. Screening for both gives a more accurate view of immune status and thus test results.

**Transglutaminase IgA + IgM combined antibodies.** Transglutaminase is an enzyme in the digestive tract targeted in an autoimmune attack triggered by gluten. If this marker comes back positive you know gluten is attacking gut tissue through an autoimmune attack.

It is however, important to note that studies have shown that 50% of those with Celiac Disease are not sensitive to Gliadin, hence, there is still a possibility to miss 50%. When negative results are obtained with Array 1, yet symptoms seem to be apparent, Array 3 is recommended as it is extremely sensitive and comprehensive.

## Array 2: Intestinal Antigenic Permeability Screen

### **A test that identifies how gluten is robbing you of gut health**

Gluten causes inflammation in the gut, which eventually leads to intestinal permeability, or "leaky gut." Leaky gut allows undigested food particles, bacteria, and other pathogens to escape into the bloodstream where they can trigger allergies, sensitivities, and inflammation in other parts of the body. This is a main reason why people come back allergic to many foods. Several different mechanisms cause leaky gut:

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Breakdown of cells  
Loosening of the junctures of the gut lining  
Bacterial infection  
This test pinpoints which of these is causing leaky gut so your practitioner knows what to specifically target for faster and more efficient gut repair.

## Array 3: Wheat/Gluten Proteome Sensitivity and Autoimmunity

### **More than one wheat protein can cause Gluten Sensitivity - Cyrex Labs tests for ten peptides of gluten**

Being Gluten Sensitive isn't as black-and-white as once thought. Actually, gluten is a misnomer - "gliadin" is one portion of wheat that triggers an immune response in people (since "gluten" is commonly used I will stick with that term). It also has been discovered that wheat is made up of more than 100 different components that can cause a reaction, not just one (gliadin).

Until now testing for Gluten Sensitivity has only been against one of those components, alpha gliadin. Through extensive research Cyrex pinpointed the twelve components of wheat that most often provoke an immune response.

This new test greatly expands the parameters of gluten sensitivity testing, catching those who may have previously tested negative because they don't react to the alpha gliadin. A 'false negative' occurs when the (current) test says a person is 'ok' and they are not. I believe we will no longer see as many 'false negatives'.

### **Opioid testing**

Array 3 also tests whether gluten has a drug-like opiate effect on an individual. Is gluten affecting your brain? Some people have enzymes in their digestive tract that break gluten down into opioids that act like heroin or morphine. Embarking on a gluten-free diet can cause terrible withdrawal symptoms in these people. One practitioner tells of a patient whose withdrawal symptoms were so severe she went to the emergency room. Another problem with opioids is they disrupt brain function by attaching to receptor sites normally meant for neurotransmitters. Neurotransmitters are brain chemicals that help dictate our personality, moods, behavior, bodily function, and more.

This opioid effect on neurotransmitter receptors explains why gluten plays a role in so many cases of ADD/ADHD, autism, or behavioral problems in children; or brain fog, depression, anxiety, schizophrenia, anorexia and migraines in adults. When one mother put her autistic son on a gluten-free diet, he began eating the binding out of books as he was so desperate for his gluten-opioid "fix."

Array 3 screens for antibodies to the opioids produced from wheat called Gluteomorphins and Prodynorphins.

## Array 4: Gluten-Associated Sensitivity and Cross-Reactive Foods

### **24 foods that cross-react with gluten or are newly introduced to a gluten-free diet.**

One of the most frustrating scenarios for both the practitioner and the patient is when a

gluten-free diet fails to have any effect on a person who seems so clearly gluten sensitive. Newer research shows this may be due to cross-reactivity. In cross-reactivity the body mistakes another food for gluten and reacts accordingly. Array 4 tests for 24 different foods that may be causing cross-reactivity.

**Dairy** - Cross-reactivity is common with dairy as its structure so closely resembles that of gluten. In fact 50% of people who are sensitive to gluten are also sensitive to dairy.

**Coffee surprisingly, can cross-reactive with gluten** - However Cyrex researchers were surprised to find coffee has the highest rate of cross-reaction with gluten. In other words, some people's (not everyone's) immune system mistakes coffee for gluten, triggering a reaction. This test informs people whether one needs to give up coffee (gasp!) to prevent gluten cross-reactivity.

**Amaranth and quinoa** - Array 4 also tests for foods that many people eat for the first time on a gluten-free diet, such as amaranth or quinoa. Never having been exposed to these foods could trigger the immune system to respond as if these grains were foreign intruders, especially in the case of a leaky and inflamed gut. This panel has great clinical significance as it explains why people still react even after giving up gluten and even dairy.

### Array 5: Systemic Autoimmune Reactivity Screen

#### Which parts of the body are affected by a gluten-sensitivity?

People typically shrug off the possibility of gluten sensitivity by saying, "I don't have any digestive problems." Little do they know that gluten produces digestive symptoms in only a minority of people (1 out of 8). For the majority gluten damages the brain, the heart, the skin, the respiratory tract, or the joints.

The new Cyrex Array 5 can be useful for Patients who:

- Have been diagnosed with an autoimmune disorder, as they commonly develop additional autoimmune conditions
- With chronic increased intestinal permeability, which is the gateway for environmentally- induced autoimmune disorders

The new Cyrex Array 5 will help you assess predictive antibodies. As you know, elevated numbers of antibodies, known as Predictive Antibodies, are measurable up to ten years before the clinical onset of the disease. Identification of pathogenesis at this stage allows for the possible arrest or even reversal of disease progression. Array 5 - Systemic Autoimmune Reactivity Screen™ looks at multiple tissues commonly targeted by auto-antibodies, including Cardiovascular, Endocrine, Joint, Gastrointestinal and more.

**It is wise to consider testing.** It can be life changing.