

Celiac & Gluten Sensitivity Blood Spot

Celiac disease (CD) is often undiagnosed and is caused in genetically predisposed individuals by abnormal intestinal permeability and abnormal immune response to gluten, a protein complex found in wheat, barley, spelt and rye. The inflammatory autoimmune response damages the lining of the small bowel and is associated with diarrhea, bloating, fatigue, nutritional deficiencies, and systemic autoimmune conditions. Gluten sensitivity can cause similar symptoms but without the same level of tissue damage. The Celiac & Gluten Sensitivity profile from Doctor's Data helps differentiate between CD and gluten sensitivity by evaluating the serum titers of IgA and IgG for deamidated gliadin peptide, gliadin, and gluten.

Turnaround Time

3 to 5 days

Analytes Tested

Analyte	CPT	ABN Required
Deamidated Gliadin Peptide (DGP) IgA	83516	No
Deamidated Gliadin Peptide (DGP) IgG	83516	No
Gliadin IgA	83520	No
Gliadin IgG	83520	No
Gluten IgG	86001	Yes

This test is useful for

- Patients who have persistent skin conditions (rash) or ataxia, idiopathic neurological conditions, autoimmune arthritis/ thyroiditis, unexplained weight loss or persistent gastrointestinal symptoms that are not associated with enteropathogens

- Symptomatic individuals that have tested positive for the HLA DQ2/DQ8 genotypes
- Patients with symptoms or symptom exacerbation with dietary gluten or re-introduction of gluten after a trial elimination of gluten
- Individuals that have a first degree relative with a diagnosis of CD
- Any child with a history of 3 or more antibiotic-treated cases of gastroenteritis while less than 6 months of age
- Patients on a gluten-inclusive diet who have Type I diabetes, Multiple Sclerosis or schizophrenia
- Individuals on a gluten-inclusive diet who have other laboratory evidence that may be associated with CD:
 - Elevated liver function tests
 - Bone demineralization
 - Evidence of impaired absorption of fat-soluble vitamins, iron, B12 or folic acid

Detailed Information

The Celiac & Gluten Sensitivity profile from Doctor's Data helps differentiate between CD and gluten sensitivity by evaluating the serum titers of IgA and IgG for deamidated gliadin peptide, gliadin, and gluten.

Celiac disease (CD) is often undiagnosed and is caused in genetically predisposed individuals by abnormal intestinal permeability and abnormal immune response to gluten, a protein complex found in wheat, barley, spelt and rye. The inflammatory autoimmune response is associated with extreme damage to the lining of the small bowel and is associated with diarrhea, bloating, fatigue, nutritional deficiencies, and systemic autoimmune conditions. Although most commonly diagnosed in children, CD is often not expressed until later in life (delayed onset). It has been hypothesized that a gradual or abrupt change in the gastrointestinal microbiome may be responsible for delayed onset. Non-Celiac gluten sensitivity (NCGS) can cause similar symptoms but without the same level of intestinal epithelial tissue damage.

Antibody tests that indicate possible CD and NCGS will only be accurate if the patient is on a gluten-inclusive diet. The test is also useful for monitoring adherence to a gluten-free diet.

Celiac Disease

CD may result in a variety of gastrointestinal (GI) and "extra-intestinal" symptoms. Common symptoms associated with CD include:

- GI – Diarrhea, steatorrhea, weight loss, bloating, flatulence, abdominal pain
- Systemic

- Fatigue
- Iron deficiency anemia
- Rashes and skin problems
- Peripheral neuropathy or ataxia
- Autoimmune arthritis or neurological conditions
- Failure to thrive (infants)
- Bone disease or loss of bone density
- Malnutrition
- Hormone and fertility problems
- Abnormal liver function tests

CD is also associated with other clinical disorders including thyroiditis, type I diabetes mellitus, Down syndrome, and IgA deficiency. Patients diagnosed with CD must remain on a gluten-free diet for life and avoid all gluten containing foods and grains (wheat, rye, spelt, barley). This test is clinically useful for monitoring patient adherence to a gluten-free diet. Gluten is present in almost all processed foods and many beverages. A complete list of foods containing gluten may be found at www.doctorsdata.com under

'Hidden Sources of Ingredients'.

Non-Celiac Gluten Sensitivity (NCGS)

Individuals with NCGS are often spared the intestinal damage common in Celiac patients, but suffer from abdominal pain, bloating, diarrhea, constipation, and many “extra-intestinal” symptoms such as “foggy mind”, depression, ADHD-like behavior, headaches, bone or joint pain, and chronic fatigue when they have gluten in their diet. There are many antigenic triggers (epitopes) in the gluten protein complex that have cytotoxic, immunomodulatory, and gut permeating properties.

Immune cells activated in the sub-endothelial space in the gut circulate throughout the body. Up to 50% of NCGS patients may only test positive for IgG anti-gliadin antibodies when on a gluten-inclusive diet.