IBS or celiac disease? Testing helps you know

Celiac disease and IBS testing for patients with suspected irritable bowel syndrome
Is your patient’s IBS actually celiac disease? The simple solution: consider testing for both.

A clinical challenge—and a readily available solution
Irritable bowel syndrome (IBS) and celiac disease are notoriously difficult to tell apart. Whenever IBS is suspected, evidence strongly suggests you should test for both.

**Reason 1: Prevalence**
Celiac disease is thought to be as much as 5 times more common among IBS patients than the general population (3.6% vs. 0.7%)\(^1\)

**Reason 2: Clinical recommendations**
A 2009 Expert Task Force from the American College of Gastroenterology recommended celiac testing for all patients with suspected IBS-D (IBS with diarrhea) and IBS-M (IBS-mixed)\(^1\)

**Reason 3: Cost-effectiveness**
Screening for celiac disease in patients with IBS-D may be cost-effective on the basis of preventing years of morbidity and attendant expense\(^2\)

**IBS vs. celiac disease**
IBS is a complex disorder with painful symptoms that vary from patient to patient. In the past, treatment required a trial-and-error approach. However, a new antibiotic, rifaximin, is now available for effective treatment of IBS.

Celiac disease can be fully managed without medication by restricting gluten intake with a gluten-free diet (GFD). Consequently, serum testing for suspected IBS is important—and every patient with suspected IBS should also be considered for celiac disease testing. The cost of overlooking a celiac disease diagnosis, as measured in patient suffering, is simply too high.
IBS or CD? Here's the story, in brief
- IBS and celiac disease share many signs and symptoms
- IBS and celiac disease are treatable
- Celiac disease is believed to have a higher prevalence in patients with suspected IBS-D (3.6% vs. 0.7%)\(^1\)

IBS patients with CD vs. general population
- Testing from Quest Diagnostics can confirm the presence of celiac antibodies and genetic markers in IBS-D cases
- Testing suspected IBS patients for antibodies and/or human leukocyte antigen (HLA) alleles can help you reach a differential diagnosis for celiac disease

The takeaway:
- Patients suspected of having IBS should be considered for celiac disease testing
- Testing for both IBS and CD can identify more patients who may benefit from either medicine or a GFD

For more information on new testing for IBS as well as our comprehensive menu for celiac disease, visit QuestDiagnostics.com/IBS or QuestDiagnostics.com/CD.
What is IBS?
IBS is a chronic and common disorder of the large intestine. It commonly causes cramping, abdominal pain, bloating, gas, diarrhea, and constipation.

Rome III: the gold standard in IBS classification
The Rome Criteria is a classification system for functional gastrointestinal disorders. Rome III is the benchmark for IBS diagnosis.3

Criteria must have been fulfilled for the previous 3 months, with symptom onset at least 6 months prior to diagnosis.

Subtyping IBS3
IBS subtypes are based on stool consistency and can be aided by use of the Bristol Stool Form Scale. There are 4 subtypes: with constipation (IBS-C), with diarrhea (IBS-D), mixed (IBS-M), and unclassified (IBS-U).

Serum testing for IBS now available
IBSDetex™ is a new tool for the IBS diagnostic workup:
- ELISA test based on 2 validated serum biomarkers
- Tests for the presence of antibodies to a toxin from gastroenteritis, CdtB, and vinculin, a protein commonly found in nerve centers in the lining of the gut
- A positive result supports a confident diagnosis of IBS associated with diarrhea (IBS-D or IBS-M) based on a large, randomized, controlled, published study of >2,500 patients4
- 3-day turnaround time
- Specimen requirements: 1 mL of serum from a non-gel barrier tube; room temperature

IBS-D/IBS-M pathophysiologic sequence
- Acute gastroenteritis
  - E coli, C jejuni, Shigella, Salmonella
- Bacterial toxin
  - Cytolethal distending toxin B (CdtB)
- Autoimmunity response
  - Vinculin
- Gut nerve damage
  - Reduced motility
- Bacterial overgrowth
  - Natural flow pattern is disrupted
- IBS
  - Bloating and abdominal pain
What is celiac disease?
Celiac disease is an immune reaction to eating gluten, a protein found in wheat, barley, and rye.
• Occurs in people with a genetic susceptibility
• Precipitated by gliadin, a component of gluten protein
• Improves with gluten withdrawal
• Manifests clinically in a wide variety of symptoms

How is celiac disease classified?
• **Classic:** features of malabsorption, fully developed villous atrophy, and GI symptoms
• **Atypical:** no GI symptoms but evaluated for iron deficiency anemia, short stature, osteoporosis, and other nonclassic symptoms
• **Silent:** no symptoms, features, or complications; found incidentally
• **Latent:** celiac patients on a GFD with normal histology or patients on a GFD with normal histology who will eventually develop celiac disease

What antibody tests are available for celiac disease?
The most sensitive celiac disease test, and an excellent first-line marker, is the tissue transglutaminase antibodies (IgA tTG) test. However, other antibody tests are also available.⁵

<table>
<thead>
<tr>
<th>Test</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antigliadin IgG</td>
<td>69–85</td>
<td>73–90</td>
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<tr>
<td>Antigliadin IgA</td>
<td>75–90</td>
<td>82–90</td>
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<tr>
<td>EMA</td>
<td>85–98</td>
<td>97–100</td>
</tr>
<tr>
<td>IgA tTG Human</td>
<td>93–96</td>
<td>99–100</td>
</tr>
</tbody>
</table>

What genetic tests are available for celiac disease?
All celiac patients carry 1 or both of 2 human leukocyte antigen (HLA) alleles: DQ2 and DQ8.
• 30% of Caucasians carry DQ2 and DQ8—therefore, genetic testing alone cannot diagnose celiac disease
• However, a negative test result for both DQ2 and DQ8 *rules out* celiac disease with 99% confidence⁶,⁷

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99%⁶,⁷ confidence ruling out CD with DQ2/DQ8 testing
Trust Quest Diagnostics for all your gastrointestinal (GI) testing needs. Our broad GI distress test menu is your assurance of having the right test for the right patient at the right time.

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Test Code</th>
<th>CPT Code(s)*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Celiac Disease</strong></td>
<td></td>
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<tr>
<td>Gliadin (Deamidated Peptide) Antibody (IgG, IgA)</td>
<td>8889</td>
<td>83516 (x2)</td>
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<tr>
<td>Gliadin (Deamidated Peptide) Antibody (IgA)</td>
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<tr>
<td>Gliadin (Deamidated Peptide) Antibody (IgG)</td>
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<td>83516</td>
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<tr>
<td><strong>HLA Typing for Celiac Disease</strong></td>
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<tr>
<td>Includes HLA-DQ2 (DQA1<em>05/DQB1</em>02), HLA-DQ8 (DQA1<em>03/DQB1</em>0302), HLA-DQA1*, HLA-DQB1*</td>
<td>17135(X)</td>
<td>81376, 81382</td>
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<tr>
<td><strong>Celiac Disease Comprehensive Panel</strong></td>
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<tr>
<td>Includes Tissue Transglutaminase IgA with Reflexes, Gliadin (Deamidated) Antibody IgA, and Total IgA, Serum with Reflex</td>
<td>19955</td>
<td>82784, 83516</td>
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<td><strong>Celiac Disease Comprehensive Panel, Infant</strong></td>
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<tr>
<td>Includes Tissue Transglutaminase IgA with Reflexes, Gliadin (Deamidated) Antibody IgA, and Total IgA, Serum with Reflex</td>
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<tr>
<td><strong>Celiac Disease Panel 2 with Reflex to Endomysial Antibody Titer</strong></td>
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<tr>
<td>Includes Gliadin (Deamidated) Antibody (IgG, IgA); Tissue Transglutaminase Antibody (IgG, IgA); Endomysial Antibody Screen (IgA); IgA, Serum. If the Endomysial Antibody Screen IgA is abnormal, Endomysial Antibody Titer is performed at an additional charge (CPT code(s): 86256).</td>
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<td><strong>Irritable Bowel Syndrome</strong></td>
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<td>IBSDetex™ Test</td>
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</table>

* The CPT codes provided are based on AMA guidelines and are for informational purposes only. CPT coding is the sole responsibility of the billing party. Please direct any questions regarding coding to the payer being billed.

** Panel components may be ordered individually.

For more information, contact your Quest Diagnostics sales representative or visit [QuestDiagnostics.com](http://QuestDiagnostics.com).

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