

Primary Care Update

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Celiac Disease: Concepts & Conundrums

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What is the Preferred Initial Test for Celiac Disease (CD)?

- A. Anti-gliadin antibodies (AGA)**
- B. Anti-tissue transglutaminase (TTG) antibodies**
- C. Anti-nuclear antibodies (ANA)**
- D. HLA DQ8**

Patients with CD Should Avoid all the Following Except?

- A. Bread**
- B. Beer**
- C. Barley**
- D. Wine**

All of the Following are Known Complications of CD Except?

- A. Lymphoma**
- B. Renal failure**
- C. Fractures**
- D. Esophageal cancer**

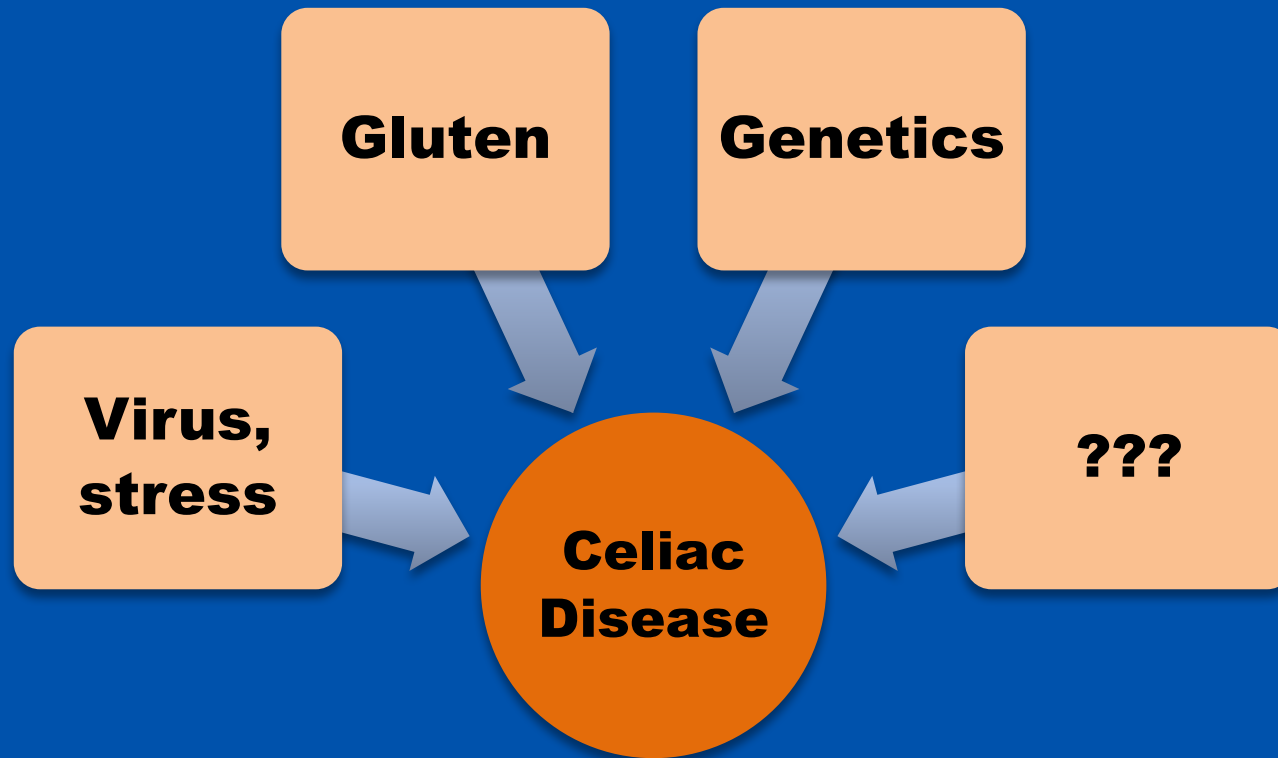
Celiac Disease (“Sprue”)

- **Autoimmune disease**
- **T-cell mediated reaction to gluten**
 - **Storage protein for wheat, barley, rye**
 - **Harmful to mucosal villi in small intestine**
- **One of the commonest causes of malabsorption**
- **Associated with other autoimmune diseases**
 - **Type 1 Diabetes (3-10%)**

Epidemiology

- **Prevalence 1%**
- **Highest in Europe, increasing worldwide**
- **Largely underdiagnosed in the US**
 - **Prevalence 1/200**
- **Females > males**
- **Affects 5-10% of first degree relatives**
 - **Should consider screening**

Pathogenesis



Symptoms

- **Diarrhea (commonest)**
 - ~20-50% fulfill Rome criteria for IBS
- **Dyspepsia**
- **Abdominal pain, bloating**
- **Unexplained iron deficiency anemia**
- **Unexplained LFT elevation**
- **Infertility**
- **Skin disorders**
 - **Dermatitis Herpetiformis**
- **Neuropathy**
- **Multisystemic!**



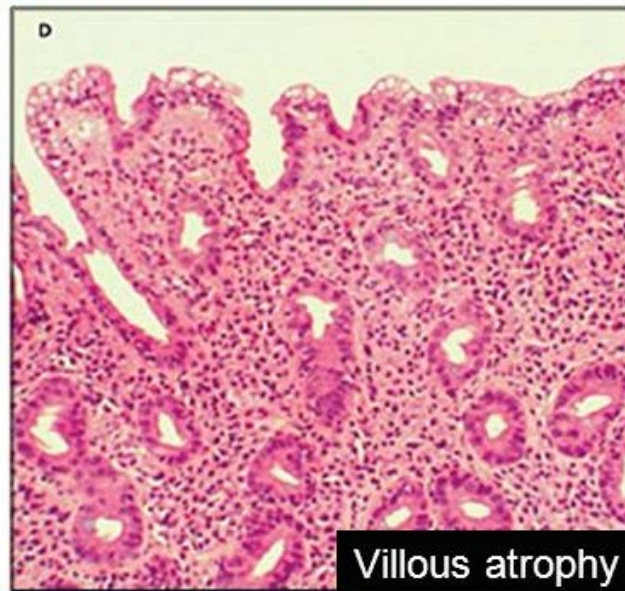
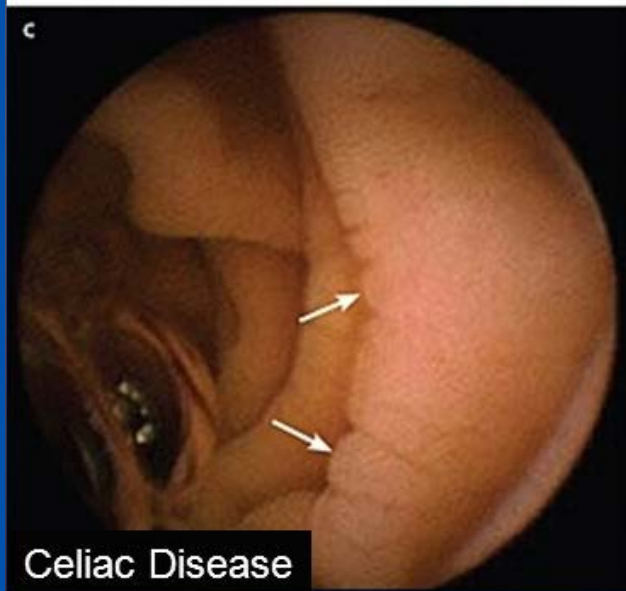
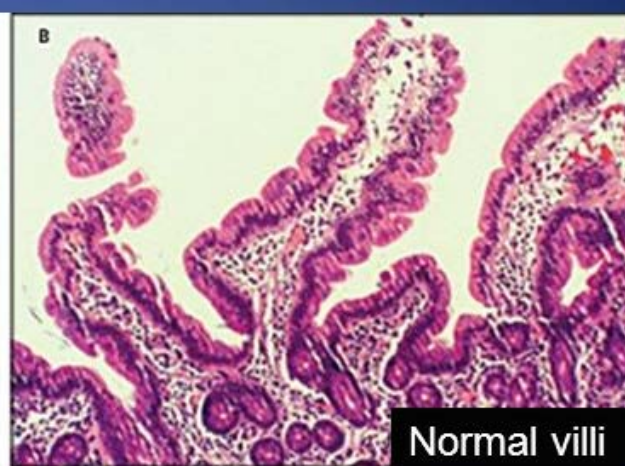
What Tests Should I Order?

- **Anti-tissue transglutaminase antibody, **TTG IgA**, is preferred**
 - **Sensitivity/specificity >95%**
- **Check total IgA levels**
 - **~2-3% are deficient → IgG based testing**
 - **TTG and/or deamidated gliadin peptides (DGPs)**
- **Anti-gliadin antibodies (AGA) are less specific**
- **If equivocal, genetic testing (HLA DQ2/DQ8), is useful to rule out CD**

When to Refer?

- **If positive serology or high clinical suspicion → send to GI**
- **Upper endoscopy with small bowel biopsies is gold standard!**
- **Testing should be done on a gluten diet**

Endoscopic Findings



Differential Diagnosis

- **Autoimmune enteropathy**
- **Medication induced enteropathy**
 - **Olmesartan**
- **Whipples Disease**
- **Common variable immune deficiency**
- **Collagenous sprue**
- **Crohns disease**
- **Small intestinal bacterial overgrowth**

Management

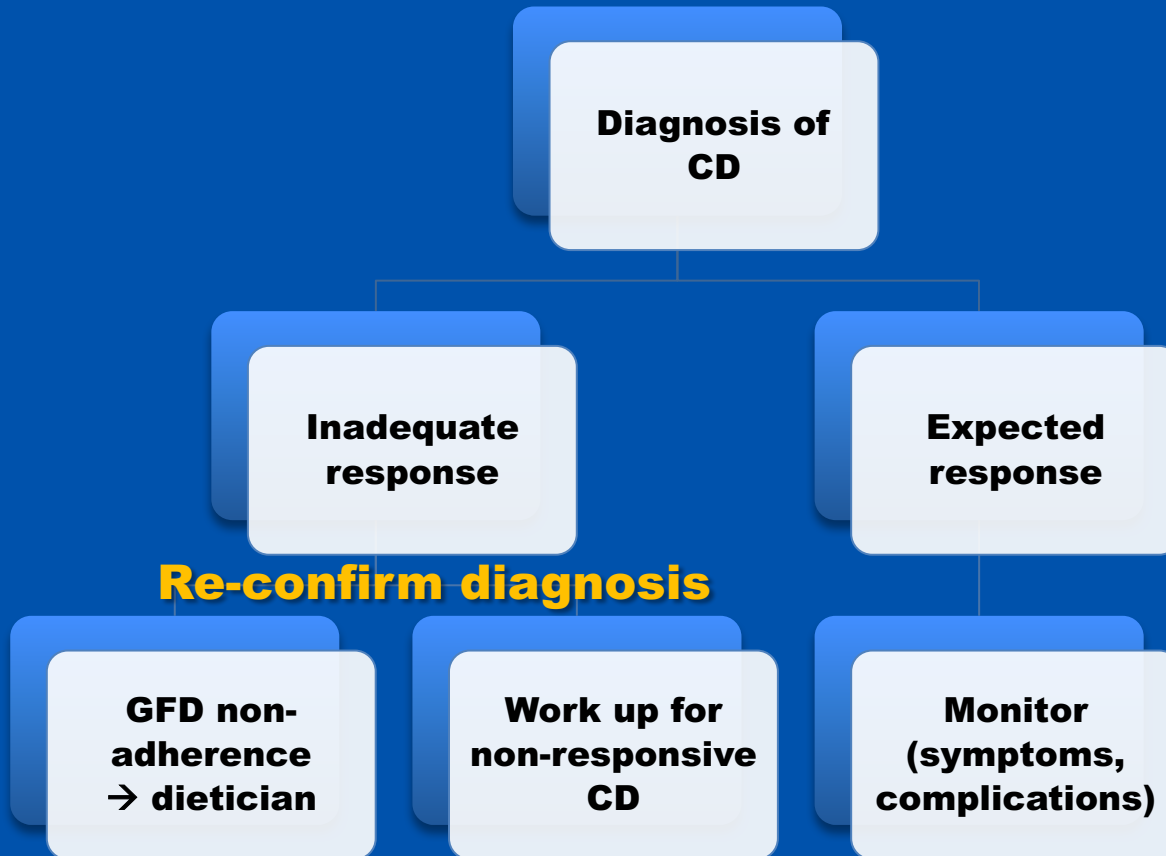
- **Strict gluten-free diet for life**
 - **Avoid wheat, barley, rye**
 - **Avoid beer, ale (wine is ok!)**
 - **? oats**
 - **may be safe/tolerated**
- **Assessment of micronutrient deficiencies**
 - **Iron, folic acid, vitamin D, vitamin B12**
- **Consider referral to a dietician**



Complications

- **Malignancies**
 - **Small bowel adenocarcinoma**
 - **Esophageal cancer**
 - **B-cell and T-cell non-Hodgkin lymphoma**
 - **intestinal**
- **Low bone mineral density, fractures**
- **Infertility, spontaneous abortions, preterm deliveries**
- **Neurological dysfunction**

Monitoring



Non-Responsive CD

- **Affects 7-30%**
- **Persistent signs/symptoms despite 6-12 months of gluten avoidance**
- **Consider other causes of villous atrophy**
- **Consider other etiologies:**
 - **Food intolerances (lactose, fructose)**
 - **Small intestinal bacterial overgrowth**
 - **Microscopic colitis**
 - **Pancreatic insufficiency**
 - **IBD**

Refractory CD

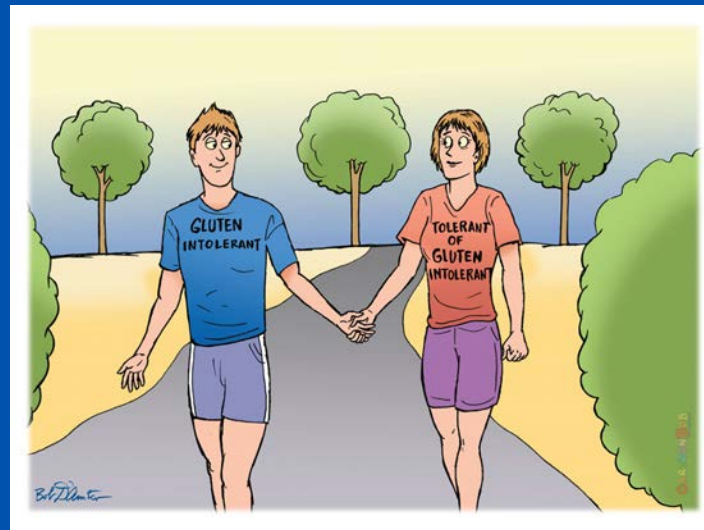
- **Affects 1-2%**
- **Persistent or recurrent signs/symptoms of malabsorption with villous atrophy despite strict GFD for > 12 months**
 - **Absence of other disorders, including lymphoma**
- **Type 1: Lymphocytic infiltration of mucosa**
- **Type 2: Oligoclonal T-cell expansion within SB mucosa**

Non-Celiac Gluten Sensitivity

- **Negative serology, biopsies**
- **Features of malabsorption or nutrient deficiencies are unlikely**
- **Not at risk for long term complications**
- **Diet can be adjusted to symptoms**

Summary

- **Celiac disease (CD) is largely undiagnosed in the US**
- **Gluten free diet is the mainstay of treatment**
- **Be aware of non-responsive, refractory CD and non-celiac gluten sensitivity**
- **When in doubt, call us!**



References

- **Rubio-Tapia A et al. ACG Clinical Guidelines: Diagnosis and Management of Celiac Disease. Am J Gastroenterol. 2013;108-:656-676.**
- **Kabbani TA et al. Celiac disease or non-celiac gluten sensitivity? An approach to clinical differential diagnosis. Am J Gastro 2014;109:741-746.**
- **Fasano A et al. Celiac Disease. N Engl J Med 2012;367:2419-2426.**
- **Green PHR et al. Celiac Disease. N Engl J Med 2007;357:1731-1743.**
- **www.celiac.org**