

Could your patient have celiac disease?

What is celiac disease?

Celiac disease (CeD) is an **autoimmune disease** triggered by consuming gluten and results in damage to the small intestine. While many patients may present with the “classic GI symptoms” of CeD, such as diarrhea, abdominal pain and bloating, many others do not experience these. **Some may have neurological and/or psychological symptoms** not as readily recognized as being related to CeD. For example, children with CeD may present with signs of emotional distress, change of mood and lethargy (1).

The diversity of symptoms can make CeD a clinical chameleon. **Neurologists can play a key role** in promptly diagnosing patients with extra-intestinal symptoms of CeD.

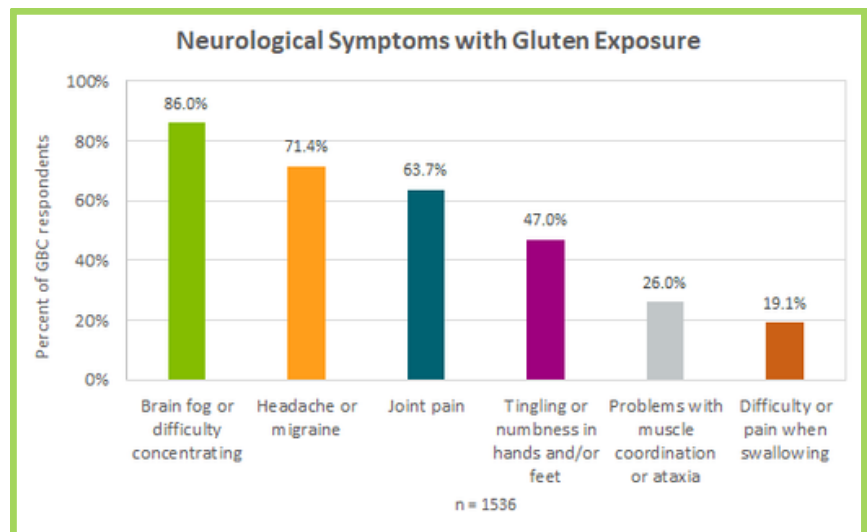
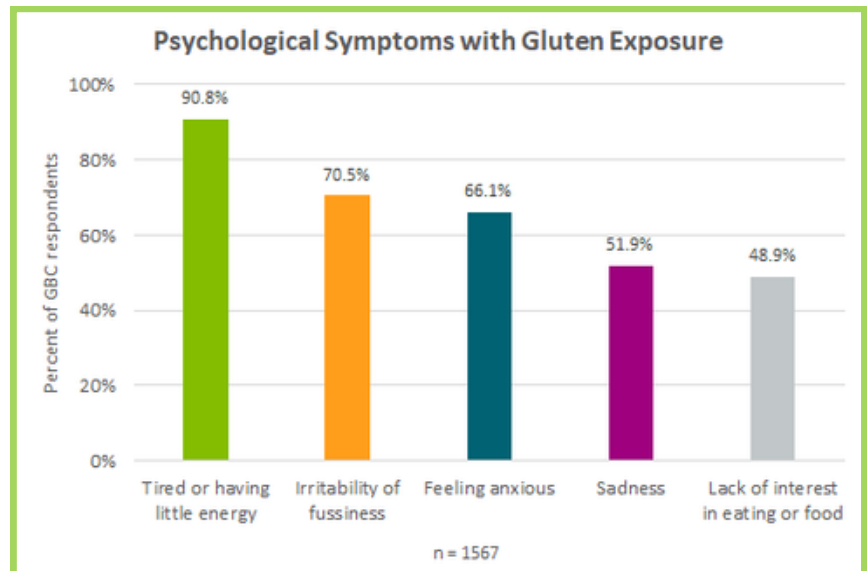
Neurological and psychological presentations of celiac disease

Beyond Celiac, a patient advocacy organization, conducted a survey of approximately 1,500 CeD patients to learn what symptoms they experience after ingesting gluten. Results at right.

Each of the top three symptoms in both the neurological and psychological categories were reported as being experienced by **more than 60%** of survey participants, suggesting they are all **quite common among patients with celiac disease**.

Many of these psychological symptoms also overlap with symptoms of depression, which can also be a symptom of CeD.

Those with undiagnosed celiac disease may also have more severe presentations, including gluten encephalopathy and epilepsy in addition to those signs and symptoms found after diagnosis with gluten exposure (2).





Headaches and celiac disease

A study in the journal *Nutrients* (3), reviewed 40 headache-related scientific articles published from 1987 to 2017 and found:

- The prevalence of adults and children with headaches in CeD was 26% and 18%, respectively.
- Headache, usually migraine, was the first symptom of CeD.
- Overall, **adult CeD patients were 2.7 times more likely to have headaches** than those who did not have CeD.
- One cross-sectional population-based study found that likelihood of children and adolescents with CeD suffer from headaches was about 2 times greater than those without CeD.
- The overall prevalence of CeD in children with idiopathic headache was 2.4%.
- One study found that among 90 adult patients with idiopathic migraine, about 4% had CeD compared to less than one-half a percent of controls without CeD.

Psychiatric disorders and celiac disease

In a population-based study with a median follow-up of 12.3 years, psychiatric disorders were more common before a diagnosis of CeD (odds ratio, 1.56; 95% CI, 1.39–1.76). Children with newly diagnosed or potential CeD often complained of aches and pains, tired easily, were easily distracted, and had trouble concentrating. An association was found between ADHD and CeD, highlighting the need to examine subtypes of ADHD, specifically the inattentive type, in CeD (4).

How to test for celiac disease

When patients symptoms associated with CeD seek treatment from a neurologist, **serology testing for CeD** can put them on a path to a correct diagnosis and symptom relief. Please note that patients **must be eating gluten to get tested for celiac disease**. A patient put on the gluten-free diet prematurely may receive inaccurate test results. Learn more at beyondceliac.org/get-tested/

For those who are already diagnosed with celiac disease, it is important to consider that exacerbation of symptoms, such as migraine, may be a result of gluten exposure.



Learn more at BeyondCeliac.org

References

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2. Patel, SC; Shreya, D; Zamora, DI; Patel, GI; Grossmann, I; Rodriguez, K; Soni, M; Joshi, PK; Sange, I. Celiac Disease, Beyond the Bowel: A Review of Its Neurological Manifestations. *Cureus* 2021, 13(12)
3. Zis, P; Julian, T; Hadjivassiliou, M. Headache Associated with Coeliac Disease: A Systematic Review and Meta-Analysis. *Nutrients* 2018, 10:1445-1556.
4. Gaur S. The Association between ADHD and Celiac Disease in Children. *Children* 2022, 9:781-791.