

## What is Celiac Disease?

- Celiac disease is a multi-system genetic autoimmune disorder affecting 1-2% of people worldwide.
- For people with celiac disease, eating gluten (a protein found in wheat, rye, and barley) causes the immune system to create antibodies that attack the small intestine. Villi, small finger-like projections that line the small intestine, atrophy and eventually flatten, causing them to lose the ability to absorb nutrients.

## Celiac Disease by the Numbers

- 3 million+ Americans have celiac disease. Most studies show that less than 40% of all people with celiac disease are diagnosed.
- The prevalence of celiac disease has increased 4 or 5 fold since 1950 for unknown reasons.
- On average, it takes 4 years to be correctly diagnosed.
- There is no medication or cure for celiac disease—the only treatment is a lifelong, strict gluten-free diet.
- Studies show that 30-50% of people on a gluten-free diet continue to experience symptoms and have intestinal damage, revealing the ineffectiveness of the gluten-free diet as a treatment.
- iCureCeliac<sup>®</sup> patient registry participants report missing 23 days of work/school annually due to celiac-related illness, with 74% having been accidentally exposed to gluten within the past 30 days.
  - 96% reported “always” or “often” maintaining a strict gluten-free diet, but only 41% reported low symptom burden.
  - 93% said they want a treatment other than a gluten-free diet.

### Increased Mortality Risk Associated with Celiac Disease

- 6x increased risk of death from non-Hodgkin’s lymphoma
- 3.1x increased risk of death from liver disease
- 2.6x increased risk of death by pneumonia
- 4x increased risk of small bowel cancer

### Refractory Celiac Disease (RCD)

- 1 in 200 patients have RCD I or II, meaning they don’t respond to a strict gluten-free diet.
- RCD-II patients have a 50% increased risk of developing enteropathy-associated T cell lymphoma (EATL).
- The average survival time for patients with RCD-II is 3-10 years post-diagnosis.

## The Only Treatment: The Gluten-Free Diet

- As little as 50 mg/day of gluten triggers symptoms - a normal diet contains > 10 g/day of gluten.
  - 10 mg/day is considered “safe” for people with celiac - this is the equivalent of 1/8 teaspoon of flour.
- Gluten is virtually impossible to avoid, as it is in 80% of foodstuff.
- Gluten-free substitutes contain more fat and sugar, and fewer nutrients. This may increase risk of heart attack due to a reduced consumption of whole grains.