

## Health Manifestations of Celiac Disease (CD)

### Section B: Signs, Symptoms, Associated Disorders and Complications

Affected System	Affected Organ	ID No.	Manifestation	Type*	Current Medical Information **	Deficient Nutrient
Digestive System	Large intestine	125	Colitis, Ulcerative <sup>1,34,101</sup>	(AD)	<p>[P] Significantly increased prevalence of familial ulcerative colitis in patients with CD.<sup>101</sup></p> <p>[D] Ulcerative colitis is an inflammatory disorder of the colon characterized by continuous inflammation of the mucosa and submucosa, usually with small ulcers, extending from the rectum and typically involving the distal colon, rectum, and anus and producing bloody diarrhea. Iron deficiency anemia often develops.</p> <p>Case control study evaluating the familial occurrence of inflammatory bowel disease in 600 first degree relatives of 11 consecutive patients with CD revealed 10 cases of IBD of whom 7 cases were ulcerative colitis and 3 cases were Crohn's disease.<sup>101</sup></p> <p>[M] Marked by rectal bleeding, frequent diarrhea with outpouring of blood, mucous, and pus increasing fecal content, pain with the passage of stools, and probable weight loss, anemia, and nutritional deficits.</p> <p>[C] Results from unclear mechanism.</p> <p>[R] GFD prevents increased morbidity from malnutrition and malignancy in untreated CD.</p>	Omega-3 fatty acid, Vitamin A deficiencies may exacerbate. <sup>34</sup>
Digestive System	Large intestine	126	Constipation <sup>1,73</sup>	(AT)	<p>[P] About 20% of people with celiac disease have constipation instead of diarrhea.<sup>73</sup></p> <p>[D] Constipation is a chronic digestive symptom of CD characterized by alteration in stool formation, consistency, and evacuation.</p> <p>[M] Marked by decrease in frequency of bowel movements with difficult or incomplete passage of stool and/or passage of excessively dry, hard stool or soft pasty stool, flatulence, gas, bloating and cramping.</p> <p>[C] Results from abnormal bowel motility, dysbiosis, and malabsorption in CD.</p> <p>[R] CD-related constipation responds to GFD.<sup>73</sup></p>	Magnesium, Vitamin B <sub>1</sub> , Vitamin B <sub>12</sub> .
Digestive System	Large intestine	127	Constipation Alternating with Diarrhea <sup>1,73</sup>	(AT)	<p>[P] Common in people with untreated CD.<sup>73</sup></p> <p>[D] Constipation alternating with diarrhea is a chronic digestive symptom of CD characterized by alteration in stool formation, consistency, and evacuation.</p> <p>[M] Marked by passage of excessively dry, hard stool and loose stool in the same movement or at different times, gas and flatulence.</p> <p>[C] Results from abnormal bowel motility, dysbiosis, and malabsorption in CD.</p> <p>[R] CD-related constipation alternating with diarrhea responds to GFD.<sup>73</sup></p>	Magnesium, Vitamin B <sub>1</sub> .

+ (S) = Classic sign/symptom; (AT) = Atypical sign/symptom; (AD) Associated Disorder; (C) = Complication.

++ [P] = Prevalence; [D] = Description; [M] = Sign/symptom; [C] = CD related cause; [R] = Response to gluten Free diet (GFD).