

Celiac Disease and Oral Health: The Role of Dental Professionals

Dr. Melissa Ing & Caleigh McAulay, RD

Understanding Celiac Disease

Celiac disease is a chronic autoimmune disorder triggered by the ingestion of gluten, a protein found in wheat, rye, and barley. In individuals with celiac disease, gluten consumption causes damage to the small intestine, leading to malabsorption of essential nutrients. While it is commonly associated with gastrointestinal symptoms such as diarrhea, bloating, and weight loss, many individuals present with non-gastrointestinal symptoms, including oral and dental manifestations.

An estimated 1% of the population has celiac disease, affecting both children and adults. Many cases go undiagnosed due to its varied and sometimes subtle – or even “silent” presentations. Early diagnosis and treatment with a strict, lifelong gluten-free diet can significantly reduce the risk of complications, including osteoporosis, reproductive issues, and certain cancers.

The Role of Dental Professionals in Celiac Disease Diagnosis

- Celiac disease can often be asymptomatic, meaning that oral and dental manifestations may be the only clues to an undiagnosed case. This puts dental professionals in a unique position to aid in earlier detection.
- A thorough medical and dental history, including family history, can assist in identifying systemic conditions like celiac disease.
- The dental office should research routinely used materials in cleanings and filling procedures to determine if they contain gluten. Contacting manufacturers may be necessary.
- The oral healthcare team should refer patients with persistent oral symptoms to consult their physician for serological screening for celiac disease. Note: patients should be advised not to alter their diet until all gluten antibody screening tests and endoscopic evaluations are complete.
- Collaboration with other healthcare providers ensures comprehensive care for patients with celiac disease.

Recognizing Oral and Dental Manifestations of Celiac Disease

The **two most common** oral and dental findings associated with celiac disease are:

1. **Dental Enamel Defects:** White, yellow, or brown discoloration, pitting, mottling or translucency. Enamel defects are typically symmetrical and affect multiple quadrants. They are seen more frequently in younger patients, while older individuals may have had defects covered with veneers or crowns.



*Multiple white and cream opacities with clearly defined margins.
(By permission: Drs. Ted Malahias & Peter Green)*



*Deep horizontal grooves with large pits and linear discoloration.
(By permission: Children's Digestive Health and Nutrition Foundation)*

2. **Recurrent Aphthous Ulcers:** Recurring canker sores found on soft oral tissues.



*Photo from Edmund Peters,
DDS, MSc, FRCD (C),
Professor Emeritus
University of Alberta*

Other oral symptoms of celiac disease can include:

3. **Delayed Dental Development:** Late eruption of teeth seen in pediatric cases.
4. **Atrophic glossitis:** Inflamed, painful tongue due to loss of dorsal papillae.
5. **Xerostomia:** Dry mouth, increasing the risk of cavities and oral infections.
6. **Angular cheilitis:** Cracking and inflammation at the corners of the mouth.



*Photo from Edmund Peters,
DDS, MSc, FRCD (C),
Professor Emeritus
University of Alberta*

7. **Geographic tongue:** Irregular, map-like, patchy tongue due to irregular papillary surface.
8. **Oral lichen planus:** Lacy, white patches or bumps inside the cheeks, on the tongue, or roof of the mouth.
9. **Oral cancers:** Not common, but possible to see squamous cell carcinoma in individuals with celiac disease.

Celiac Disease, Oral and Dental Health:

- **Oral Health Maintenance:** Patients with celiac disease may have increased susceptibility to cavities due to enamel defects and dry mouth. In office fluoride varnishes and annual dental check-ups are recommended.
- **Recurring Aphthous Ulcers & Atrophic Glossitis:** Recommend warm salt water rinses, avoiding spicy foods to prevent discomfort, and supplementing with vitamin B complex and iron if deficiencies are suspected.
- **Angular Cheilitis & Inflammatory Tongue Conditions:** Suggest vitamin B complex and iron supplementation. Antibiotic ointments may be necessary for angular cheilitis.
- **Xerostomia:** Recommend dry mouth substitutes or oral lubricants to manage symptoms.

Conclusion

As primary healthcare providers, **dental professionals can play a vital role** in the early identification of celiac disease. Recognizing its oral and dental manifestations can lead to timely diagnosis and management, improving patient outcomes. By staying informed and proactive, dental teams can contribute significantly to the well-being of individuals affected by celiac disease.

Your Observation Could Change a Life!

Celiac Canada – Find, Treat, Cure

Visit [Oral Health - Celiac Canada](#) for more information and resources.

Suggested Readings:

1. El-Hodhod, Mostafa Abdel-Aziz, et al.
Screening for Celiac Disease in Children with Dental Enamel Defects.
ISRN Pediatrics. V. 2012.
2. De Carvalho, F.K. et al.
Oral aspects in celiac disease children: clinical and dental enamel chemical evaluation.
Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology. June 2015. Vol. 119 No.6.
3. **Oral manifestations of celiac disease: A clinical guide for dentists.**
Rashid M, Zarkadas M, Anca A, Limeback H. J Can Dent Assoc 2011;77:b39
4. **The association between celiac disease, dental enamel defects, and aphthous ulcers in a United States cohort.**
Cheng J, Malahias T, Brar P, Minaya MT, Green PH. J Clin Gastroenterol. 2010;44(3):191-4.
5. Ing, M. (2021).
General Information and Dental Implications: Celiac Disease.
Canadian Dental Association.
<https://cda-adc.ca/en/services/essentials/2021/issue2/>
6. Ing, M. (2019, November 25).
Celiac disease, non-celiac gluten sensitivity and your dental patients.
Oasis Discussions.
<https://oasisdiscussions.ca/2019/11/25/celiac-disease-non-celiac-gluten-sensitivity-and-your-dental-patients-2/>