

Coeliac Disease in Adults

[Disclaimer](#)

Contents

Disclaimer	1
Background	2
About coeliac disease	2
Assessment	2
Increased risk for coeliac disease	2
Clinical features	3
Adequate gluten	3
Coeliac disease serology	3
HLA DQ gene test	3
Management	4
Importance of gluten-free diet	4
Other investigations to consider	5
Repeat investigations	5
Referral	5
Information	6
For health professionals	6
For patients	6

Background

About coeliac disease

- An immune-mediated, genetically determined permanent intolerance to gluten (which occurs in wheat, rye, barley, and oats).
- Prevalence of about 1% in Australia and occurs in all ethnicities. Incidence is lowest in those with Asian background, but is increasing.
- Diagnosis is by gastroscopy and duodenal biopsy provided the patient is eating a gluten-containing diet.
 - Serology helps indicate which patients need biopsy.
 - Patients with positive serology need biopsy for confirmation of disease.
- May cause micronutrient deficiency such as iron, B12, folate, vitamin D, calcium, zinc which may result in anaemia, osteoporosis and secondary hyperparathyroidism.
- Associated with a number of autoimmune diseases including type 1 diabetes, thyroid, and liver disease.
- Long-term, poorly controlled coeliac disease increases the risk of small bowel lymphoma and other gastrointestinal (GI) malignancies.

Assessment

1. Assess **clinical features** or **risk factors**. Adults may have few or no symptoms.

Increased risk for coeliac disease

- *First-degree relatives with coeliac disease (10% risk)*
- *Second-degree relatives with coeliac disease (2.6 to 5% risk)*
- *Type 1 diabetes*
- *Autoimmune thyroid disease*
- *Irritable bowel syndrome*
- *Liver disease*
- *Down syndrome*
- *Turner's syndrome*
- *Osteoporosis*
- *Unexplained infertility*
- *Sjogren's syndrome*
- ***Dermatitis herpetiformis***

Dermatitis herpetiformis (DH)

- *An uncommon intensely pruritic vesiculopapular rash strongly associated with gluten sensitivity.*
- *More than 90% of patients with DH will have findings consistent with gluten-sensitive enteropathy on biopsy.*
- *As with coeliac disease, patients with DH almost always carry the HLA DQ2 or HLA DQ8 haplotype.*
- *DH characteristically has a symmetrical distribution, most commonly involving the scalp, elbows, shoulders, knees, and buttocks.*

- *Diagnosis can be confirmed with skin biopsy.*
- *Responds well to treatment with gluten-free diet, with or without dapsone.*

See DermNet NZ – [Dermatitis Herpetiformis](#) for images.

- *Immunoglobulin A (IgA) deficiency*

Clinical features

- *Coeliac disease may be asymptomatic, and an absence of the clinical features below does not exclude the diagnosis*
- *GI symptoms – mouth ulcers, abdominal pain, bloating, flatulence, diarrhoea, constipation*
- *Nutritional deficiency – unexplained iron or folate deficiency with or without anaemia, vitamin D deficiency, zinc deficiency*
- *Weight loss*
- *Fatigue, irritability, altered mental alertness*
- *Abnormal liver function tests*
- *Osteoporosis*
- *Reduced fertility (in females)*
- [Dermatitis herpetiformis \(DH\)](#)

2. Arrange **coeliac disease serology** ensuring patient is consuming **adequate gluten**.

Adequate gluten

The optimal amount and duration of gluten intake necessary for a definitive diagnosis is uncertain. Remind the patient that the longer the duration, the more reliable the diagnosis. Current practice is to recommend 3 to 6 grams of gluten (e.g. 2 slices of wheat-based bread) daily for 6 weeks or longer.

Coeliac disease serology

- *Transglutaminase-IgA (tTG-IgA), and*
- *Deamidated gliadin peptide-IgG (DGP-IgG)*

These antibody tests are now the current accepted tests for coeliac disease and in practice both tests have > 85% sensitivity and > 90% specificity. See Australian Journal of General Practice – [Interpreting Tests for Coeliac Disease: Tips, Pitfalls and Updates](#).

3. Consider **HLA DQ gene test** if patient has been on a gluten free diet and is unwilling to re-challenge.

HLA DQ gene test

- *99.6% of patients with coeliac disease are either HLA DQ2 or DQ8 positive.*
- *A negative result for both HLA DQ2 and DQ8 essentially excludes coeliac disease.*
- *Positive results are not informative as up to 50% of the general population are HLA DQ2 or DQ8 positive.*

- *It may be a useful test to rule out coeliac disease in a patient on a gluten-free diet who is unable or refuses to take gluten.*
- *HLA DQ status is genetic and fixed – repeat testing is inappropriate.*

4. Consider other investigations:

- FBE, LFT, TFT
- Iron studies, folate, Vitamin D

5. If positive serology:

- request [gastroscopy](#) and small bowel biopsy to make the diagnosis.
- ensure patient remains on **adequate gluten** diet prior to endoscopy.

Management

1. If coeliac disease is to be confirmed:

- request [gastroscopy](#) and small bowel biopsy to make the diagnosis.
- ensure patient remains on **adequate gluten** diet prior to endoscopy.

2. If coeliac serology negative but high clinical suspicion and positive [HLA DQ gene test](#), arrange [urgent or routine gastroenterology referral](#).

3. When confirmed, provide advice and education on Coeliac disease:

- Advise about the **importance of lifelong adherence** to a gluten-free diet.

Importance of gluten-free diet

➤ *Reduces:*

- *complications of osteoporosis.*
- *GI side-effects.*
- *fatigue.*

➤ *Helps fertility in women.*

➤ *May improve cognition.*

➤ *Reduces risk of T-cell lymphoma of small bowel and other small bowel malignancies.*

- Provide a [letter confirming medical diagnosis](#) of coeliac disease to enable membership of the state's Coeliac Society.
- See [Coeliac Australia](#) for information on diet and general management.
- Refer to a dietitian who specialises in coeliac disease.

4. Arrange **additional investigations** with or without specialist referral to identify any deficiencies in absorption of micronutrients or bone metabolism.

Other investigations to consider

At diagnosis, blood tests may reveal a deficiency of various micronutrients, particularly iron, folate, vitamin D and zinc. Osteopaenia is relatively common in patients who present as adults.

Newly diagnosed adults should be screened by:

- DXA bone density scan – patients with "proven malabsorptive disorder" are eligible for a Medicare rebate for a DXA scan (item 12315 – note "histologically confirmed coeliac disease" on referral form)
- Calcium, phosphate, zinc, vitamin D, folate, vitamin B12, parathyroid hormone

5. Suggest serological screening and assessment of all first-degree relatives.
6. Organise review at 3 to 6 months following diagnosis:
 - Assess symptoms, compliance with diet, and any deficiencies identified at diagnosis.
 - If GI symptoms persist despite gluten-free diet, consider:
 - requesting dietitian assessment of diet, and possible continued exposure to gluten.
 - alternative diagnoses e.g., inflammatory bowel disease, irritable bowel syndrome, colorectal cancer.
 - requesting [urgent or routine gastroenterology referral](#).
7. Arrange annual review:
 - Assess compliance to gluten-free diet and discuss the **importance of lifelong adherence** to a gluten-free diet. Refer to a dietitian if necessary.
 - Check and manage any side-effects from a gluten-free diet e.g., constipation.
 - Measure and monitor BMI.
 - Review for complications and associated diseases.
 - Check tTG annually. This is an indicator of compliance with a gluten-free diet. It may take up to 2 years for the tTG to become negative after starting a gluten-free diet.
 - Consider repeating **investigations** that were previously abnormal.

Repeat investigations

- FBE
- Iron studies
- Vitamin B12
- Folate
- Thyroid function tests (TFT)
- Parathyroid hormone (PTH)
- Calcium
- Phosphate
- Zinc
- Vitamin D
- LFT
- Bone mineral density

Referral

- If positive serology, request [gastroscopy](#) and small bowel biopsy to make diagnosis of coeliac disease.
- Arrange [urgent or routine gastroenterology referral](#) if:
 - if coeliac serology negative but high clinical suspicion and positive **HLA DQ gene test**.

- if refractory symptoms or persistently elevated antibodies, despite adequate dietary compliance.
- Request assessment by a dietitian who specialises in coeliac disease at diagnosis, and later if there are problems with the gluten-free diet.

Information

For health professionals

Further information

- ACG Clinical Guidelines – [Diagnosis and Management of Celiac Disease](#)
- Australian Family Physician – [Coeliac Disease: Where are We in 2014?](#)
- Coeliac Australia – [Coeliac Disease Diagnostic Card](#)
- National Institute for Health and Care Excellence (NICE) – [Coeliac Disease: Recognition, Assessment and Management](#) [September 2015]
- WA Department of Health – [Coeliac Disease Model of Care](#)

For patients

- Better Health Channel – [Coeliac Disease and Gluten Sensitivity](#)
- [Coeliac Australia](#)
 - [Coeliac Disease](#)
 - [Multilingual fact sheets](#) 
- Gastroenterological Society of Australia – [Coeliac Disease](#)

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