

Gluten Challenge

Do not commence a gluten free diet prior to being tested for coeliac disease. If a gluten free diet has already been adopted, the tests used to diagnose coeliac disease are unreliable, and can be falsely negative. A gluten challenge will be required to allow for testing and a conclusive diagnosis.

How much gluten do I need to eat?

If gluten has been removed from the diet, a normal diet must be resumed for six weeks prior to testing (blood test or biopsy). During this 'gluten challenge', you should aim to ingest approximately 10g of gluten. This means four slices of wheat-based bread (or equivalent) should be consumed each day for adults or two slices of wheat-based bread each day for children.

Note: Not all bread is equal! The amount of gluten in a slice of bread can range from approximately 2 grams to 4 grams.

1 slice of wheat-based bread containing 2 – 2.5 grams of gluten is equivalent to:

½ cup wheat-based cereal

1 Weet-bix

½ cup cooked wheat-based pasta

½ English muffin

½ large bread roll

4-5 crispbreads (e.g. Vita-Wheats, Salada)

8-10 crackers (e.g. water crackers, Jatz)

2 small sweet biscuits (e.g. Scotch Finger)

It is advised to gradually build up to the recommended challenge dose over a week or so. Initial symptoms may be severe but should ease over time.

Coeliac Australia recognise that there is limited consensus as to the dose of gluten and length of time a challenge is needed. Evidence (Leffler et al, Gut 2013;62:996-1004) suggests that 3-6 grams per day for 4 weeks may be sufficient to achieve changes in the blood tests (coeliac serology) for most people (~70%) with coeliac disease. As the gluten challenge is being done to determine with as much certainty as possible whether coeliac disease is or is not present, Coeliac Australia currently recommend including more gluten for a longer period of time to guarantee a correct diagnosis for the majority of people. Be guided by your doctor during the challenge period.

What about the coeliac gene test?

Over 99% of people affected by coeliac disease have the HLA DQ2, HLA DQ8, or parts of these genes. Therefore, a negative test for these genes effectively rules out coeliac disease. The gene test on its own cannot diagnose coeliac disease - only 1 in 40 people who have HLA DQ2 or HLA DQ8 will develop coeliac disease. A gluten free diet should only be started after confirmation of coeliac disease by small bowel biopsy.

As the gene test is not dependent on gluten intake, it can be used when people have already commenced a gluten free diet. If the gene test is positive, then a gluten challenge followed by small bowel biopsy will be required to test for coeliac disease.

For further information
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