

# Online tool improves gluten-free adherence

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The researchers observed a clinically significant improvement in adherence amongst the intervention group relative to the control group at program completion and during the follow-up. Credit: European Parliament

Researchers from Curtin University and the University of Sydney have shown that an online, interactive, theory-based intervention provides an effective means of improving gluten-free diet (GFD) adherence in coeliac disease sufferers.

Coeliac disease (CD) is an autoimmune disorder of the small bowel caused by a reaction to gliadin, a protein found in wheat, rye and barley.

Long-term gluten consumption by those with CD has been linked to health complications including osteoporosis, male and female infertility and cancers.

University of Sydney lead researcher Dr Kirby Sainsbury says that it is crucial for people with CD to maintain a strict GFD.

"Only a very small amount of gluten, equivalent to a breadcrumb, is needed to trigger the autoimmune response responsible for these effects," Dr Sainsbury says.

She was interested in exploring the impact an online resource had on improving GFD knowledge, skills and dietary adherence, as well as other variables such as quality of life and psychological symptoms.

Bread n' Butter...Gluten Free of Course!—the first [intervention](#) designed to improve GFD adherence in CD—consisted of six weekly online modules\* which focussed on educational, communication and cognitive-behavioural change components.

A total of 189 participants with biopsy-confirmed CD participated in the study; 101 people participated in the intervention while 88 were used as the control group.

Both groups completed the Coeliac Dietary Adherence Test to measure GFD adherence, and the World Health Organisation's Quality of Life Assessment to measure physical and psychological wellbeing, at the baseline, at program completion and at three- and six-months post intervention.

The researchers observed a clinically significant improvement in adherence amongst the intervention group relative to the control group at program completion and during the follow-up.

In particular they noticed a clinically significant improvement in adherence amongst the participants who had inadequate adherence at the baseline.

"This is a very positive finding and suggests that the intervention worked to improve skills needed to maintain good adherence beyond just the period of active engagement with the intervention materials," Dr Sainsbury says.

"The same pattern was found for knowledge."

Knowledge alone fails to spur action  
 "Despite improvements in both adherence and knowledge, it was interesting that the improvement in knowledge was not what led to the improvement

in adherence," she says.

"This is what's called the knowledge-behaviour gap... although knowledge is necessary for behaviour change and good adherence, it is not sufficient to prompt changes."

Dr Sainsbury says she hopes that the relatively simple, easy to administer, online program can be used in the future to prompt improvements in GFD adherence amongst those who are struggling with their [adherence](#).

**More information:** "Dissemination of an Online Theory-Based Intervention to Improve Gluten-Free Diet Adherence in Coeliac Disease: the Relationship Between Acceptability, Effectiveness, and Attrition." Kirby Sainsbury, Barbara Mullan, Louise Sharpe *International Journal of Behavioral Medicine*. May 2014. [link.springer.com/article/10.1007/s12529-014-9416-4#](https://link.springer.com/article/10.1007/s12529-014-9416-4#)

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