

# Gluten misconceptions and scam

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## Introduction

Gluten is nothing new; it has always been part of wheat-based products. Gluten is formed from flour storage proteins (glutenins and gliadins) when water is added. Recently, gluten comes into spotlight due to increase in the number of celiac patient. Celiac disease is an immune disorder that primarily truncates the villi of the small intestine in the genetically predisposed people due to reaction to  $\alpha$ -type gliadins. Global spread of celiac might be due to increasing in population, migration and inter-marriage. Also, increase in celiac cases can be due to increase in gluten concentration in food due to reduction in processing (mostly fermentation) time and addition of extra gluten in recent food production.<sup>1</sup>

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## Gluten misconceptions

The concern of gluten-health relationship has led development gluten-free products. However, there is wide spread of misconceptions

about celiac disease, wheat products and gluten-free products (Table 1).

**Table 1** Clarification of gluten misconceptions

Misconceptions	Clarification
Gluten free products are nutritional richer than wheat-based products.	Gluten-free products are usually low in dietary fiber unfortified. <sup>2</sup> Their protein content is often less than wheat-based products.
Gluten free products are non-wheat product.	Gluten free products are from alcohol-treated wheat flour which has had part of its gliadin removed.
Gluten is dangerous to all.	Gluten is not a bad protein for all but for few – the celiac disease patient i.e 1% of the global population. <sup>3</sup>
Celiac disease is only cause by wheat gluten.	Celiac disease is also cause by gluten forming protein and other homologous proteins from other plant including barley, oat and rye. <sup>3</sup>
Gluten-gliadin has become more potent.	Recently proteomic study showed that wheat gliadin has not changed over several decades of breeding programs.
Avoiding gluten help in weight loss.	Gluten-free products are often made with flours with higher glycemic index than wheat . <sup>2</sup>

## Gluten scam

Currently, celiac disease can only be prevented by complete abstinence of gluten containing products. Many products are now being labelled as gluten free mostly to attract consumers' patronage. The additional processing cost make gluten-free products costlier than conventional wheat based products. As at 2010, the total sales of gluten-free products were estimated to be \$2.5 billion.<sup>2</sup> Taking advantages of the aforementioned misconception, fair of gluten is now a tool to scam many consumers of their hard earned income.

Adequate understanding of gluten-health and–market relationships enhances consumers' choice of gluten-free products to be based on necessity.

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## Conflict of interest

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