Clin Nutr. 2016 Dec;35(6):1236-1241. doi: 10.1016/j.clnu.2016.05.002. Epub 2016 May 7.

Gluten free diet and nutrient deficiencies: A review.

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Abstract

BACKGROUND & AIMS: The only available treatment for celiac disease (CD) is lifelong adherence to gluten free (GF)-diet. However, GF-diet may lead to possible nutrient unbalance resulting in improper nutritional quality of diet. The aim of this study is to evaluate the nutritional quality of GF-diet.

METHODS: MEDLINE®/PubMed and Cochrane Library were electronically searched for articles published between 1990/01/01 and 2015/09/01.

RESULTS: GF-diet was found to be poor in alimentary fiber due in particular to the necessary avoidance of several kinds of foods naturally rich in fiber (i.e. grain) and the low content of fiber of GF product that are usually made with starches and/or refined flours. Micronutrients are also found to be poor, in particular Vit. D, Vit. B12 and folate, in addition to some minerals such as iron, zinc, magnesium and calcium. Moreover, an inadequate macronutrient intake was reported related above all to the focus on the avoidance of gluten that often leaving back the importance of nutritional quality of the choice. In particular, it was found a higher content of both saturated and hydrogenated fatty acids and an increase in the glycemic index and glycemic load of the meal.

CONCLUSIONS: Despite the GF-diet is necessary in celiac disease treatment and the attention is on gluten avoidance, the evaluation of nutritional quality of the diet must be considered. Moreover, educational strategies based on the relationship between nutrients and food and human health could be developed to optimize the therapeutic approach in celiac patients.

KEYWORDS: Celiac disease; Gluten free diet; Nutrients deficiency; Quality of diet

PMID: 27211234 DOI: 10.1016/j.clnu.2016.05.002

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