

Letter to the Editor

Effects of a gluten-free diet on gut microbiota and immune function in healthy adult human subjects – comment by Jackson

A paper in the *British Journal of Nutrition* by De Palma *et al.*⁽¹⁾ noted that healthy adult human subjects fed a gluten-free diet (GFD) developed significant changes in their gut microbiota. Similar results were observed by Collado *et al.*⁽²⁾ in coeliac-affected infants on a GFD compared with healthy controls. Naturally occurring fructan-type resistant starches, especially oligofructose and inulin, are known to promote a favourable mix of colon bacteria⁽³⁾. What has been overlooked in the literature is the extent to which wheat contributes to this prebiotic stimulus. For example, Van Loos *et al.*⁽⁴⁾ reported that wheat (78%) and barley (3%) together provide 81% of oligofructose and inulin for average North Americans, with onions giving 10%. Moshfegh *et al.*⁽⁵⁾ found that, in Americans, wheat supplied 70% of these two fructans, with onions contributing 25%. Thus, it appears that a GFD in both coeliac and non-coeliac subjects could produce similar, potentially adverse, changes in the microbiota solely on the basis of a marked reduction in intake of naturally occurring fructans which have prebiotic action. Provision of gluten-free but prebiotic-rich foods and/or a supplement of fructan-type prebiotics could avoid this situation and, in so doing, provide important support to the intestinal microbiota as well as important nutritional guidance for the coeliac patient.

F. W. J. is the president of Jackson GI Medical which markets a prebiotic supplement.

Frank W. Jackson
Jackson GI Medical
1460 Raven Hill Road
Mechanicsburg
PA 17055
USA
email fwj@comcast.net

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