

## Treating occult coeliac disease with a gluten-free diet is associated with a significant improvement in quality of life

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The majority of coeliacs have few obvious gastrointestinal (GI) symptoms despite the presence of the enteropathy, have atypical symptoms or have physiological derangements such as iron deficiency anaemia or osteoporosis. It is not clear whether these coeliacs have a reduced quality of life or if quality of life changes following treatment with withdrawal of gluten from the diet. Johnson *et al.* ( $n = 14$ ) observed silent coeliacs had no different life quality at diagnosis nor following 1 year of treatment in comparison to healthy controls<sup>(1)</sup> though Nachman *et al.* ( $n = 8$ ) observed silent coeliacs had significantly worse off quality of life in comparison to controls at diagnosis<sup>(2)</sup>. Our aim was to describe the quality of life at diagnosis of coeliac disease in a large contemporary cohort and observe any change following treatment with a gluten-free diet (GFD).

151 adults newly diagnosed with coeliac disease between 2007–2008 at Nottingham, Sheffield and Derby were studied. Quality of life was assessed with SF36 questionnaire. Paired t-tests were used to examine changes in SF36 quality of life scores from diagnosis of coeliac disease and following 12 months treatment with GFD. Incident coeliacs were categorised as having a classic presentation (presenting with weight loss and diarrhoea,  $n = 22$ ); presenting with GI symptoms ( $n = 85$ ); or having occult disease (no GI symptoms or have physiological derangements such as anaemia in absence of GI symptoms,  $n = 44$ ).

Mean SF36 score at diagnosis of coeliac disease was highest in those presenting with occult disease (65.1 (SD 18.6) and lowest in those with classic disease (48.7 (SD 19.3)). Following exposure to 12 months GFD there was a statistically significant improvement in quality of life (Table). The improvement in SF36 score with a GFD was similar regardless of their presenting symptoms at diagnosis.

**Table.** Quality of life at diagnosis of coeliac disease

Quality of life	At diagnosis of coeliac disease (SD)	Following 12 months GFD (SD)	Mean difference [95% CI]
<b>Mean SF36 score</b>			
All coeliacs	59.1 (19.5)	77.7 (16.5)	18.5 [15.4, 21.6]
Classic disease	48.5 (18.8)	67.1 (25.1)	18.7 [8.4, 28.9]
GI symptoms	57.4 (18.5)	77.4 (14.1)	20.0 [15.9, 24.1]
Occult disease	67.6 (18.9)	83.2 (14.3)	15.5 [9.9, 21.2]

Following diagnosis and treatment of coeliac disease with a GFD we observed an improvement in quality of life that was similar regardless of the presenting symptoms and signs recorded at diagnosis and the baseline quality of life. Without a randomised controlled trial we cannot be sure of the true magnitude of this effect over placebo.

1. Johnston SD, Rodgers C & Watson RGP (2004) *Eur J Gastroenterol Hepatol* **16**, 1281–1286.
2. Nachman F, Maurino E, Vazquez H, Sfoglia C, Gonzalez A, Gonzalez V, del Campo MP, Smecul E, Niveloni S, Sugai E, Mazure R, Cabanne A & Bai JC (2009) *Dig Liv Dis* **41**, 15–25.