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## Benefits of a gluten-free diet for asymptomatic patients with serologic markers of celiac disease.

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#### Abstract

**BACKGROUND & AIMS:** We investigated whether screen-detected and apparently asymptomatic adults with endomysial antibodies (EmA) benefit from a gluten-free diet (GFD).

**METHODS:** We performed a prospective trial of 3031 individuals at risk for celiac disease based on screens for EmA. Of 148 seropositive individuals, 40 fulfilled inclusion criteria and were assigned randomly to groups placed on a GFD or gluten-containing diets. We evaluated ratios of small-bowel mucosal villous height:crypt depth, serology and laboratory test results, gastrointestinal symptom scores, physiologic well-being, perception of health by a visual analog scale, bone mineral density, and body composition at baseline and after 1 year. Thereafter, the group on the gluten-containing diet started a GFD and was evaluated a third time; subjects in the GFD group remained on this diet.

**RESULTS:** After 1 year on the GFD, the mean mucosal villous height:crypt depth values increased ( $P < .001$ ), levels of celiac-associated antibodies decreased ( $P < .003$ ), and gastrointestinal symptoms improved to a greater extent than in patients on gluten-containing diets ( $P = .003$ ). The GFD group also had reduced indigestion ( $P = .006$ ), reflux ( $P = .05$ ), and anxiety ( $P = .025$ ), and better health, based on the visual analog scale ( $P = .017$ ), than the gluten-containing diet group. Only social function scores improved more in the gluten-containing diet group than in the GFD group ( $P = .031$ ). There were no differences between groups in laboratory test results, bone mineral density, or body composition. Most measured parameters improved when patients in the gluten-containing diet group were placed on GFDs. No subjects considered their experience to be negative and most expected to remain on GFDs.

**CONCLUSIONS:** GFDs benefit asymptomatic EmA-positive patients. The results support active screening of patients at risk for celiac disease. Clinicaltrials.gov no: [NCT01116505](https://clinicaltrials.gov/ct2/show/study/NCT01116505).

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**KEYWORDS:** GSRS; Gastrointestinal Endoscopy; Serology Test; VAS

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