

**CELIAC DISEASE:
DIET AND BMD LOSS**

Patients with celiac disease who are positive for endomysium antibodies—a measure of disease activity—should adhere strictly to a gluten-free diet, as noncompliance can negatively affect BMD, a recent report suggests.

At present, a gluten-free diet is the only available treatment for celiac disease and effectively abolishes all signs and symptoms of this disorder.

According to the results of several studies, BMD is reduced before treatment with a gluten-free diet in the majority of children and adolescents with celiac disease, but markedly improves within 1–2 years of strict diet adherence. “Low adherence to dietary restrictions has been a common finding, especially in adolescents,” says first author Štefan Blazina (University Children’s Hospital, Ljubljana, Slovenia), “and we were questioning whether occasional gluten intake affects body composition.”

The investigators compared the BMD of 55 children or adolescents with celiac disease who showed no endomysium antibodies in the past 2 years (strict diet adherence) with that of 19 patients with celiac disease who tested positive for endomysium antibodies (no strict diet adherence). “We used endomysium antibodies to determine compliance with the gluten-free diet because of common underreporting of dietary transgressions,” explains Blazina.

The investigators found significantly lower BMD values in patients with occasional gluten intake compared with those negative for endomysium antibodies. “We suppose that low BMD in patients with positive endomysium antibodies is a consequence of inflammation driven by cytokines and autoantibodies,” comments Blazina.

Calcium intake and vitamin D levels were below recommendations in both groups, prompting Blazina to suggest increasing the advice on “correct dietary allowances of calcium and vitamin D supplementation in winter and spring”.

Linda Koch

Original article Blazina, S. *et al.* Bone mineral density and importance of strict gluten-free diet in children and adolescents with celiac disease. *Bone* 47, 598–603 (2010)