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# The effect of dietary glutamate on fibromyalgia and irritable bowel symptoms.

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## Source

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## Abstract

**OBJECTIVES:** To examine the effects of a challenge with monosodium glutamate (MSG) as compared to placebo on the symptoms of fibromyalgia (FM), in participants who initially experienced >30% remission of symptoms on an excitotoxin elimination diet.

**METHODS:** Fifty-seven FM patients who also had irritable bowel syndrome (IBS) were placed on a 4-week diet that excluded dietary additive excitotoxins including MSG and aspartame. Thirty-seven people completed the diet and 84% of those reported that >30% of their symptoms resolved, thus making them eligible to proceed to challenges. Subjects who improved on the diet were then randomised to a 2-week double-blind placebo-controlled crossover challenge with MSG or placebo for 3 consecutive days each week. The primary outcome measure was total symptom score. Secondary outcome measures included visual analogue pain scales (VAS for FM and IBS), an IBS Quality of Life Questionnaire (IBS QOL) and the Fibromyalgia Impact Questionnaire-Revised (FIQR). Repeated measures ANOVA was used to analyse crossover challenge results.

**RESULTS:** The MSG challenge, as compared to placebo, resulted in a significant return of symptoms (total symptom score,  $p < 0.02$ ); a worsening of fibromyalgia severity as determined by the FIQR ( $p < 0.03$ ); decreased quality of life in regards to IBS symptoms (IBS QOL,  $p < 0.05$ ); and a non-significant trend toward worsening FM pain based on visual analogue scale (VAS,  $p < 0.07$ ).

**CONCLUSIONS:** These findings suggest that dietary glutamate may be contributing to FM symptoms in some patients. Future research on the role of dietary excitotoxins in FM is warranted.