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A multicentered, open-label trial on the safety and efficacy of methylsulfonylmethane in the treatment of seasonal allergic rhinitis.

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Abstract

BACKGROUND: Seasonal allergic rhinitis (SAR) affects more than 23 million Americans annually, and current epidemiologic studies indicate that its prevalence within the United States is increasing. Numerous clinical observations and case studies have led researchers to hypothesize that methylsulfonylmethane (MSM) may help ameliorate the symptoms associated with SAR.

OBJECTIVE: The primary goal of this study was to evaluate the efficacy of MSM in the reduction of SAR-associated symptoms. This study also examined possible adverse reactions associated with methylsulfonylmethane supplementation. Finally, this study attempted to elucidate the method of action by which MSM elicits its effect on allergy symptoms.

DESIGN: Fifty-five (55) subjects were recruited for the study. All met the criteria for participation in the study. 50 subjects completed the study. Those subjects completing the study consumed 2,600 mg of MSM orally per day for 30 days. Clinical respiratory symptoms and energy levels were evaluated by a Seasonal Allergy Symptom Questionnaire (SASQ) at baseline and on days 7, 14, 21, and 30. Immune and inflammatory reactions were measured by plasma immunoglobulin E (IgE) and C-reactive protein at baseline and on day 30. An additional inflammatory biomarker, plasma histamine, was measured in a subset of subjects ($n = 5$).

RESULTS: Day 7 upper and total respiratory symptoms were reduced significantly from baseline ($p < 0.01$ and $p < 0.005$, respectively). Lower respiratory symptoms were significantly improved from baseline by week 3 ($p < 0.001$). All respiratory improvements were maintained through the 30-day visit. Energy levels increased significantly by day 14 ($p < 0.0001$); this increase continued through day 30. No significant changes were observed in plasma IgE or histamine levels. The results of this study are promising. It would be worthwhile to conduct a larger, randomized, double-blind, placebo-controlled study to establish further if MSM would be a useful agent in the treatment of symptoms associated with SAR.

CONCLUSION: The results of this study suggest that MSM supplementation of 2,600 mg/day for 30 days may be efficacious in the reduction of symptoms associated with SAR. Furthermore, few side effects are associated with the use of this compound. Recent acute and subacute chronic toxicologic data on the same source of MSM as used in this study, further validate the safety of this product.

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