Toxicity of methylsulfonylmethane in rats

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Abstract
Methylsulfonylmethane (MSM) is a popular dietary supplement used in a variety of conditions including pain, inflammation, allergies, arthritis, parasitic infections and the maintenance of normal keratin levels in hair, skin and nails. Despite its popularity, there is little published toxicology data on MSM. The objective of this study was to evaluate the acute and subchronic toxicity of MSM in rats at a dose five to seven times the maximum recommended dose in humans. MSM administered in a single gavage dose of 2 g/kg resulted in no adverse events or mortality. MSM administered as a daily dose of 1.5 g/kg for 90 days by gavage resulted in no adverse events or mortality. Necropsy did not reveal any gross pathological lesions or changes in organ weights. Renal histology of treated animals was normal. It is concluded that MSM is well tolerated in rats at an acute dose of 2 g/kg and at a subacute chronic dose of 1.5 g/kg.

Keywords
Methylsulfonylmethane; MSM; Toxicity; Rats; Oral; Dimethyl sulfone

Abbreviations
DMSO, dimethyl sulfoxide; MSM, methylsulfonylmethane.

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