

## 4-Carvomenthenol, a monoterpene of essential oils, attenuates the anaphylactic shock reaction by decreasing the mast cell degranulation process in mice

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### ABSTRACT

The monoterpene 4-carvomenthenol (Carvo) is a compound of essential oils presenting anti-inflammatory activity. In this study we evaluate the oral treatment with Carvo (12.5 - 100 mg/kg) on several *in vivo* acute inflammatory experimental models. Therefore, Swiss mice were pretreated with Carvo and inhibited paw edema formation induced by carrageenan and PGE2/histamine. Also, Carvo decreased the peritoneal influx of leukocyte dependent on polymorphonuclear cells. The monoterpene diminished the mice scratching behavior and, surprisingly, avoided the animal death caused by the compound 48/80 in a 30 min period in model anaphylactic shock. Furthermore, this study demonstrates that Carvo alleviated the inflammatory process by diminishing the inflammatory cell migration, edema formation and mostly by decreasing the mast cell activation and histamine release ameliorating the drastic anaphylactic reaction avoiding the death of the animals. Therefore, we suggest that the 4-carvomenthenol can be a potential phytomedicine to treat histamine-induced sick behavior as allergic disorders.

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