

### Effects of *Panax ginseng* on Immune Hypersensitivity

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There have been several reports regarding the effects of *Panax ginseng* on allergy reactions. However, they are very sporadic and no systemic yet. To study the effects of *Panax ginseng* on hypersensitivity, either ginseng total saponin (GTS, 200 mg/kg, oral, two hours prior to experiments) or ethanol extract (50 and 200 mg/kg, oral, one week) was administered.

Various parameters were employed to assess the anti-allergic actions of *Panax ginseng*: 48hr passive cutaneous anaphylaxis (PCA), skin reactions, histamine release from rat peritoneal mast cells, and lipoxxygenase activity. In 48 hr PCA, and in skin reactions induced by chemical mediators (histamine, serotonin) and mediator releaser (compound 48/80), *Panax ginseng* did not suppress sensitized immune functions, rather showed tendency to increase the histamine-induced vascular permeability. *Panax ginseng* did not inhibit lipoxxygenase activity either.

Interestingly, GTS markedly increased histamine release from rat peritoneal mast cells. However, GTS alone did not induce histamine release from unsensitized mast cells, suggesting that its effect is not merely on membrane integrity.

These results suggest that *Panax ginseng* may not be beneficial for allergic diseases, but rather it would make it worse.