

## Anti-Allergic Effects of Food Constituents

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### Summary

Besides the physiological properties, studies revealed the roles of vitamins, such as ascorbic acid (vitamin C) and pyridoxine (vitamin B<sub>6</sub>), in ameliorating the symptoms of allergic disorders. In the present study, using the differential-interference contrast (DIC) microscopy, we examined the effects of these vitamins on the degranulation from rat peritoneal mast cells. Both vitamins dose-dependently decreased the numbers of degranulating mast cells. At higher concentrations (5, 10 mM), they markedly suppressed the numbers of degranulating mast cells. At relatively lower concentrations (1, 2 mM), pyridoxine did not significantly affect the numbers of degranulating mast cells. Surprisingly, however, pyridoxine with such low doses synergistically augmented the suppressive effects of ascorbic acid. These results provided *in vitro* evidence that vitamins, such as ascorbic acid and pyridoxine, dose-dependently inhibited the process of exocytosis. Pyridoxine alone with lower doses did not stabilize mast cells. However, it synergistically potentiated the mast cell-stabilizing property of ascorbic acid.