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### Anti-allergic effect of bee venom in allergic rhinitis

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Allergic rhinitis (AR) is characterized by nasal mucosal inflammation resulting from immunoglobulin E (IgE) mediated hypersensitivity reaction. Allergen exposures stimulate infiltration of inflammatory cells within the nasal mucosa, including basophils, eosinophils, mast cells and mononuclear cells. These inflammatory cells release several allergic mediators, such as histamine, cysteinyl leukotrienes and prostaglandins, which sustain the inflammatory reaction and produce characteristic nasal symptoms of sneezing, itching, rhinorrhea and nasal congestion. Bee venom (BV) consists of various biologically active amines, peptides and nonpeptide components and has radio protective, anti-mutagenic, anti-inflammatory, anti-nociceptive and anticancer activities. Two main components of BV, melittin and adolapin, have anti-inflammatory activity that involve inhibition of cyclooxygenase-2 and phospholipase-A expression and decrease levels of tumour necrosis factor- $\alpha$  interleukin (IL)-1, IL-6 and nitric oxide. The anti-allergic activity is associated with marked inhibition of OVA-induced tracheal contraction and histamine release from lung tissue. The mast-cell degranulating peptide binds to the mast cell receptors and inhibits the binding of IgE and production of histamine. BV also inhibits the release of inflammatory mediators similar to non-steroidal anti-inflammatory drugs.

### Biography

Magdy I Al-Shourbagi is currently working as the Head of Hyperbaric Oxygen therapy Unit at Sharm El Sheikh International Hospital, Egypt. He is the Consultant of Ear, Nose and Throat, in the same hospital. He received his MB Bch degree in 1983 from Faculty of Medicine, Ain Shams University and his Master's degree in ENT in 1989 from Diploma of Healthcare Quality, National Institute of training of Physician and Hyper Baric Oxygen therapy, Army Navy Academy, Alexandria. His interest has been focused lately on hyperbaric oxygen therapy and bee products and their therapeutic effects. He is also the Head of Quality Department in Sharm International Hospital.

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