



# Factsheet: Allergic Rhinitis

## About Allergic Rhinitis

Allergic rhinitis is a chronic inflammation of the nose, throat, and sinuses. It is induced by external irritants, usually pollens carried in the air. Seasonal allergic rhinitis (hay fever) is related to tree pollen in the spring, grass pollen in the summer and weed pollen in the autumn. Non-seasonal allergies (perennial allergic rhinitis) are caused by indoor allergens, such as dust mites, animal hair and mould, and occurs all year round. Typical symptoms include itchy eyes, a blocked or runny nose, sneezing fits and breathing problems.

On average about 1 person in 90 suffers badly enough to consult a doctor, and many other people have the disorder in a milder form. Anyone can develop an allergy to a common substance, but those who do have usually inherited the tendency as a family trait. People are particularly susceptible if they have another allergic condition such as asthma or eczema, or if any such conditions run in the family.

Most sufferers rely on antihistamines to get them through the pollen season or when they come into contact with an animal they are allergic to. Removing the cause of the reaction usually results in immediate relief. The side effects of chronic or untreated hay fever however can make a person feel constantly ill and irritable. Health complications from repeated hay fever attacks include chronic sinusitis (inflammation of the sinus cavities) and nasal polyps or growths. In addition, a significant percentage of people with hay fever have or develop asthma.

## Western Medicine View

Sensitivity is established when the lymphoid tissues that form antibodies are stimulated to make specialised antibodies to otherwise harmless pollens, spores, etc. These antibodies fix to other specialised cells throughout the body that contain powerful defensive substances such as histamine. When the individual is next exposed to the pollen, the antibodies trigger the cells to secrete their defensive substances. This in turn causes the dilation of blood vessels, increased secretions of fluids, swelling of tissues, itching, sneezing, and other reactions that add up to an allergic reaction. The inflammation and other symptoms, while real enough, actually are not of the same destructive nature as those carried by more serious diseases.

When avoiding the triggers of an allergy is no longer possible without severely compromising the quality of daily life, most allergy sufferers use an over the counter antihistamine, in the form of tablets, nasal sprays and eye drops. Antihistamine works to block the body's release of histamine – the chemical which causes allergy symptoms such as itching, sneezing, watery eyes and runny nose. Antihistamine drugs are temporarily effective for relieving hay fever symptoms. However, they should be used sparingly as they tend to dry out the mucous membranes and thereby increase sensitivity to antihistamine. They can also cause side effects such as headache, constipation, drowsiness and blurred vision, and are unsuitable for pregnant women. After taking them for more than a month or so, they become less and less effective.

Decongestants or using air conditioning and air purifying devices may help cut down on suffering. For extreme cases of allergy, immunotherapy is used and involves injecting allergen into the blood over a period of up to 5 years in order to suppress the allergic responses of the immune system. This treatment has very mixed results though. All drug treatments merely suppress symptoms and do not alter the basic allergic reaction.

## Chinese Medicine View

According to Chinese medicine theory, allergic rhinitis is fundamentally caused by a weakness in the immune system so treatment with acupuncture and Chinese herbal medicine will aim to primarily strengthen it. Regular physical exercise

and immune boosting food and herbs are also an important method of treatment.

Hay fever is usually attributed to a deficiency of Qi and an invasion of wind heat in the Lung. In general, the aim of the treatment will be to open the Lung Qi to expel the wind heat. Symptoms vary from patient to patient and the prescription will be based on the experiences and symptoms of the individual. Acupuncture may relieve the wider symptoms of an allergy attack, such as nasal congestion, discharge and itching.

## **Evidence for Treatment with Chinese Medicine**

Chinese medicine has been shown to be effective in treating allergies. Evidence from systematic reviews suggests that acupuncture and moxibustion may be a safe and effective treatment for allergic rhinitis with benefits over conventional medicine. The reviews also noted that more high-quality randomised controlled trials are needed to assess the efficacy of acupuncture.

In a comparative study on treating Type I allergic diseases, the outcome showed that acupuncture had an extensive and remarkable effect on Type I allergic reactions and the curative effect was higher in the acupuncture group than in the desensitisation group. Randomised controlled trials have found that acupuncture has clinically relevant and long lasting benefits when used as an adjunct to routine care for allergic rhinitis. Active acupuncture is more effective than sham acupuncture in decreasing the symptoms for persistent allergic rhinitis and increasing the symptom-free days.

Acupuncture stimulates the nervous system to release chemicals in the body that influence the body's own internal regulating system. The improved energy and biochemical balance produced by acupuncture results in stimulating the body's natural healing abilities. It can help to strengthen the body's resistance and can regulate levels of IgE and cytokines, mediators of the allergic reaction to extrinsic allergens. Acupuncture may help to relieve pain and congestion in people with allergic rhinitis by stimulating nerves in muscles and other tissues to release of endorphins and other neurohumoral factors, and changes the processing of pain in the brain and spinal cord, promoting the release of vascular and immunomodulatory factors to reduce inflammation, increasing local microcirculation to disperse swelling and modulating the number and ratio of immune cell types.

## **Clinical Trials and Articles**

Brinkhaus, B et al (2008), 'Acupuncture in patients with allergic rhinitis: A pragmatic randomized trial', *Annals of Allergy, Asthma and Immunology*, 101: 535 – 543

Chari, P et al (1988), 'Acupuncture therapy in allergic rhinitis', *American Journal of Acupuncture*, 16(2): 143 – 147

Cheng, KJ (2009), 'Neuroanatomical basis of acupuncture treatment for some common illnesses', *Acupuncture in Medicine*, 27: 61 – 64

Han, JS (2004), 'Acupuncture and endorphins', *Neuroscience Letter*, 361: 258 – 261

Huang, YQ (1990), 'Therapeutic effect of acupuncture treatment in 128 cases of hay fever', *Zhongguo Zhenjiu (Chinese Acupuncture and Moxibustion)*, 10(6): 296 – 297 [Chinese]

Hui, KK et al (2010), 'Acupuncture, the limbic system, and the anticorrelated networks of the brain', *Autonomic Neuroscience*, 157: 81 – 90

Jin, R et al (1989), 'Clinical observation of 100 cases with allergic rhinitis treated by acupuncture', *Zhongguo Zhenjiu (Chinese Acupuncture and Moxibustion)*, 9(4): 185 – 186 [Chinese]

Komori, M et al (2009), 'Microcirculatory responses to acupuncture stimulation and phototherapy', *Anesthesia and Analgesia*, 108: 635 – 640

Kavoussi, B and Ross, BE (2007), 'The neuroimmune basis of anti-inflammatory acupuncture', *Integrative Cancer Therapies*, 6: 251 – 257

Kawakita, K et al (2008), 'Do Japanese style acupuncture and moxibustion reduce symptoms of the common cold?', *Evidence Based Complementary and Alternative Medicine*, 5: 481 – 489

Lee, MS et al (2009), 'Acupuncture for allergic rhinitis: A systematic review', *Annals of Allergy, Asthma and Immunology*,

Liu, DX (1995), 'Acupuncture at biqu in the treatment of allergic rhinitis', *Zhongguo Zhenjiu (Chinese Acupuncture and Moxibustion)*, 15(6): 293 [Chinese]

Ng, DK et al (2004), 'A double-blind, randomized, placebo-controlled trial of acupuncture for the treatment of childhood persistent allergic rhinitis', *Pediatrics*, 114: 1242 – 1247

Pomeranz, B, 'Scientific basis of acupuncture', in Stux, G and Pomeranz, B (eds) (1987), *Acupuncture Textbook and Atlas*, Heidelberg: Springer-Verlag, 1 – 18

Roberts, J et al (2008), 'A systematic review of the clinical effectiveness of acupuncture for allergic rhinitis', *BMC Complementary and Alternative Medicine*, 8: 13

Rao, YQ and Han, NY, 'Therapeutic effect of acupuncture on allergic rhinitis and its effects on immunologic function', *Zhongguo Zhenjiu (Chinese Acupuncture and Moxibustion)*, 26(8): 557 – 560 [Chinese]

Witt, CM et al (2009), 'Cost-effectiveness of acupuncture in women and men with allergic rhinitis: A randomized controlled study in usual care', *American Journal of Epidemiology*, 169: 562 – 571

Xiao, L et al (2009), 'Systematic evaluation of the randomized controlled trials about acupuncture and moxibustion treatment of allergic rhinitis', *Zhongguo Zhenjiu (Chinese Acupuncture and Moxibustion)*, 29: 512 – 516 [Chinese]

Xue, CC et al (2007), 'Acupuncture for persistent allergic rhinitis: a randomised, sham-controlled trial', *The Medical Journal of Australia*, 187: 337 – 341

Yu, JL et al (1994), 'Effect of acupuncture treatment in 230 cases of allergic rhinitis', *Zhongguo Zhenjiu (Chinese Acupuncture and Moxibustion)*, 14(5): 241 – 242 [Chinese]

Zhang, CS et al (2010), 'Ear-acupressure for allergic rhinitis: A systematic review', *Clinical Otolaryngology*, 35: 6 – 12

Zhao, ZQ (2008), 'Neural mechanism underlying acupuncture analgesia', *Progress in Neurobiology*, 85: 355 – 375

Zijlstra, FJ et al (2003), 'Anti-inflammatory actions of acupuncture', *Mediators of Inflammation*, 12: 59 – 69

*This factsheet will continue to be updated with new clinical trials and articles as they become available.*