

ACUPUNCTURE AND COLDS AND FLU

About colds and flu

Acute upper respiratory tract viral infections are the most common diseases of human beings (Eccles 2005). Adults have two to five common colds each year and school children have from seven to ten colds per year (Johnston 1996). The common cold is most often caused by rhinoviruses (Heikkinen 2003). It is a short mild illness with early symptoms of headache, sneezing, chills and sore throat, and later symptoms of nasal discharge, nasal obstruction, cough and malaise (Eccles 2005). Generally, the severity of symptoms increases rapidly, peaking 2-3 days after infection, with a mean duration of symptoms of 7-10 days but with some symptoms persisting for more than 3 weeks.

Influenza is caused by infection with influenza A and B viruses. In the UK, outbreaks of influenza occur in most winters, cause much illness and are a major burden on the NHS (Meier 2000). Influenza is an unpleasant but usually self-limiting disease. The illness can affect both the upper and lower respiratory tract, and is often accompanied by systemic signs and symptoms, such as: abrupt onset of fever; chills; non-productive cough; myalgias; headache; nasal congestion; sore throat; and fatigue (Cox 1998). It may be complicated by, for example, otitis media, bacterial sinusitis, secondary bacterial pneumonia, meningitis, encephalitis or exacerbations of underlying disease (Department of Health 2010). In the UK, 1.3% of people with influenza-like illness are hospitalised each year (Cooper 2003), and influenza and its complications cause around 3,000–4,000 deaths in an average year (far more during a major epidemic) (Meier 2000). Older people, young children and immunosuppressed people are most at risk of developing complications.

The aim of management is to reduce the duration and severity of influenza symptoms, and the risk of complications; and to minimise adverse effects of treatment. Management of the common cold involves drugs to alleviate symptoms, such as mild analgesics. For influenza, there are also antivirals.

References

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How acupuncture can help

Evidence from randomised controlled trials suggests that electroacupuncture (Xiao 2007), acupuncture (Kawakita 2008; Kawakita 2004) and acupressure (Takeuchi 1999) can help relieve the symptoms of the common cold. (see Table below)

Acupuncture may help relieve symptoms of colds and flu by:

- * enhancing natural killer cell activities and modulating the number and ratio of immune cell types (Kawakita 2008);

- *reducing pain through the stimulation of nerves located in muscles and other tissues, which leads to release of endorphins and other neurohumoral factors (Pomeranz 1987);

- *reducing inflammation through the release of vascular and immunomodulatory factors (Kavoussi 2007, Zijlstra 2003);

- * increasing local microcirculation (Komori 2009), which aids dispersal of swelling.

About traditional acupuncture

Acupuncture is a tried and tested system of traditional medicine, which has been used in China and other eastern cultures for thousands of years to restore, promote and maintain good health. Its benefits are now widely acknowledged all over the world and in the past decade traditional acupuncture has begun to feature more prominently in mainstream healthcare in the UK. In conjunction with needling, the practitioner may use techniques such as moxibustion, cupping, massage or electro-acupuncture. They may also suggest dietary or lifestyle changes.

Traditional acupuncture takes a holistic approach to health and regards illness as a sign that the body is out of balance. The exact pattern and degree of imbalance is unique to each individual. The traditional acupuncturist's skill lies in identifying the precise nature of the underlying disharmony and selecting the most effective treatment. The choice of acupuncture points will be specific to each patient's needs. Traditional acupuncture can also be used as a preventive measure to strengthen the constitution and promote general well-being.

An increasing weight of evidence from Western scientific research (see overleaf) is demonstrating the effectiveness of acupuncture for treating a wide variety of conditions. From a biomedical viewpoint, acupuncture is believed to stimulate the nervous system, influencing the production of the body's communication substances - hormones and neurotransmitters. The resulting biochemical changes activate the body's self-regulating homeostatic systems, stimulating its natural healing abilities and promoting physical and emotional well-being.

About the British Acupuncture Council

With over 3000 members, the British Acupuncture Council (BACc) is the UK's largest professional body for traditional acupuncturists. Membership of the BACc guarantees excellence in training, safe practice and professional conduct. To find a qualified traditional acupuncturist, contact the BACc on 020 8735 0400 or visit www.acupuncture.org.uk

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The evidence

Research	Conclusion
Randomised controlled trials	
Xiao L et al. <u>Clinical observation on effects of acupuncture at Dazhui (GV 14) for abating fever of common cold. Chinese acupuncture & moxibustion</u> 2007; 27: 169-72.	A randomised controlled trial that explored the therapeutic effect of acupuncture for abating fever of common cold. Two hundred and sixty-one patients were assigned to electroacupuncture or a control group given antondine injection. The transient effect of abating fever within 24 h was observed. After treatment, the body temperature at all observation time points in the treatment group were lower than those in the control group ($p < 0.01$). The effect-appearing time (1.42 hours) was shorter in the treatment group than in the control group (3.44 hours, $p < 0.01$). The cure rate and the abating fever rate were better (27.8% and 75.9%) with electroacupuncture than with the control (10.9% and 55.5%) ($p < 0.01$). <u>The researchers concluded that electroacupuncture had a definite therapeutic effect on high fever due to the common cold, and that the treatment should be taken as early as possible.</u>
Kawakita K et al. Preventive and curative effects of acupuncture on the common cold: a multicentre randomized controlled trial in Japan. <i>Complementary Therapies in Medicine</i> 2004 Dec; 12: 181-8.	A trial that determined the preventive and curative effects of manual acupuncture on the symptoms of the common cold. A total of 326 participants were randomly allocated to acupuncture and no-treatment control groups. Acupuncture treatments were performed four times during the 2-week experimental period with a 2-week follow-up period. A common cold diary was scored daily for 4 weeks, and a common cold questionnaire was scored before each acupuncture treatment and twice at weekly intervals. The diary score in the acupuncture group tended to decrease after treatment, but the difference between groups was not significant. Statistically significantly fewer symptoms were reported in the questionnaire by the acupuncture group than control group ($p = 0.024$). No severe adverse event was reported. The researchers concluded that the trial found a significantly positive effect of acupuncture, and that use of acupuncture for symptoms of the common cold symptoms should be considered.
Takeuchi H et al. The effects of nasal massage of the "yingxiang" acupuncture point on nasal airway resistance and sensation of nasal airflow in patients with nasal congestion associated with acute upper respiratory tract infection. <i>American Journal of Rhinology</i> 1999; 13: 77-9.	A randomised controlled trial that determined whether nasal massage of a specific acupuncture point in patients with nasal congestion had any effect on nasal airway resistance (NAR) measured by posterior rhinomanometry and sensation of nasal airflow measured on a visual analogue scale (VAS). Twenty patients were randomized into two groups; one group self massaged the acupuncture point for 30 seconds, while the other group acted as control group without nasal massage. NAR and VAS were measured at baseline, and at 2 and 10 minutes after massage. At the end of the study, patients were asked to score any change in their nasal congestion. There was no statistically significant difference between the two groups in percentage change in NAR or VAS from baseline at any time during the study, although the massage group showed trends toward decongestion and relief from congestion. <u>At the end of the study, more patients in the massage group than the control group felt their nasal congestion was improved.</u>
Research on mechanisms for acupuncture	
Komori M et al. Microcirculatory responses to acupuncture stimulation and phototherapy. <i>Anesth Analg</i> 2009; 108: 635-40.	Experimental study on rabbits in which acupuncture stimulation was directly observed to increase diameter and blood flow velocity of peripheral arterioles, enhancing local microcirculation.
Kawakita K et al. Do Japanese style acupuncture and moxibustion reduce symptoms of the common cold? <i>eCAM</i> 2008; 5: 481-9.	A review of research into the effects of Japanese style acupuncture and moxibustion on the symptoms of the common cold. It reports that research has shown acupuncture to reduce common cold symptoms, and that acupuncture stimulation enhances natural killer cell activities and modulates the number and ratio of immune cell types.
Kavoussi B, Ross BE. The neuroimmune basis of anti-inflammatory acupuncture. <i>Integr Cancer Ther</i> 2007; 6: 251-7.	Review article that suggests the anti-inflammatory actions of traditional and electro-acupuncture are mediated by efferent vagus nerve activation and inflammatory macrophage deactivation.
Zijlstra FJ et al. Anti-inflammatory actions of acupuncture. <i>Mediators</i>	An article that suggests a hypothesis for anti-inflammatory action of acupuncture: Insertion of acupuncture needles initially stimulates production

<p><i>Inflamm</i> 2003; 12: 59-69.</p>	<p>of beta-endorphins, CGRP and substance P, leading to further stimulation of cytokines and NO. While high levels of CGRP have been shown to be pro-inflammatory, CGRP in low concentrations exerts potent anti-inflammatory actions. Therefore, a frequently applied 'low-dose' treatment of acupuncture could provoke a sustained release of CGRP with anti-inflammatory activity, without stimulation of pro-inflammatory cells.</p>
<p>Pomeranz B. Scientific basis of acupuncture. In: Stux G, Pomeranz B, eds. <i>Acupuncture Textbook and Atlas</i>. Heidelberg: Springer-Verlag; 1987: 1-18.</p>	<p>Needle activation of A delta and C afferent nerve fibres in muscle sends signals to the spinal cord, where dynorphin and enkephalins are released. Afferent pathways continue to the midbrain, triggering excitatory and inhibitory mediators in spinal cord. Ensuing release of serotonin and norepinephrine onto the spinal cord leads to pain transmission being inhibited both pre- and postsynaptically in the spinothalamic tract. Finally, these signals reach the hypothalamus and pituitary, triggering release of adrenocorticotrophic hormones and beta-endorphin.</p>