

ACUPUNCTURE AND BELL'S PALSY

About Bell's Palsy

Each year in the UK, around 1 in 5,000 people develop Bell's palsy, which is characterised by unilateral facial weakness of rapid onset (Rowlands 2002, Holland 2004). The condition can develop at any age, but seems to be most common in those aged between 15 and 60 years (Peitersen 1982). In about 71% of patients, it resolves spontaneously without treatment, but 13% are left with slight facial weakness and 16% with moderate to severe weakness that results in major facial dysfunction and disfigurement (Peitersen 1982, Peitersen 2002, Ikeda 2005). Bell's palsy is due to inflammation of the facial nerve in the internal auditory canal, but the cause of the inflammation is unknown (Adour 1972, Gacek 2002). The condition results in an isolated unilateral lower motor neurone palsy, with impairment of all facial movements on the affected side, including blinking. Conventional medical treatment includes eye protection, drugs (i.e. corticosteroids, antivirals), surgery and physiotherapy.

References

Rowlands S et al. The epidemiology and treatment of Bell's palsy in the UK. *Eur J Neurol* 2002; 9: 63-7.

Holland NJ, Weiner GM. Recent developments in Bell's palsy. *BMJ* 2004; 329: 553-7.

Peitersen E. The natural history of Bell's palsy. *Am J Otol* 1982; 4: 107-11.

Peitersen E. Bell's palsy: the spontaneous course of 2,500 peripheral facial nerve palsies of different etiologies. *Acta Otolaryngol Suppl* 2002; 549: 4. 30.

Ikeda M et al. Clinical factors that influence the prognosis of facial nerve paralysis and the magnitudes of influence. *Laryngoscope* 2005; 115: 855-60.

Adour KK et al. Prednisone treatment for idiopathic facial paralysis (Bell's palsy). *N Eng J Med* 1972; 287: 1268-72.

How acupuncture can help you

Clinical trials suggest that acupuncture is at least as effective as corticosteroids and may improve recovery in patients with Bell's palsy, either used alone or in combination with drug treatment (Tong 2009; Li 2004). Note though that most of the trials to date have been of poor quality which allows only tentative conclusions to be reached (Chen 2010). (See Table overleaf)

Acupuncture may help in the treatment of Bell's palsy by:

- reducing inflammation, by promoting release of vascular and immunomodulatory factors (Kim 2008, Kavoussi 2007, Zijstra 2003);
- enhancing local microcirculation, by increasing the diameter and blood flow velocity of peripheral arterioles (Komori 2009);
- nerve and muscular stimulation (Cheng 2009).

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 wellbeing.

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 wellbeing.

About the British Acupuncture Council

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

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The evidence

Research	Conclusion
Reviews	
<p><u>Chen N, Zhou M, He L, Zhou D, Li N</u>. Acupuncture for Bell's palsy. <i>Cochrane Database of Systematic Reviews</i> 2010 Aug 4;(8):CD002914</p>	<p>A systematic review of the use of acupuncture for Bell's palsy that included six randomised studies involving a total of 537 patients recruited within 14 days of onset; five studies used acupuncture and one used acupuncture plus drugs. The studies were all found to have serious methodological or reporting weaknesses (e.g. uncertain allocation concealment and loss to follow-up) and clinical differences between trials precluded meta-analysis. No trials reported on the outcomes specified for the review but instead presented frequencies for categories such as 'marked improvement'. <u>The authors concluded that, while the six studies individually suggested benefit, their poor quality precluded firm conclusions.</u></p>
Clinical studies	
<p><u>Tong FM, Chow SK, Chan PY, Wong AK, Wan SS, Ng RK, Chan G, Chan WS, Ng A, Law CK</u>. A prospective randomised controlled study on efficacies of acupuncture and steroid in treatment of idiopathic peripheral facial paralysis. <i>Acupunct Med</i>. 2009 Dec;27(4):169-73.</p>	<p>119 patients were randomly allocated to groups of acupuncture, steroid and control (conventional expectant treatment). They were assessed weekly by blinded assessors, using the House-Brackmann facial nerve grading system. The overall improvement (grade 3 or better) was 86.9% in the steroid group, 96.4% in the acupuncture group and 89.5% in the control group respectively. However, the difference in degree of recovery and speed of recovery in the three groups was not statistically significant. <u>The efficacies of acupuncture, steroid and conventional expectant treatment (natural course of recovery) in idiopathic peripheral facial palsy (Bell's palsy) in the study were the same with respect to the degree of recovery and speed of recovery.</u></p>
<p>Li Y et al. Efficacy of acupuncture and moxibustion in treating Bell's palsy: a multicenter randomized controlled trial in China. <i>Chin Med J (Engl)</i> 2004; 117: 1502-6.</p>	<p>A multicentre single-blind randomised controlled trial involving 480 patients with Bell's palsy (1-90 days after onset) that compared acupuncture alone with acupuncture in combination with drug treatment (i.e. prednisolone 30mg daily for 3 days, B vitamins and dibazole) and with drug treatment alone (the control group). The outcome assessors were unaware of the interventions assigned in the trial. The outcome measures were facial function graded using the House-Brackmann scale both pre- and post-treatment at 4 weeks, and disability and psychosocial status evaluated using the Facial Disability Index. A total of 41 patients did not complete the trial and were not included in the analysis. Significantly more patients were cured (House-Brackmann grade I) with acupuncture alone than in the control group (41% vs. 28.1%, respectively, $p=0.013$), but not the combined treatment group (31%). <u>In all, 95.5% were cured, or obviously improved (House-Brackmann grade II) with acupuncture alone and with combined treatment compared with 87.5% in the control group ($p=0.024$ and 0.014, respectively). It is worth noting that among the 314 patients followed up at 3 and 6 months post-treatment, no difference was found between the three groups, with all patients reaching grade III</u></p>

or better on the House-Brackmann scale.

Physiology studies (human and animal)

Kimori M, Takada K, Tomizawa Y, Nishiyama K, Kondo I, Kawamata M, Ozaki M. Microcirculatory responses to acupuncture stimulation and phototherapy. *Anesth Analg* 2009; 108: 635-40.

An experimental study on rabbits, in which acupuncture stimulation was directly observed to increase diameter and blood flow velocity of peripheral arterioles, enhancing local microcirculation.

Cheng KJ. Neuroanatomical basis of acupuncture treatment for some common illnesses. *Acupunct Med* 2009;27: 61-4.

A review that looked at the acupuncture treatment formulae for some common conditions, including sciatica, trigeminal neuralgia, and facial nerve palsy. It is found that, in many cases, the acupuncture points traditionally used have a neuroanatomical significance from the viewpoint of biomedicine. From this, the reviewers hypothesised that plausible mechanisms of action include intramuscular stimulation for treating muscular pain and nerve stimulation for treating neuropathies.

Kim HW, Uh DK, Yoon SY, Roh DH, Kwon YB, Han HJ, Lee HJ, Beitz AJ, Lee JH. Low-frequency electroacupuncture suppresses carrageenan-induced paw inflammation in mice via sympathetic post-ganglionic neurons, while high-frequency EA suppression is mediated by the sympathoadrenal medullary axis. *Brain Res Bul.* 2008; 75: 698-705.

An experimental study on rats, the results of which suggest that suppressive effects of low frequency electroacupuncture on carrageenan-induced paw inflammation are mediated by sympathetic post-ganglionic neurones, while suppressive effects of high frequency electroacupuncture are mediated by the sympatho-adrenal medullary axis.

Kavoussi B, Ross BE. The neuroimmune basis of anti-inflammatory acupuncture. *Integr Cancer Ther* 2007; 6: :251-7.

A 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, van den Berg-de Lange I, Huygen FJ, Klein J. Anti-inflammatory actions of acupuncture. *Mediators Inflamm* 2003;12: 59-69.

A review that suggests a hypothesis for the anti-inflammatory action of acupuncture. Insertion of acupuncture needle initially stimulates production of beta-endorphins, calcitonin gene-related peptide (CGRP) and substance P, leading to further stimulation of cytokines and nitric oxide (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.

Terms and conditions

The use of this fact sheet is for the use of British Acupuncture Council members and is subject to the strict conditions imposed by the British Acupuncture Council details of which can be found in the members area of its website www.acupuncture.org.uk.