

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

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How acupuncture can help

Some clinical trials suggest that acupuncture may improve recovery in patients with Bell's palsy, either used alone or in combination with drug treatment, but more high quality studies are needed to confirm this (He 2007, Li 2004). (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);
- local nerve 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 (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 British Acupuncture Council on 020 8735 0400 or visit www.acupuncture.org.uk

ACUPUNCTURE AND BELL'S PALSY

The evidence

Research	Conclusion
Reviews He L et al. Acupuncture for Bell's palsy. <i>Cochrane Database of Systematic Reviews</i> 2007, Issue 4. Art. No.: CD002914. DOI: 10.1002/14651858.CD002914.pub3	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 found to have methodological or reporting weaknesses (e.g. uncertain allocation concealment and loss to follow-up) and clinical differences between trials precluded meta-analysis. <u>The authors concluded that, while the six studies individually suggested benefit, their poor quality precluded firm conclusions.</u>
Clinical studies	
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.	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 or better on the House-Brackmann scale.</u>
Wang XH, Zhang LM, Han M, Zhang KQ, Jiang JJ. Treatment of Bell's palsy with combination of traditional Chinese medicine and western medicine [Article in Chinese] <i>Hua Xi Kou Qiang Yi Xue Za Zhi</i> . 2004; 22: 211-3.	A randomised controlled trial involving 83 patients with Bell's palsy, which compared treatment involving drugs, acupuncture and physiotherapy with treatment involving massage plus functional exercise (the control group). The results of both groups were evaluated according to Portmann's Simple Scale. The score before treatment was 2.907 in the acupuncture, while it was 2.931 in the control group. After treatment, the score was 18.593 in the acupuncture group, while it was 9.862 in the control group. Scores for the function of facial muscles were higher in the acupuncture group than the control group ($p<0.01$), as was the improvement index ($p<0.01$). <u>The researchers concluded that there is significant curative effect with a combination of acupuncture and western medicine in the treatment of Bell's palsy.</u>
Physiology studies (human and animal)	
Komori M, Takada K, Tomizawa Y, Nishiyama K, Kondo I, Kawamata M, Ozaki M. Microcirculatory responses to acupuncture stimulation and phototherapy. <i>Anesth Analg</i> 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	A review that looked at the acupuncture treatment formulae for some common conditions, including sciatica, trigeminal neuralgia, and facial nerve

<p>illnesses. <i>Acupunct Med</i> 2009;27: 61-4.</p>	<p>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.</p>
<p>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. <i>Brain Res Bul.</i> 2008; 75: 698-705.</p>	<p>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.</p>
<p>Kavoussi B, Ross BE. The neuroimmune basis of anti-inflammatory acupuncture. <i>Integr Cancer Ther</i> 2007; 6: :251-7.</p>	<p>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.</p>
<p>Zijlstra FJ, van den Berg-de Lange I, Huygen FJ, Klein J. Anti-inflammatory actions of acupuncture. <i>Mediators Inflamm</i> 2003;12: 59-69.</p>	<p>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.</p>

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