

## Evidence summary

# Chinese medicine for post-stroke spasticity

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This summary of key findings from *Volume 13: Post-stroke spasticity*<sup>1</sup> of the Evidence-based Clinical Chinese Medicine monograph series outlines:

- what a post-stroke spasticity is
- current treatments
- findings from research into classical Chinese medicine literature and modern Chinese medicine clinical studies.

### What is post-stroke spasticity?

Post-stroke spasticity is a common, disabling complication that often occurs after stroke.<sup>2</sup> Its major symptom is overly tense muscle that makes it difficult to control and move that muscle.<sup>2</sup>

### Current treatments

Treatments for post-stroke spasticity include pharmacotherapy and rehabilitation to reduce the severity of spasticity and other related symptoms.<sup>2</sup> However, concerns about the effectiveness of these treatments and their side effects have led some people with post-stroke spasticity to explore complementary medicine, including Chinese medicine therapies.<sup>2</sup>

Chinese medicine treatment for post-stroke spasticity includes oral and topical Chinese herbal medicine, acupuncture, moxibustion and *tuina*. Chinese medicine practitioners base their treatments on the patient's symptoms, relevant clinical textbooks and guidelines, research and clinical experience.

### Classical Chinese medicine literature

The *Encyclopedia of Traditional Chinese Medicine (Zhong Hua Yi Dian)* is a large and important collection of classical Chinese medicine books. It includes 264 citations that describe treatment of post-stroke spasticity symptoms with Chinese herbal medicine, including oral decoctions, topical pastes, steaming and baths. There are 30 citations for acupuncture therapies for treating post-stroke spasticity.

The Chinese herbal medicine therapies from classical literature are different to those in modern clinical studies, but the acupuncture points are similar.

### Modern Chinese medicine clinical studies

To write the *Post-stroke spasticity*<sup>1</sup> monograph, nine biomedical databases (five English language and four Chinese language) were searched in May 2015. This search found 317 clinical studies of Chinese medicine therapies for post-stroke spasticity. Most studies (257) were randomised controlled trials. An additional search of the International Clinical Trials Registry Platform in March 2023 identified one new registered randomised controlled trial on acupuncture.

#### Chinese herbal medicine

##### *Oral Chinese herbal medicine*

Twenty-seven randomised controlled trials tested oral Chinese herbal medicine for post-stroke spasticity. Oral Chinese herbal medicine was more effective than routine pharmacotherapy/rehabilitation in reducing post-stroke spasticity symptoms, either alone or combined with routine pharmacotherapy/rehabilitation.<sup>3</sup>

##### *Topical Chinese herbal medicine*

In 24 trials of topical Chinese herbal medicine for post-stroke spasticity, combining it with routine pharmacotherapy/rehabilitation was more effective than routine treatment alone.

##### *Oral plus topical Chinese herbal medicine*

In 11 trials, oral and topical Chinese herbal medicine administered together, either alone or combined with routine pharmacotherapies/rehabilitation, reduced the severity of post-stroke spasticity. People in these trials reported mild nausea, mild rash, influenza-like symptoms.

#### Acupuncture and *tuina* therapies

Results from 151 randomised controlled trials that explored acupuncture therapies for post-stroke spasticity showed acupuncture improved motor function,

either alone or when combined with routine pharmacotherapy/rehabilitation.

Acupuncture combined with rehabilitation improved patients' motor function and quality of life, and reduced pain in post-stroke shoulder–hand syndrome.<sup>4</sup>

When integrated with routine pharmacotherapy/rehabilitation, electroacupuncture enhanced improvement of post-stroke spasticity symptoms compared to routine pharmacotherapy/rehabilitation alone.<sup>5</sup>

Acupuncture and moxibustion combined with rehabilitation produced similar results.<sup>1</sup>

One new registered randomised controlled trial of electroacupuncture for post-stroke spasticity was identified since 2018. Results showed no improvement in post-stroke spasticity symptoms when electroacupuncture was added to routine pharmacotherapy/rehabilitation.<sup>6</sup>

People in these trials reported mild discomfort or minor bleeding at the needling site.

In 16 randomised controlled trials, *tuina* added to routine rehabilitation reduced the severity of spasticity and improved patients' daily activities. No adverse events were associated with *tuina*.<sup>1</sup>

### Key messages

- Chinese medicine has been used throughout history to treat post-stroke spasticity-related symptoms.
- Treatment approaches have evolved over time.
- Oral and topical Chinese herbal medicine may improve post-stroke spasticity symptoms, alone or in conjunction with routine pharmacotherapies/rehabilitation.
- Acupuncture, electroacupuncture, acupressure, moxibustion and *tuina* may be effective treatments for post-stroke spasticity.
- Clinicians and patients should discuss potential risks and benefits, so patients can make informed choices about care.

### For more information

Find out more about Chinese medicine for post-stroke spasticity in the book *Evidence-based Clinical Chinese Medicine Volume 13: Post-stroke Spasticity*<sup>1</sup> from <https://doi.org/10.1142/11650>

To find out more about Chinese medicine research at the China–Australia International Centre for Chinese Medicine, visit [www.rmit.edu.au/research/centres-collaborations/multi-partner-collaborations/cairccm](http://www.rmit.edu.au/research/centres-collaborations/multi-partner-collaborations/cairccm)

### References

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3. Cai Y, Zhang C S, Liu S, et al. Add-On Effects of Chinese Herbal Medicine for Post-Stroke Spasticity: A Systematic Review and Meta-Analysis. Front Pharmacol, 2019, 10:734.
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6. Cai Y, Zhang C S, Zhang A L, et al. Electroacupuncture for Poststroke Spasticity: Results of a Pilot Pragmatic Randomized Controlled Trial. J Pain Symptom Manage, 2021, 61(2):305-314.

### Disclaimer

This evidence summary is not intended as a guide for self-medication or medical advice – patients should seek professional advice from qualified Chinese medicine practitioners.