

## Evidence summary

# Chinese medicine for urinary tract infection

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This summary of key findings from *Volume 22: Urinary tract infection*<sup>1</sup> of the Evidence-based Clinical Chinese Medicine monograph series outlines:

- what a urinary tract infection is
- current treatments
- findings from research into classical Chinese medicine literature and modern Chinese medicine clinical studies.

## What is a urinary tract infection?

A urinary tract infection (UTI) is a common health problem.<sup>2</sup> Its symptoms include pain (dysuria), increased urinary frequency and urgency. Many adults, particularly women, experience acute or recurrent UTIs.<sup>2</sup>

## Current treatments

The main conventional medical treatment is antibiotics. While antibiotics are effective, concerns about antibiotic resistance have increased interest in complementary therapies, including Chinese medicine, to treat and prevent recurrence of UTI.<sup>3</sup>

Chinese medicine treatment options include Chinese herbal medicine, acupuncture, ear acupuncture, ultrashort wave therapy, and dietary and lifestyle advice. 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 Chinese medicine books. It includes 488 citations that describe the treatment of urinary symptoms that are typical of UTI with

Chinese herbal medicine, including decoctions, powders and liquid formulas.

While the *Encyclopedia of Traditional Chinese Medicine* also includes acupuncture therapies as treatment options for UTI, they are much less frequently cited.

All of the herbal medicine treatments that are mentioned in contemporary textbooks and classical literature for UTI were tested in modern clinical studies.

## Modern Chinese medicine clinical studies

To write the *Urinary tract infection*<sup>1</sup> monograph, nine biomedical databases (five English-language and four Chinese-language) were searched in July 2018. This search found 198 relevant studies of Chinese medicine treatments for UTI, of which 154 were randomised controlled trials, 21 were non-randomised controlled clinical trials and 23 were non-controlled studies.

An additional search of the International Clinical Trials Registry Platform conducted in March 2023 identified five new relevant registered randomised controlled trials of Chinese herbal medicine.

## Chinese herbal medicine

Most studies (146) of Chinese herbal medicine were randomised controlled trials. All but one of these studies tested oral Chinese herbal medicine for acute, persistent and recurrent UTI.

In randomised controlled trials looking at acute UTI, oral Chinese herbal medicine was more effective than antibiotics (alone or with other treatments) in increasing the chance of cure (defined as being symptom free and having no bacteria in the urine). Chinese herbal medicine combined with

antibiotics also increased the chance of cure and reduced urinary symptoms sooner than antibiotics (alone or with other treatments).

Fewer studies tested Chinese herbal medicine for persistent UTI, but the trials that did showed Chinese herbal medicine increased the likelihood of a cure in a similar way to acute UTI. Chinese herbal medicine combined with antibiotics also reduced the chance of recurrence in people with persistent UTI.

In addition, oral Chinese herbal medicine alone or combined with antibiotics increased the chance of cure for people with recurrent UTI.

Mild gastrointestinal adverse events were common among the people who participated in these trials.

The five new relevant registered randomised controlled trials of Chinese herbal medicine for UTI had mixed results: some showed benefit, others showed potential for harm.

### Acupuncture and related therapies

The original database search found eight relevant studies of acupuncture therapies for UTI. Six of these were randomised controlled trials. Results from five randomised controlled trials of acupuncture for UTI were published in a systematic review.<sup>4</sup> This review suggested acupuncture may play a role in treating and preventing recurrent UTI in women.

No new relevant registered randomised controlled trials of acupuncture for UTI were identified since 2018.

## Key messages

- Chinese medicine treatments have been used throughout history to treat UTI-related symptoms.
- Treatment approaches have evolved over time.
- Oral Chinese herbal medicine may increase the chance of cure and minimise recurrence.
- Acupuncture and moxibustion may be effective treatment options for recurrent UTI.
- Clinicians and patients should discuss the potential risks and benefits, so patients can make informed choices about their care.

## For more information

You can find out more about Chinese medicine for UTI in the book *Evidence-based Clinical Chinese Medicine Volume 22: Urinary Tract Infection*<sup>1</sup> from <https://doi.org/10.1142/11907>

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

1. Coyle M, Qin X. (2021) *Volume 22: Urinary tract infection*. Xue CC, Lu C, editors. World Scientific Publishing Co. Pte. Ltd.; Singapore.
2. Peck J, Shepherd JP. (2021) Recurrent urinary tract infections: diagnosis, treatment, and prevention. *Obstet Gynecol Clin North Am* 48(3): 501–13.
3. Flower A, Bishop FL, Lewith G. (2014) How women manage recurrent urinary tract infections: an analysis of postings on a popular web forum. *BMC Fam Pract* 15: 162.
4. Qin X, Coyle ME, Yang L, *et al.* (2020) Acupuncture for recurrent urinary tract infection in women: a systematic review and meta-analysis. *BJOG* 127(12): 1459–68.

## 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.