

Expert Herbal Reality Resource

Dang Gui

Names

Botanical Name: *Radix angelicae sinensis* / *Angelica sinensis* (Oliv.) Diels

Family: Umbelliferae

Common names: Dong quai, Chinese angelica root, tang-kwai, toki (Japanese), tanggwí (Korean)



Description

Dang gui is a large herbaceous, fragrant, perennial plant grown in cool, damp climates at high altitudes such as those found in its native soils of the Gansu, Sichuan, Shaanxi and Hubei provinces of China as well as mountainous regions of Korea and Japan.

It grows 3-4 feet tall, with grooved purple stems, large bright green leaves and broad flat clusters of small white flowers blossoming in the Summer.

The roots are harvested in autumn after three year's growth. They are then carefully cleaned, dried, slowly smoked and cut in to thin slices. The best quality is believed to be from Gansu province and is evidenced in large, long, moist and fragrant roots with few branches, a light yellowish-brown outside and yellowish-white inside (1).

Note: There are many varieties of angelica species used as dang gui. Angelica acutiloba is believed in Japanese herbalism to perhaps be even more tonifying than A. sinensis. A. archangelica (Angelica) is a separate herb used in western herbalism and is not to be confused with dang gui.

Constituents

- Polysaccharides: high molecular weight polysaccharide
- Phenylpropanoids: ferulic acid
- Coumarins: low levels of angelol, angelicone, oxypeucedanin, osthole, 7-desmethyloberosin
- Furaoncoumarins: psoralen, bergapten, imperatorin
- Phytosterols: beta-sitosterol
- Aromatic compounds: asligustilide, butylidenephthalide, butylphthalide, n-butylidenephthalide, n-butylphthalide, ligustilide, senkyunolide A
- Vitamins: A, B12, E, C, folic acid, biotin (8)

Traditional use

Dang gui has an extensive history in Chinese medicine and its use can be traced back nearly 2,000 years to the first known Chinese text to describe individual herbs, the *Shen nong ben cao jing* (The Divine Farmer's Classic of the Materia Medica) (25-22AD).

It is also an important culinary herb and is widely used in China in recipes such as broths and congees during the 'golden month' - the month of confinement post-partum, to nourish and strengthen mothers after childbirth – after menstruation, in the frail and elderly. The dried root is very firm and the same root may be used in several soups. Once it has completely softened it is often eaten as a vegetable with rice (4).

Preparing *dang gui* with alcohol releases its volatile oils, increases its bioavailability, enhances its blood-invigorating and analgesic properties which can explain why, traditionally, it is one of a handful of TCM herbs used individually to make medicinal wine.



Traditional actions

Traditional Chinese Medicine actions:

- Tonifies blood and regulates menses
- Invigorates and harmonises blood and disperses cold
- Moistens the intestines
- Reduces swellings, expels pus, generates flesh, alleviates pain

Western herbal medicine actions:

- Blood tonic
- Emmenagogue
- Sedative
- Analgesic
- Mild laxative
- Antibacterial
- Anti-inflammatory

What practitioners say

Menstruation: *Dang gui* is the primary herb for most any kind of abnormal menstruation. Blood deficiency can lead to anaemia, absent, light and late periods. Blood stasis and blood-cold can cause painful periods with dark clots. Like blood deficiency, blood-cold can also result in late and light periods. Blood stasis may also manifest in irregular cycles. *Dang gui* may effectively be used in all of these instances. Ailments accompanying menstruation such as period pain, headaches, body aches and dizziness that arise towards the end of or after the period are often related to blood deficiency. Period pain, headaches, body aches and breast distension occurring before or during the period are often from blood stagnation. Again, *dang gui* is an excellent herb for all of these symptoms.

Gynaecological: *Dang gui* is prescribed in a vast array of formulas for most gynaecological conditions including endometriosis, pelvic inflammatory disease, PCOS, polyps and fibroids.

Pregnancy: While many western sources discourage use of *dang gui* during pregnancy, it has a long history of safe use in pregnancy in Chinese medicine. As it invigorates blood, caution must, of course, be used. Dosage is typically reduced and *chao dang gui* (dry-fried *dang gui*) is more appropriate here than other forms as it is less blood-invigorating. Blood deficiency is very common in pregnancy and can lead to fatigue, abdominal pain (obviously ectopic pregnancy and threatened miscarriage must be ruled out) and constipation. It may also be an underlying cause of recurrent miscarriage.



Post-partum: widely used in post-partum conditions where blood deficiency, stasis and, or, cold (all very common after giving birth) are the cause, including abdominal pain, persistent lochial discharge or retention, constipation, fever, joint pain, severe dizziness and insufficient or absent lactation.

Menopause: *Dang gui* is often used to treat menopausal symptoms, in particular those stemming from blood stasis with symptoms such as hot flashes, mental restlessness, insomnia, high blood pressure and abdominal pain. It is also featured in formulas treating menopause from an imbalance in the kidneys and heart.

Infertility: Cases of infertility with underlying blood deficiency are common as adequate blood supplies are needed for a healthy endometrium in which the embryo may implant and be nourished. *Dang gui* is used in many formulas aimed at enhancing a woman's fertility, such as *gui shao di huang tang* (Angelica, Paeonia, Rehmannia Decoction) a popular choice for promoting the menstrual cycle if amenorrhea is the cause of infertility.

Musculoskeletal: May be used for any pain resulting from blood deficiency, cold causing blood stasis, blood stasis or *qi* stagnation with pain and swelling. Benefits 'wind-damp' painful obstruction stemming from blood deficiency; arthritic pain which presents with swollen joints, a sensation of heaviness in the body and is aggravated by damp weather.

Gastrointestinal: Blood deficient constipation arises because the nourishing, moistening action of blood is lost leading to dryness and accumulation in the large intestine. This is especially common in the elderly and post-partum. *Dang gui's* blood-tonifying, moistening properties lubricate and unblock the bowels.

Skin: Slow-healing sores indicate *qi* and blood deficiency. *Dang gui's* blood-tonifying and invigorating actions help to heal and relieve pain in swollen, painful abscesses and sores including chronic suppurative, non-healing sores. It is also an important herb for dry skin conditions from blood deficiency which, in TCM, may generate wind, manifesting as itching. This is often found in the elderly, those with long-term illnesses, in the latter stage of pregnancy and during or after the period. It is the chief herb in the formula *yang xue run fu yin* (Nourish the Blood and Moisten the Skin Decoction). As it warms and invigorates blood, it also benefits skin conditions where cold has congealed the blood such as chilblains and purpura and is the chief herb in *dang gui si ni tang* (Tangkuei Decoction for Frigid Extremities).

Evidence

Clinical studies around *dang gui*'s use in menopause and perimenopause have garnered mixed findings, however, some have yielded promising results. A randomised control trial (RCT) in 55 postmenopausal women found that the herbal preparation *Climex* (a combination of *dang gui* and chamomile) had a significantly greater effect on reducing the number and intensity of hot flushes compared to placebo. After the first month, *Climex* had a 68% reduction in daytime hot flushes, a 74% reduction in night time hot flushes and a marked improvement in sleep and energy (9).

Another RCT studied the effect of *dang gui bu xue tang* (DGBXT; a 1 : 5 combination of *dang gui* and *huang qi* (astragalus)) on acute menopausal symptoms and concluded that DGBXT was statistically superior to placebo only in the treatment of mild hot flushes (10).

A clinical study in to *dang gui*'s use for chronic abdominal pain compared a *dang gui* pill with atropine (anticholinergic) and placebo, with an efficacy rate of 93.3%, 97.1% and 0% for each group, respectively.

Dang gui's statistically significant efficacy in reducing abdominal pain was the blocking of muscarinic, alpha and H1 receptors, an analgesic effect and an antiseptic effect (11).

Dang gui's hematopoietic action was demonstrated in a case study of a patient with anaemia unresponsive to human erythropoietin and underlying chronic renal failure whose haematopoiesis significantly improved after regularly consuming *dang gui* (12).

In a study with 1404 patients comparing the efficacy of *dang gui*, sage and dextran injections for acute cerebral infarction (stroke), efficacy rates for reducing infarct volume and neurofunction deficits were 78.7%, 63.6% and 59.3%, respectively (13).

A study of patients with coronary artery disease compared injections of a *dang gui*, *ren shen* (ginseng), *huang qi* (astragalus) herb combination and placebo and found, among other benefits, that frequency and severity of angina episodes reduced by 90% and ischemic ST-T changes on ECG improved in 56% of cases. (14)

Safety

Use with caution in cases of diarrhoea from dampness. Avoid if yin deficiency and heat signs. Use with caution and smaller doses in pregnancy. May interact with anti-coagulant drugs, in particular, warfarin. Avoid with hormone-sensitive cancers (8).



Preparation

Traditionally, soaked in water for at least 20-30 minutes then decocted in non-metallic pots with water with one or more herbs on a low-moderate heat for around 20-30 mins. Also prepared in pill, powder and tincture form.

Dosage

Dry herb: 3-15g, tincture: (1:5, 60%) 1-2ml up to three times daily. Larger doses, up to 30g, maybe used in some instances, such as post-partum.

Parts used

Root

References

1. Bensky D, Gamble A. Chinese Herbal Medicine: Materia Medica. 2nd ed. Washington: Eastland Press; 1993.
2. Clavey S. Clinical discussions. Apricot Grove, Melbourne; 2009-2011.
3. Chao WW, Lin BF. Bioactivities of Major Constituents Isolated from *Angelica sinensis* (Danggui). *Chin Med*. 2011;6:29. Published 2011 Aug 19. doi:10.1186/1749-8546-6-29.
4. Pitchford P. Healing with Whole Foods: Asian Traditions and Modern Nutrition. 3rd ed. California: North Atlantic Books; 2002.
5. Foster S, Yue X. Herbal Emissaries: Bringing Chinese Herbs to the West. Rochester: Inner Traditions International; 2000.
6. Lee S. *Revitalizing Dong Quai and Red Date Tea*. Chinese Soup Pot. Published December 2 2011. Accessed May 1 2022. <http://www.chinesesouppot.com/1-soup-recipes/1693-dong-quai-red-date-goji-tea>
7. *Dang gui and Shiitake Chicken*. Daily Cooking Quest. Published: June 10 2013. Accessed: May 1 2022. <https://dailycookingquest.com/dang-gui-and-shiitake-chicken.html>
8. Bokelmann J. Medicinal Herbs in Primary Care: An Evidence-Guided Reference for Healthcare Providers. Philadelphia: Elsevier; 2022.
9. Kupfersztain C et al. The Immediate Effect of Natural Plant Extract, *Angelica sinensis* and *Matricaria chamomilla* (Climex) for the Treatment of Hot Flushes During Menopause: A preliminary report. *Clin Exp Obstet Gynecol*. 2003;30(4):203-6.
10. Haines CJ et al. A Randomized, Double-blind, Placebo-controlled Study of the Effect of a Chinese Herbal Medicine Preparation (Dang Gui Buxue Tang) on Menopausal Symptoms in Hong Kong Chinese Women. *Climacteric*. 2008 Jun;11(3):244-51. doi: 10.1080/13697130802073029.
11. Sun SW, Wang JF. Efficacy of danggui funing Pill in Treating 162 Cases of Abdominal Pain. *Zhongguo Zhong Xi Yi Jie He Za Zhi*. 1992 Sep;12(9):531-2, 517. [Chinese]
12. Bradley RR et al. Hematopoietic Effect of *Radix Angelicae sinensis* in a Hemodialysis Patient. *Am J Kidney Dis*. 1999 Aug;34(2):349-54. doi: 10.1016/s0272-6386(99)70367-7.
13. Liu YM et al. Observation on Clinical Effect of *Angelica* Injection in Treating Acute Cerebral Infarction. *Zhongguo Zhong Xi Yi Jie He Za Zhi*. 2004 Mar;24(3):205-8.
14. Liao JZ et al. Clinical and Experimental Studies of Coronary Heart Disease Treated with yi-qi huo-xue Injection. *J Tradit Chin Med*. 1989 Sep;9(3):193-8.