Tang Kuei and Peony Formula (Dang Gui Shao Yao San) first appeared in the Jin Gui Yao Lue (Essentials from the Golden Cabinet), by Zhang Zhong-Jing, and is often thought to be the oldest formula for the treatment of liver-spleen disharmony. Zhang originally designed the formula to address persistent mild abdominal pain during pregnancy, with or without edema. As understanding of the mechanisms of the formula deepened in the subsequent centuries, its range of application expanded considerably.

**General Signs/Symptoms**
The basic pattern addressed by Tang Kuei and Peony Formula (Dang Gui Shao Yao San) is liver overacting on spleen with blood deficiency, water accumulation, and liver qi stagnation. As is evident from the large dose of the chief ingredient, white peony root (bai shao), blood deficiency is emphasized. The most common signs and symptoms include persistent abdominal pain, edema or sweating in the lower body, irregular menstruation, habitual or threatened miscarriage, postpartum weakness, weakness during pregnancy, premenstrual syndrome, and difficult urination due to deficiency.

### Classical Actions

1. Builds and nourishes blood
2. Softens the liver and smooths liver qi
3. Augments spleen qi and eliminates water accumulation
4. Unblocks blood vessels and gently invigorates blood

### Ingredients

<table>
<thead>
<tr>
<th>PINYIN</th>
<th>LATIN</th>
<th>ENGLISH</th>
<th>Percent of Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bai Shao</td>
<td>Paeoniae (radix), alba</td>
<td>Chinese White Peony root</td>
<td>25.0%</td>
</tr>
<tr>
<td>Fu Ling</td>
<td>Poria</td>
<td>Poria, Hoelen, Tuckahoe</td>
<td>16.6%</td>
</tr>
<tr>
<td>Bai Zhu</td>
<td>Atractylodis Macrocephalae (rhizoma)</td>
<td>White Atractylodes rhizome</td>
<td>16.6%</td>
</tr>
<tr>
<td>Ze Xie</td>
<td>Alismatis Rhizoma</td>
<td>Asian Water Plantain rhizome</td>
<td>16.6%</td>
</tr>
<tr>
<td>Dang Gu</td>
<td>Angelicae Sinensis (radix)</td>
<td>Dong Quai, Tang Kuei root</td>
<td>12.6%</td>
</tr>
<tr>
<td>Chuan Xiong</td>
<td>Chuanxiong Sinensis (radix)</td>
<td>Ligusticum Wallichii rhizome</td>
<td>12.6%</td>
</tr>
</tbody>
</table>

**General Indications / Modern Applications**
Because it resolves an underlying pattern that is common to a multitude of physiological disruptions, Tang Kuei and Peony Formula (Dang Gui Shao Yao San) has been found to be effective in treating an unusually large array of indications:

- Abdominal pain, mild and persistent
- Acne
- Adnexitis (inflammation of the structures adjacent to the uterus)
- Allergic rhinitis
- Anemia, gestational
- Anemia, hypochromic
- Angina
- Anovulation
- Back weakness and numbness
- Back pain (lower)/sciatica
- Breast hyperplasia
- Breech presentation in late pregnancy
- Chilblains
- Cold extremities
- Congestive heart disease
- Coronary artery disease
- Dementia
- Dizziness
- Dysmenorrhea
- Eczema
- Edema
- Fatigue
- Gastritis, chronic
- Gestational hypertension
- Gout
- Headaches, vascular
- Hemorrhoids
- Hives/urticaria
- Hormone regulation and stimulation
- Hydrocele
- Hypotension or hypertension from deficiency
- Infertility
- Learning disorders due to deficiency
- Leiomyoma
- Leg weakness
- Luteal insufficiency
- Melasma
- Memory impairment
- Meniere’s disease
- Menopausal symptoms
- Menorrhagia
- Menstrual pain
- Menstruation, irregular
- Miscarriage, habitual or threatened
- Nausea
- Ovarian cysts
- Ovarian dysfunction
- Palpitations
- Pelvic Inflammatory Disease (PID)
- Polycystic ovaries
- Post stroke impairment and deterioration
- Postpartum weakness
- Postpartum depression
- Preeclampsia
- Pregnancy, weakness during
- Pregnancy, unstable
- Premenstrual syndrome
- Psoriasis
- Rheumatoid arthritis
- Sweating, lower body
- Thrombotic stroke, prevention of
- Toxemia of pregnancy,
- Trigeminal neuralgia
- Ulcers, peptic
- Urinary tract stones
- Uterine bleeding, dysfunctional
- Uterine tumor
- Varicose veins
- Vertigo
FORMULA ACTIONS
- Builds and nourishes blood
- Softens the liver and smooths liver qi
- Augments spleen qi and eliminates water accumulation
- Unblocks blood vessels and gently invigorates blood

TONGUE
Pale, with a thin coating.

PULSE
May be slippery, or weak and thin thin.

CONTRAINDICATIONS / CAUTIONS
Normally, substances that invigorate blood flow are thought to be contraindicated during pregnancy, but the original application of Tang Kuei and Peony Formula (Dang Gui Shao Yao San) was for a condition of pregnancy and there is a significant body of clinical evidence to support the use of Tang Kuei and Peony Formula during pregnancy. It is a very popular treatment for threatened miscarriage.

Although Tang Kuei and Peony Formula (Dang Gui Shao Yao San) has the ability to transform blood stasis, clinical studies have shown that it does not enhance the anti-coagulation effect of Warfarin (coumadin).  

DOSAGE
Standard dosage is 2 tablets, 3 times daily, but this can be increased according to case.

FORMULA DISCUSSION
Tang Kuei and Peony Formula (Dang Gui Shao Yao San) treats a two-part pattern that turns out to be extraordinarily common, especially in women, and is often the basis for such a wide variety of indications that it can be difficult to see how they can all stem from the same root cause. (See “General Indications / Modern Applications” above.) Yet, with little or no modification Tang Kuei and Peony Formula (Dang Gui Shao Yao San) can be highly effective for treating all the indications on the list, provided the underlying pattern is a match.

Zhang Zhong-Jing first formulated Tang Kuei and Peony Formula (Dang Gui Shao Yao San) to treat abdominal pain during pregnancy due to a disharmony between the liver and spleen. The root of this disharmony is a deficiency of blood in the liver. During pregnancy, the liver supplies extra blood to the uterus, which is necessary to maintain the fetus, and since the liver blood “carries” the liver qi, if the expecting mother is blood deficient, or unable to sustain the increased production of blood, the liver will become stuck and hyperactive. The hyperactive liver invades the spleen (a Wood excess “overwhelms” Earth), damaging the spleen’s ability to perform its transportation and transformation function. This is how Zhang Zhong-Jing understood the development of the pattern. The accompanying signs and symptoms of Zhang Zhong-Jing’s original pattern included hypertonic abdomen with pain, fluid retention, especially edema of the lower limbs, and, of course, the chief symptom of persistent mild abdominal pain.

The root and primary part of this disharmony is liver blood deficiency leading to hyperactive liver. The rest of the pattern would not develop if there were sufficient blood to provide carriage for the liver qi. The second (and dependent) part of the disharmony is the resulting splenic failure to transform and transport fluid. The disharmony in whole can become the underlying pattern for many disorders of gynecology and obstetrics, dermatology, pain disorders, and chronic dampness, as well as gastrointestinal, hematologic, and vascular disorders. It has even been used effectively to treat certain neurological conditions.

Blood deficiency that leads to qi stagnation is easy enough to grasp without much reflection, as is the concept of liver over-acting on spleen. There are a number of formulas that treat both of these. What is unique about the pattern addressed by Tang Kuei and Peony Formula (Dang Gui Shao Yao San) is the resulting fluid accumulation. Fluids may accumulate in a great many ways. Zhang looked for edema in the lower limbs, swollen abdomen, and for inhibited urination to confirm the pattern. Today we see the water accumulation component to include such varied signs as chronic rhinitis, Meniere’s disease, nausea, a feeling that one’s head is heavy, abnormal sweating concentrated in the lower body, hydroceles, and even congestive heart disease.

SYNERGY OF INGREDIENTS
The chief ingredient, white peony root (bai shao), addresses all the major aspects of the underlying pathology. Its primary action is to supplement blood. Although it does not directly address the dampness component of the pattern, bai shao so effectively softens the liver and nourishes the blood that it can be taken by itself to prevent the pattern from developing in the first place.

The two deputies serve different functions in Tang Kuei and Peony Formula (Dang Gui Shao Yao San). Ligusticum (chuan xiong) might have been considered the chief had Zhang misunderstood the pattern he was seeing with pregnant women suffering from abdominal pain. Chuan xiong enters the blood of the liver and chong vessels (as well as the collaterals) and proceeds to “move the qi in the blood” in order to alleviate pain. Asian water plantain (ze xie) strongly addresses the water accumulation aspect of the pattern by promoting urination and leaching out dampness. It indirectly opens collaterals by removing water accumulation.

Two of the three assistants, atractylodes (bai zhu) and poria (fu ling), together can rescue the spleen from damp encumbrance and protect it from the liver’s assault. These substances are often combined to boost spleen qi and resolve dampness. In addition, Zhang frequently combined atractylodes (bai zhu) with peony (bai shao) to treat liver-spleen disharmony. The bai zhu strengthens the spleen while the bai shao soothes the liver. The third assistant, tang kuei (dang gui) joins the chief to help nourish the blood, but it is also the substance in the formula that is in control of blood invigoration.

MODERN APPLICATIONS
Gynecological
OVARIAN DYSFUNCTION—A Kampo study has shown that Dang Gui Shao Yao San is successful in treating ovarian dysfunction due to the formula’s neuroendocrine effect on the hypothalamic-controlled pituitary and ovarian functions.
Dang Gui Shao Yao San has been found to stimulate the synthesis and release of neurotransmitters, such as acetylcholine, dopamine and norepinephrine, by activating enzymes that stimulate this response in the brain.\(^{31}\)

**Menopause and surgical menopause**—A study done on the estrogenic effects of Dang Gui Shao Yao San was performed on parous rats whose ovaries had been removed. The study's purpose was to compare the effects of Dang Gui Shao Yao San with estradiol in treating menopausal symptoms. The study found that Dang Gui Shao Yao San binds to different receptors and has a very different effect on hormonal levels than estradiol. The results suggest that Dang Gui Shao Yao San has a regulatory influence as opposed to the stimulation of estrogen levels that results from estradiol, which is sometimes used in hormone replacement therapy. These results may indicate that Dang Gui Shao Yao San could be used to treat menopausal syndrome by regulating rather than stimulating hormone production in cases when hormone replacement therapy is contraindicated.\(^{32}\)

**Infertility**—A clinical study on the effects of Toki-shakuyaku-san (Dang Gui Shao Yao San) was conducted in vivo, with a group of 35 women. Basal body temperatures and abnormal hormonal levels verified by blood and urine tests indicated luteal insufficiency in 35 participants in this study. A portion of the group, (15 women) were dysmenorrheic, exhibiting PMS symptoms but had normal menstrual cycles and hormonal levels. All were given 7.5g of the formula Dang Gui Shao Yao San daily, dosing 2.5g, 3 times daily for more than three months.

The results suggest that Dang Gui Shao Yao San improves luteal insufficiency in women, by establishing proper hormonal balance, yet does not adversely affect the hormonal levels of women with normal menstrual cycles.\(^{33}\) Thus Dang Gui Shao Yao San was shown to have no adverse effects on the hormonal levels in women with normal menstrual cycles.

These results would seem to indicate that this formula has a regulating effect on hormonal levels but does not have the ability to “push” estrogen levels or any hormonal levels out of their proper range or proper proportions to one another.

**Menstrual irregularities**—Dysmenorrhea is defined as painful menstrual cramps involving the uterus. This disorder is quite common and up to 20% of women may experience pain severe enough to interrupt their daily lives. When Dang Gui Shao Yao San was administered for 6 months or more to a group of women with dysmenorrhea in a Japanese study, 100% of the women showed significantly reduced pain and reduced used of NSAIDS. A dosage of 2.5g, three times daily for 6 months was used to achieve these results.\(^{34}\)

**Premenstrual syndrome in eumenorrheic women**—A Japanese study linked poor peripheral blood circulation to premenstrual syndrome in women who had regular and normal menstrual cycles. Other studies have clearly shown that Dang Gui Shao Yao San contains compounds that can improve peripheral blood circulation. Dang Gui Shao Yao San is one of several Kampo formulas that treat the blood stagnation syndrome known as “oketsu.”\(^{35}\)

**Pregnancy, habitual miscarriage**—Two studies indicated that the use of Dang Gui Shao Yao San combined with Chai Ling Tang was effective in preventing repeated miscarriage due to autoimmune disease.\(^{36,37}\)

**Toxemia in Pregnancy**—A Japanese study in 2004 on preeclamptic rats indicated that Dang Gui Shao Yao San was effective in reducing hypertensive symptoms and intrauterine growth retardation in pregnant rats.\(^{38,39}\)

**Uterine fibroids with hypochromic anemia**—A study comparing the use of Dang Gui Shao Yao San to oral iron supplementation for the treatment of anemia caused by menorrhagia resulting from uterine myoma (fibroids), showed significant success in relieving a number of symptoms. Over an eight week period, one group received an oral iron supplementation and the other received Dang Gui Shao Yao San, 2.5 g., three times daily. The blood counts and the symptoms of anemia such as, dizziness upon standing, shortness of breath and spoon shaped nails, were improved with the oral iron supplementation. 80% of that group exhibited some degree of side effects, some so severe that they had to discontinue treatment. There were no adverse effects in the Dang Gui Shao Yao San group. The results in this group showed significant improvement in menorrhagia, dysmenorrhea, cold in the lower body, cold hands and feet, dizziness, headache and shoulder stiffness. These symptoms showed no improvement in the group that received oral iron supplementation.

The study concluded that a combination of the two therapies could offer promise as a treatment for uterine fibroids accompanied by anemia.\(^{40}\)

**Anemia in pregnancy**—Another Japanese study showed that Dang Gui Shao Yao San was successful in treating anemia associated with pregnancy. This study also studied the negative consequences of the mother’s anemia to the unborn fetus.\(^{41}\) The results of the study showed that the combination of oral iron supplementation and Dang Gui Shao Yao San could address all symptoms of anemia more successfully than each treatment used individually.\(^{42}\)

**Breech presentation in late pregnancy**—A study involving 239 pregnant women with breech presentation who were treated with Dang Gui Shao Yao San experienced positive results. After administration of 3-6 doses of a modified version of Dang Gui Shao Yao San, 217 of 239 breech presentations were corrected. This is a 90.8% success rate.\(^{43}\)

**Dermatological**

**Acne**—Tang Kuei and Peony Formula (Dang Gui Shao Yao San) effectively suppressed acne rashes as well as incidental symptoms. The synergistic activities of the ingredients in the Kampo formulations might produce these effects. In contrast, distinct suppression of incidental symptoms was not found with antimicrobials. The cause of adverse effects in antimicrobials has not yet been clarified and different degrees of suppression of incidental symptoms among the Kampo formulations exist.\(^{44}\)

**Eczema, atopic dermatitis, and psoriasis**—A Japanese study investigated the effectiveness of using Dang Gui Shao Yao San for a series of patients who had failed with conventional therapy and found it to be successful where conventional therapy had failed.\(^{45}\)

**Hematological, Circulatory and Neurological Actions**

**Anemia due to radiation therapy**—An animal study in Taiwan conducted in 1996 indicated that Dang Gui Shao Yao San administered prior to radiation therapy could protect against hematopoietic injury caused by sublethal doses of radiation.\(^{46}\)

**Memory impairment due to cerebral ischemia**—A Japanese study in 2005, indicates that Dang Gui Shao Yao San is effective in ameliorating the impairment of spatial memory caused by repeated cerebral ischemia in rats. This study determined that Dang Gui Shao Yao San has a neuroprotective action and may be helpful in treatment of cerebrovascular dementia caused by cerebral ischemia.\(^{47}\)

Another clinical study, including 31 post-stroke patients, indicated that the administration of Dang Gui Shao Yao San was able to suppress the progression of impairments of the lower limbs and improve the cerebral function of these post-stroke patients. The control group in this study experienced significantly more impairment of the lower limbs and cerebral function leading to dementia.\(^{48}\)
Alzheimer’s dementia—A clinical study in Japan tested the effects of Dang Gui Shao Yao San, for treatment of mild cognitive impairment (amnestic MCI) that is known to be a precursor to Alzheimer’s disease. The patients in this study were treated for eight weeks with Dang Gui Shao Yao San. Prior to and after the treatment, an MRI, a SPECT scan and a mini-mental state examination (MMSE) were performed. The eight week treatment improved cognitive function in all cases and there were no adverse effects to the therapy.

**Formula Comparisons**

**Tang Kuei & Peony Formula, Bupluerum & Tang Kuei Formula and Si Ni San**

These formulas treat patterns that share a number of combined similarities; blood deficiency, qi stagnation and dampness. **Tang Kuei and Peony Formula** is the oldest formulation of the three. The combination of **Tang Kuei and Peony Formula** and **Si Ni San** results in a formula very similar to Bupluerum and Tang Kuei Formula, this combination shifts the emphasis of the formula from nourishing the blood to moving liver qi stagnation and harmonizing liver and spleen. **Bupluerum and Tang Kuei Formula** also has the ability to nourish blood and qi and resolve dampness. **Si Ni San** has the least ability to nourish and the greatest ability to move liver qi stagnation of the three formulas. Thus Si Ni San has a greater ability to relieve pain due to liver qi stagnation.

All three of these formulas have the ability to treat abdominal pain when experienced as part of a gynecological disorder. Of these three formulas, **Tang Kuei and Peony Formula** had the greatest ability to dispel dampness. This formula also treats milder, persistent pain that is accompanied by dampness and blood deficiency with milder blood stasis.

### Useful Combinations

| For tendency to exterior pathogenic invasion with wei qi deficiency, during pregnancy | Use with Jade Windscreen Formula. |
| For uterine fibroids with anemia, ovarian cysts or other abdominal masses due to blood stasis, blood and qi deficiency, and a tendency to cold | Use with Cinnamon & Poria Formula. |

### Endnotes