Astragalus Formula (Huang Qi Jian Zhong Tang) is a member of the Gui Zhi Tang family of formulas. The base formula is perhaps the most famous formula from Zhang Zhong-jing’s Shang Han Lun. Zhang modified his Gui Zhi Tang formula to create Xiao Jian Zhong Tang (Minor Decoction to Construct the Middle), which is also from the Shang Han Lun. Astragalus Formula (Huang Qi Jian Zhong Tang) is a further modification of Xiao Jian Zhong Tang. It was published in Zhang’s book, Essentials from the Golden Cabinet.

**General Signs/Symptoms**
The general signs and symptoms of Astragalus Formula (Huang Qi Jian Zhong Tang) are of key importance in its clinical application. This formula treats a number of conditions and indications, but if the pattern of deficiency cold in the middle burner cannot be substantiated, then Astragalus Formula (Huang Qi Jian Zhong Tang) may not be the correct prescription. The general signs and symptoms of deficiency cold in the middle burner are lusterless and/or pale complexion with a weak or sickly constitution. There will be spontaneous sweating and a generalized weakness in the presentation, such as lack of muscle tone or even puffiness in the muscles; digestion may be weak, with either deficiency cold-type constipation or, more commonly, loose stools. Frequently, there will be spasmodic abdominal pain, which improves with warmth and pressure. The abdominal signs/symptoms happen to be the chief indications listed by Zhang in his book. The tongue may be pale, when cold and deficiency predominate, but can be slight red, if the tension created from the pattern has become advanced. The pulse can be large and empty, thin, and weak, or thin, tight, and moderate, depending on which part of the pattern is prevailing.

**Classical Actions**
1. Warms and supplements the middle burner; strengthens the constitution
2. Harmonizes the ying and wei levels, stabilizes the exterior, and stops sweating
3. Relieves spasms
4. Supplements qi and nourishes blood
5. Moistens and generates fluids
6. Supports lung qi

**Ingredients**

<table>
<thead>
<tr>
<th>Pinyin</th>
<th>Latin</th>
<th>English</th>
<th>Percent of Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yi Tang</td>
<td>Maltosum</td>
<td>Barley Malt Sugar</td>
<td>32.3%</td>
</tr>
<tr>
<td>Bai Shao</td>
<td>Paeoniae Radix, Alba</td>
<td>Chinese Peony Root, White</td>
<td>19.4%</td>
</tr>
<tr>
<td>Gui Zhi</td>
<td>Cinnamomi Ramulus</td>
<td>Cassia Twig, Chinese Cinnamon</td>
<td>9.7%</td>
</tr>
<tr>
<td>Sheng Jiang</td>
<td>Zingiberis Rhizoma Recens</td>
<td>Ginger Rhizome, Fresh</td>
<td>9.7%</td>
</tr>
<tr>
<td>Hong Zao, Da Zao</td>
<td>Jujubae Fructus</td>
<td>Jujube Fruit, Chinese Red Date</td>
<td>9.7%</td>
</tr>
<tr>
<td>Huang Qi</td>
<td>Astragali Radix</td>
<td>Astragalus Root</td>
<td>6.4%</td>
</tr>
<tr>
<td>Zhi Gan Cao</td>
<td>Glycyrrhizae Radix Preparata</td>
<td>Chinese Licorice Root</td>
<td>6.4%</td>
</tr>
<tr>
<td>Bai Zhu</td>
<td>Atractylodis Macrocephalae Rhizoma</td>
<td>White Atractylodes Rhizome</td>
<td>6.4%</td>
</tr>
</tbody>
</table>

**General Indications / Modern Applications**
- Abdominal pain, chronic, cold
- Allergies, chronic
- Anemia
- Appetite, poor
- Back spasms
- Body weakness and heaviness
- Cold limbs
- Colic
- Complexion, pale and lusterless
- Constipation (from cold)
- Constitution, delicate
- Digestion, weak
- Dizziness from deficiency
- Dyspepsia (Indigestion)
- Ear Infections, chronic
- Enuresis, childhood
- Enteritis, allergic
- Fatigue
- Feet, swollen
- Fever, low grade or occasional
- Fright, in children
- Gastritis, chronic
- Hemorrhoids
- Hypoglycemia
- Immune System, weak
- Irritability
- Irritable Bowel Syndrome (from deficiency cold)
- Jaundice (from deficiency cold)
- Leukopenia
- Migraines
- Muscles, weak
- Otitis media, chronic
- Palpitations
- Post-operative pain
- Prostate, benign hypertrophic
- Rhinitis, chronic
- Shortness of breath
- Sores not healing/ closing
- Surgery, recovery from
- Sweating, nocturnal or spontaneous
- Ulcer, peptic or oral
- Weakness, general or after illness

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FORMULA ACTIONS
• Warms and supplements the middle burner; strengthens the constitution
• Harmonizes the ying and wei levels/ stabilizes the exterior and stops sweating
• Relieves spasms
• Supplements qi and nourishes blood
• Moistens and generates fluids
• Supports lung qi

TONGUE
Pale with white coat, but may be slightly red if stagnation has developed.

PULSE
In general, the pulse will be deficient, moderate rate, and may be tight.

CONTRAINDICATIONS / CAUTIONS
Do not use with signs of heat or with heat from yin deficiency.

FORMULA DISCUSSION
The nearest relative of Astragalus Formula (Huang Qi Jian Zhong Tang) is Xiao Jian Zhong Tang (Minor Decoction to Construct the Middle), yet Zhang Zhong-jing mentions Huang Qi Jian Zhong Tang explicitly in line 6.14 of his Essentials from the Golden Cabinet (Jin Gui Yao Lue). The only two ingredients of Astragalus Formula (Huang Qi Jian Zhong Tang) that do not appear in Minor Decoction to Construct the Middle are astragalus (huang qi) and white atractylodes rhizome (bai zhu). (The function of each is discussed in the following section.) For Zhang, the primary action of Minor Decoction to Construct the Middle is to relieve the abdominal spasms caused by the deficiency cold in the middle warmer, and secondarily to treat the low grade fever, palpitations, irritability, and sore limbs that can be part of the pattern. The addition of astragalus (huang qi) and white atractylodes rhizome (bai zhu) expands the formula to address a generally delicate constitution, the signs of which include what we today would call a weak immune system: one who easily and frequently contracts viral infection. A “delicate constitution” also refers to weakness in the muscles, sometimes with puffiness of the flesh, especially in the feet. Both astragalus (huang qi) and white atractylodes rhizome (bai zhu) help to reinforce and stabilize the exterior and control sweating, and astragalus (huang qi) helps to lift the action of the maltosum (yi tang) into the lungs. The Chinese medicine correlation to the modern action of “boosting the immune system” is to tonify the middle burner and the lungs. The zang of taiyin (the lung and spleen) are the organs that take in qi from the world (oxygen and food, respectively) to sustain and strengthen the body. When both are tonified, the whole body benefits because blood and post-natal qi are abundant. One cannot have a strong immune system without abundant qi and blood. It is the support of the blood and post-natal qi through the taiyin zang that allows Astragalus Formula (Huang Qi Jian Zhong Tang) to strengthen the constitution while retaining all of the actions of the original Minor Decoction to Construct the Middle.

All the indications this formula addresses stem from cold in the middle burner. When there is cold in the middle burner, there will be insufficient transformation and transportation. This insufficiency affects yin and yang as well as qi and blood. The chart on the following page shows the relationship between the various manifestations.

SYNERGY OF INGREDIENTS
A glance at the proportions of each ingredient may cause one to wonder why this formula is called “Astragalus Formula” when astragalus (huang qi) is tied for the lowest percentage. The reason for the small percentage is that Zhang Zhong-jing recommended three different dosage ranges for astragalus (huang qi). He employed a large dose to treat certain types of swelling, such as edema; he prescribed a medium dose to firm up the exterior and treat numbness; but for taxation from deficiency, Zhang habitually prescribed small doses. In contrast, the other chief substance in Astragalus Formula (Huang Qi Jian Zhong Tang), maltosum (yi tang), must be prescribed in large doses in order to be effective. The same formula could just have easily and justifiably been called “Yi Tang Formula.” In fact, maltosum (yi tang) was given the distinction by Zhou Yan at the end of the
Qing Dynasty as the “quintessence of the quintessence” of middle burner tonics. His reasoning was that grains represent the primary source (the quintessence) for us to replenish post-natal qi; they are the gift of the earth for tonification of the earth element in our bodies. The taste associated with the earth element is sweet. Therefore, he argued, maltosum (yi tang), being the quintessence of the sweetness of the grain, was in fact “the quintessence of the quintessence” for middle burner supplementation. Its property is warm, and, as a warming, sweet substance with special affinity for the middle burner, it, along with astragalus (huang qi), represents the intention of Astragalus Formula (Huang Qi Jian Zhong Tang). They are thus co-chiefs.

The entire formula of Zhang Zhong-jing’s Gui Zhi Tang (Cinnamon Twig Formula) is included in Astragalus Formula (Huang Qi Jian Zhong Tang), and these five ingredients can be taken together as a deputy in the formula. The main function of Gui Zhi Tang (Cinnamon Twig Formula) is to harmonize the ying and wei levels so that they have the proper relationship to each other. That is, the ying provides an anchor and a medium of circulation for the wei qi, while the wei protects the ying from external invasion and transforms it, as necessary, into yin. When both ying and wei are sufficient and in proper relationship to each other, defense against exterior invasion is strong. The wei protects from the outside and the ying supports from the inside by nourishing. The second action of Astragalus Formula (Huang Qi Jian Zhong Tang) is to stabilize the exterior. Since this is a co-existing sub-pattern to the deficiency cold in the middle burner, the Gui Zhi Tang (Cinnamon Twig Formula) therefore can be seen to function as a deputy in the present formula. But broken down into its constituents, only the white peony (bai shao) and the cinnamon twig (gui zhi) are deputies in Astragalus Formula (Huang Qi Jian Zhong Tang). These two ingredients are the representative substances in all of the Chinese materia medica for harmonizing ying and wei.1 Sweet, acrid and warming, cinnamon twig (gui zhi) drives and disperses, and ultimately facilitates transformation into yang. White peony (bai shao), being sour and slightly cold and bitter, astringes and nourishes, facilitating the transformation into yin.

Ginger root (sheng jiang) and Chinese red date (da zao/ hong zao) serve as assistants in both Gui Zhi Tang (Cinnamon Twig Formula) and Astragalus Formula (Huang Qi Jian Zhong Tang). They reinforce the role of the deputies. Ginger root (sheng jiang) is warming and dispersing; it assists cinnamon twig (gui zhi). Chinese red date (da zao/ hong zao), on the other hand, is a qi tonic with special qualities. Its red color indicates an affinity with the blood; it supplements the qi within the blood, that is, the ying qi. In this way, it helps the white peony (bai shao) to support the ying qi.

Many sources assume that prepared licorice root (zhi gan cao) serves the same function in Astragalus Formula (Huang Qi Jian Zhong Tang) that it does in Gui Zhi Tang (Cinnamon Twig Formula), that is, as envoy or guide. But, in addition to being a tonic formula, Astragalus Formula (Huang Qi Jian Zhong Tang) also harmonizes, and the harmonizing action of the maltosum (yi tang) itself is strong enough to provide the action that an envoy would contribute. The large percentage of maltosum (yi tang) in Astragalus Formula (Huang Qi Jian Zhong Tang) would either over-ride the prepared licorice root (zhi gan cao) in this action or, more accurately, assimilate it. The facilitation of assimilation is a function of the envoy. Therefore, prepared licorice root (zhi gan cao) serves not as an envoy but as another deputy. In the present formula it tonifies the qi of the spleen and stomach, helps to nourish fluids, and relieves spasms. It is the substance most closely mirroring the actions of maltosum (yi tang).

White atractylodes rhizome (bai zhu) is added to Astragalus Formula (Huang Qi Jian Zhong Tang) as an assistant to warm and strengthen digestion. Some of the substances that nourish yin and help to generate fluids can cause yin and fluids to accumulate when taken long term. The low dose of white atractylodes rhizome (bai zhu) moderates this tendency while helping to strengthen the middle burner.

Modern Applications
Peptic Ulcer
74 patients diagnosed with peptic ulcer were treated with modified Astragalus Formula (Huang Qi Jian Zhong Tang). Syndrome breakdown according to Oriental medicine included 60.8% presenting with spleen and stomach deficiency, 74% for liver/spleen disharmony, qi and blood stagnation, and 77.8% for qi and blood stagnation, and 74% for damp-heat. After a six week treatment course 55.1% were deemed cured. 37.8% showed improvement, and 8.1% showed no improvement, with a total effective rate of 91.9%. There was a 100% effective rate for patients presenting with spleen and stomach deficiency, 83.3% effective rate for liver-spleen disharmony, 77.8% for qi and blood stagnation, and 75% effective rate for damp-heat pattern.6 Another study was done using Astragalus Formula (Huang Qi Jian Zhong Tang) to treat gastric
ulcers in conjunction with Western medicine. The treatment group used a combination of the herbs and western medication and the control group used Western medication alone. The initial results showed very little difference between the two groups, however the six month follow-up showed significant reduction in recurrence rate versus the control group.\textsuperscript{ii}

**Gastritis**
A study was done to observe the effectiveness of Astragalus Formula (Huang Qi Jian Zhong Tang) in the treatment of chronic gastritis with a stomach deficiency pattern. 76 patients were divided into two groups; 40 patients in the treatment group who were given Astragalus Formula (Huang Qi Jian Zhong Tang) with moxibus treatment and 36 patients in the control group who were given Western medication. The treatment lasted two weeks. Results showed changes in clinical signs and symptoms as well as changes in relapse rate six months after treatment. There was not a significant difference in the initial total effective rate of the two groups, with 87.5% for the treatment group and 77.78% for the control group. The relapse rate was significantly reduced for the treatment group at 11.43% versus the control group of 42.86%.\textsuperscript{vi}

**Oral Ulcers**
Oral ulcers can be treated using Astragalus Formula (Huang Qi Jian Zhong Tang). A study was conducted involving 80 patients with recurrent oral ulcers and an OM diagnosis of stomach deficiency; 40 patients in the treatment group were given Astragalus Formula (Huang Qi Jian Zhong Tang) and 40 patients in the control group were given oral vitamin B2, vitamin C, and levamisole treatment. After the treatment, signs and symptoms were much improved in the treatment group over the control group. Additionally, the recurrence rate was lessened in the treatment group versus the control group.\textsuperscript{v} Another study showed two treatment groups of 30 people each with recurrent oral ulcers and a diagnosis of spleen and kidney yang deficiency. The first group took modified Astragalus Formula (Huang Qi Jian Zhong Tang) and the second group took Fu Zi Li Zhong Tang (Aconite Decoction to Regulate the Middle). The initial results showed very close outcomes between the two groups, with Astragalus Formula (Huang Qi Jian Zhong Tang) slightly more effective with a 93.3% effective rate versus 90% for Fu Zi Li Zhong Tang. Follow ups at six months and one year showed Huang Qi Jian Zhong Tang superior to Fu Zi Li Zhong Tang.\textsuperscript{vi}

**Functional Dyspepsia**
A study was done to evaluate the efficacy of Astragalus Formula (Huang Qi Jian Zhong Tang) to treat functional dyspepsia (indigestion). 135 patients were part of the trial. In the treatment group Astragalus Formula (Huang Qi Jian Zhong Tang) was prescribed to 90 people and in the control group domperidone was prescribed to 45 people. The results showed a 44.4% cure rate and overall effective rate of 93.3% for the treatment group compared to the control group that had an overall effective rate of 80%.\textsuperscript{vii}

**Irritable Bowel Syndrome**
A clinical study was done using Astragalus Formula (Huang Qi Jian Zhong Tang) for diarrhea-type IBS associated with a OM diagnosis of spleen qi deficiency. 60 people were divided into two groups, a treatment group taking Astragalus Formula (Huang Qi Jian Zhong Tang) and the control group that received treatment with pinaverium bromide (an antispasmodic pharmaceutical used throughout the world). The course of treatment was four weeks. The results showed a total effective rate of 90% for the treatment group and 76.7% for the control group, demonstrating Astragalus Formula (Huang Qi Jian Zhong Tang) to be an effective treatment for diarrhea-type IBS, improving clinical symptoms like abdominal pain and quality of life.\textsuperscript{viii}

**Constipation**
A clinical study utilizing modified Huang Qi Jian Zhong Tang for treating 30 patients with constipation due to spleen and stomach deficiency achieved a short term total effective rate of 93.33%. This is in comparison to the control group that was given macrogol powder, which had an effective rate of 83.3%. The treatment lasted three months. The relapse rate was significantly lower for the treatment group versus the control group.\textsuperscript{ix}

**Pediatric Diarrhea**
A clinical observation of Astragalus Formula (Huang Qi Jian Zhong Tang) for 100 children with diarrhea was conducted. The results showed 79 cases deemed cured and 21 cases with marked improvement, with a total effective rate of 100%.\textsuperscript{x}

**Chronic Rhinitis**
Chronic allergic rhinitis can be treated with Astragalus Formula (Huang Qi Jian Zhong Tang). 60 cases of allergic rhinitis were given Astragalus Formula (Huang Qi Jian Zhong Tang). Signs and symptoms included nasal congestion, sneezing, and clear or white watery nasal
discharge. The herbs were given for a minimum of one week and up to twenty days. The results showed that the clinical signs and symptoms returned to normal without recurrence for 50 patients, an 83.3% effective rate. The remaining ten patients had moderate improvement in their allergic rhinitis symptoms.\(^{\text{xxi}}\)

**Chronic Otitis Media**

Chronic supplicative otitis media is defined as chronic inflammation of the middle ear characterized by periodic discharge. **Astragalus Formula** *(Huang Qi Jian Zhong Tang)* was shown to be 85.5% effective in a clinical study involving 55 patients diagnosed with chronic supplicative otitis media.\(^{\text{xii}}\)

**Leukopenia**

A clinical study involving 26 patients with a low white blood cell count, some with frequent occurrences of infection, showed complete recovery in 17 patients, improvement in 6 patients and no benefit to 3 patients. **Astragalus Formula** *(Huang Qi Jian Zhong Tang)* was combined with *Huang Lian Jie Du Pian* with some appropriate modifications as individual cases required. Larger doses and a longer courses of treatment were used with those who experienced more frequent infections. Treatment courses were 10-20 days, determined by severity of symptoms.\(^{\text{xiii}}\) In another clinical study **Astragalus Formula** *(Huang Qi Jian Zhong Tang)* was used in conjunction with *Si Wu Tang* for 146 patients post chemotherapy treatment for leukopenia. 142 cases showed effective results with a raise in normal white blood cell count after the treatment course.\(^{\text{xiv}}\)

**Athletic Performance**

**Astragalus Formula** *(Huang Qi Jian Zhong Tang)* may help increase athletic performance and boost recovery time and fatigue post workout. A research study was done on 12 athletes. Half were administered **Astragalus Formula** *(Huang Qi Jian Zhong Tang)* and half were administered a placebo. The treatment lasted eight weeks. The results showed that **Astragalus Formula** *(Huang Qi Jian Zhong Tang)* might increase time until exhaustion, increase anaerobic threshold, and speed up recovery from fatigue post workout.\(^{\text{xxv}}\)

**Formula Comparisons**

**Astragalus Formula** *(Huang Qi Jian Zhong Tang)* and **Ginseng and Astragalus Formula** *(Bu Zhong Yi Qi Tang)*

These two formulas have similar functions in that they both support the middle burner. **Ginseng and Astragalus Formula** *(Bu Zhong Yi Qi Tang)* is focused on tonifying and lifting sunken spleen qi. **Astragalus Formula** *(Huang Qi Jian Zhong Tang)* has the ability to tonify middle burner qi, improving the function of the spleen and stomach, but it is much better for abdominal spams and issues affecting the digestive tract than **Ginseng and Astragalus Formula** *(Bu Zhong Yi Qi Tang)*.

**Astragalus Formula** *(Huang Qi Jian Zhong Tang)* and **General Tonic Formula** *(Shi Quan Da Bu Wan)*

Both formulas supplement the middle burner and warm and augment the yang qi. Both assist in restoring the transformation and transportation function of the middle burner. They each treat many of the same indications, such as post-partum weakness, reduced appetite, poor digestion, sores that won’t heal. But **General Tonic Formula** *(Shi Quan Da Bu Wan)* is formulated to emphasize the qi and blood deficiency component, while **Astragalus Formula** *(Huang Qi Jian Zhong Tang)* emphasizes the deficiency cold in the middle burner.

**Formula Combinations**

**Astragalus Formula** *(Huang Qi Jian Zhong Tang)* can be used to treat a number of chronic conditions. It is most effective when alternating with a formula that can address the acute flare-up phase. Use **Astragalus Formula** *(Huang Qi Jian Zhong Tang)* during periods of no or minor symptomology and switch to the appropriate acute phase formula when symptoms prevail.

**Astragalus Formula** *(Huang Qi Jian Zhong Tang)* and **Children’s Ear Formula** *(Hai Er Fang)*

**Astragalus Formula** *(Huang Qi Jian Zhong Tang)* may be utilized to treat children who have a compromised immune system due to malnutrition, constitutional predisposition and/or a weak middle burner qi. This weakened constitution sometimes leads to chronic ear infections. Administer **Astragalus Formula** *(Huang Qi Jian Zhong Tang)* in order to strengthen and warm the middle burner and boost immune response. Discontinue use when an ear infection occurs and treat the acute stage with **Children’s Ear Formula** *(Hai Er Fang)* until the acute symptoms have dissipated. Then return to **Astragalus Formula** *(Huang Qi Jian Zhong Tang)* until the wei qi is strengthened enough to resist recurrent infections.

**Astragalus Formula** *(Huang Qi Jian Zhong Tang)* and **Xanthium and Magnolia Formula** *(Jia Wei Xin Yi San)*

This combination is useful for treating wei qi deficiency and middle burner deficiency cold which leads to chronic rhinitis. Administer **Astragalus Formula** *(Huang Qi Jian Zhong Tang)* in order to boost the wei qi to resist patho-
genic invasion of allergens. When allergy symptoms are present, administer Xanthium and Magnolia Formula (Jia Wei Xin Yi San) to control symptoms and discontinue use of Astragalus Formula (Huang Qi Jian Zhong Tang) until allergy symptoms dissipate.

### Useful Combinations

| For wei qi deficiency leading to chronic ear infections in children | Alternate with Children’s Ear Formula (see page 6). |
| For wei qi deficiency leading to chronic rhinitis or allergies | Alternate with Xanthium and Magnolia Formula (see page 6). |

### Endnotes

Notes