

DRUG-HERB INTERACTIONS

Sources
<ul style="list-style-type: none"> • <i>Integrated Pharmacology: Combining Modern Pharmacology with Chinese Medicine</i> by Dr Greg Sperber, Bob Flaws • <i>Chinese Medical Herbology and Pharmacology</i> by John Chen, Tina Chen • <i>Chinese Herbal Medicine: Materia Medica</i> by Dan Bensky, Steven Clavey, Erich Stoger

<p>Bai Shao (Radix Paeoniae Alba)</p>	<ul style="list-style-type: none"> • Use Bai Shao caution with <u>sedatives</u> as this herb has a sedative and analgesic effect on the central nervous system (CNS). It prolongs sleeping time induced by barbiturates and has a protective effect against seizures induced by cardiazol. • Use Bai Shao caution for those taking <u>anticoagulants</u> such as heparin, warfarin (Coumadin), and enoxaparin (Lovenox) or <u>antiplatelet</u> drugs such as aspirin, dipyridamole (Persantine), and clopidogrel (Plavix). • Use Bai Shao caution for those taking insulin, sulfonyleureas and other <u>anti-diabetics</u> such as tolbutamide (Orinase), glipizide (Glucotrol) and glyburide (DiaBeta/Micronase) as there may be a synergistic effect leading to hypoglycemia.
<p>Ban Lan Gen (Radix Isatidis)</p>	<ul style="list-style-type: none"> • Ban Lan Gen may potentiate anticoagulants and antiplatelet. • Use Ban Lan Gen caution with <u>anticoagulants</u> such as heparin, warfarin (Coumadin) and enoxaparin (Lovenox) or <u>antiplatelet</u> such as aspirin, dipyridamole (Persantine) and clopidogrel (Plavix).
<p>Cang Er Zi (Fructus Xanthii)</p>	<ul style="list-style-type: none"> • Cang Er Zi, Bai Shao, and Niu Bang Zi should be used with caution in combination with <u>anti-diabetic</u> drugs such as insulin, tolbutamide (Orinase), glipizide (Glucotrol), and glyburide (Diabeta/Micronase) as there may be a synergistic effect leading to hypoglycemia. • Other herbs that may lower glucose levels include Cang Zhu, Gan Cao, and Di Gu Pi.
<p>Da Huang (Radix et Rhizoma Rhei)</p>	<ul style="list-style-type: none"> • Laxative herbs such as Da Huang can cause a decrease in <u>potassium</u> levels when used chronically or at high doses. • Loss of potassium can induce toxic effects of digitalis glycosides.
<p>Da Suan (Bulbus Allii Sativi)</p>	<ul style="list-style-type: none"> • Du Suan (garlic) can act as a cholesterol lowering agent, as an anticoagulant, and may lower <u>plasma glucose</u> levels. • The sulfur compounds in garlic (ajoene, allicin) have an ability to block the aggregation of <u>platelets</u> and prevent the formation of clots. Garlic powder supplements such as Allicor taken twice daily for 24 months seems to reduce how much hardening of the arteries progresses. • Garlic may reduce pre-meal <u>blood sugar</u> levels in patients with or without diabetes.
<p>Dan Shen (Radix Salviae Miltiorrhizae)</p>	<ul style="list-style-type: none"> • Use Dan Shen with caution for patients taking <u>anticoagulants</u> (heparin, warfarin, enoxaparin) or <u>antiplatelet</u> drugs (aspirin, dipyridamole, clopidogrel) as concurrent use may have an additive or synergistic effect. • Anticoagulants drugs interfere with the coagulation process. Heparin and warfarin are the two most well-known anticoagulants. • Antiplatelets are drugs which interfere with platelet formation. These drugs may be used as prophylaxis for clot formation, to treat acute thrombotic events and as anti-inflammatory drugs.
<p>Dang Gui (Radix Angelicae Sinensis)</p>	<ul style="list-style-type: none"> • Dang Gui does interact with <u>anticoagulant</u> and <u>antiplatelet</u> medications. Concurrent use of Dang Gui with warfarin (Coumadin) may potentiate the effects of warfarin, heparin, enoxaparin (Lovenox) or antiplatelet drugs including aspirin, dipyridamole (Persantine) and clopidogrel (Plavix) • While there is some controversy, the preponderance of evidence suggests <u>NO estrogen-like activity</u> is produced with Dang Gui.

<p>Fu Ling (Poria)</p>	<ul style="list-style-type: none"> Concurrent use of Fu Ling with <u>diuretics</u> such as chlorothiazide, hydrochlorothiazide, furosemide (Lasix), bumetanide (Bumex) and torsemide (Demadex) may lead to increased elimination of water and/or electrolytes. Other herbs that may interact with diuretics are Zhu Ling, Ze Xie, and Gui Zhi.
<p>Fu Zi (Radix Aconiti Lateralis)</p>	<ul style="list-style-type: none"> Fu Zi has positive inotropic (affects muscle contraction) and chronotropic (affects heart rate) effect and should be taken with extreme caution with patients on <u>antiarrhythmic drugs</u>. Different types of fast arrhythmias include atrial fibrillation, atrial flutter, supraventricular tachycardia, ventricular tachycardia and premature heartbeats.
<p>Gan Cao (Radix Glycyrrhizae)</p>	<ul style="list-style-type: none"> Gan Cao may increase blood pressure and fluid retention when used with <u>oral contraceptives</u>. Large amounts of Gan Cao can interact with these diuretics and decrease <u>potassium</u> levels in the body. Gan Cao may alter the therapeutic effects of <u>corticosteroids</u> such as cortisone, prednisone (Orasone), dexamethasone (Decadron), hydrocortisone (Cortef) and methylprednisolone (Medrol). Gan Cao should be used with caution with cardiac glycosides such as <u>digoxin</u> (Lanoxin). Gan Cao speeds up the metabolism of drugs such as chloral hydrate, urethane, cocaine, picrotoxin, caffeine, pilocarpine, nicotine, and barbiturates and treats overdose of these agents.
<p>Ge Gen (Radix Puerariae)</p>	<ul style="list-style-type: none"> When ethanol is metabolized into acetaldehyde, the constituent of Ge Gen, daidzin can effectively inhibit <u>aldehyde dehydrogenase</u> (in vitro). A small human trial of chronic beer drinkers found that 3g of Ge Gen daily for one week caused significantly reduced beer intake during a 1.5 hr observed session. Total volume and size of each sip decreased. In a larger study of 300 alcohol abusers, 80% no longer experienced alcohol cravings after 2-4 weeks of intake with no adverse effects (no dose listed). However, another small study showed no reduction in alcohol craving in those receiving 2.4g daily.
<p>Guang Fang Ji (Radix Aristolochiae Fangji)</p>	<ul style="list-style-type: none"> Guang Fang Ji is banned due to its toxicity. The herb contains <u>aristolochic acid</u>, a compound that can cause toxic effects on the Liver, adrenals, and permanent kidney damage, including kidney failure. Aristolochic acids (AAs) are identified as a group of toxins that can cause end-stage renal failure associated with urothelial carcinoma. Aristolochic acid, chemical constituent of the aristolochia species and some asarum species of herbs, are detected in Guang Fang Ji, Guan Mu Tong, Xi Xin, Ma Dou Ling, or Qing Mu Xiang.
<p>Gui Zhi (Ramulus Cinnamomi)</p>	<ul style="list-style-type: none"> Gui Zhi used with <u>diuretics</u> such as chlorothiazide, hydrochlorothiazide, furosemide (Lasix), bumetanide (Bumex) and torsemide (Demadex) may lead to increased elimination of water and/or electrolytes.
<p>Hong Hua (Flos Carthami)</p>	<ul style="list-style-type: none"> Hong Hua should be used with caution for patients taking <u>anticoagulants</u> such as heparin, warfarin (Coumadin) and enoxaparin (Lovenox) or <u>antiplatelet</u> drugs such as aspirin, dipyridamole (Persantine) and clopidogrel (Plavix) as concurrent use may have an additive or synergistic effect. Other herbs that may have the same effects include Pu Huang and Dan Shen.
<p>Hu Jiao (Fructus Piperis)</p>	<ul style="list-style-type: none"> Hu Jiao (black pepper) interacts with <u>Propranolol</u> (Inderal). Black pepper might increase the absorption of propranolol (Inderal) and might increase the effects and side effects of propranolol (Inderal). The brand names for propranolol are Inderal and InnoPran XL. Propranolol is a beta-blocker that treats the heart and circulation. It treats tremors, angina, hypertension, and heart rhythm disorders. It is also used to treat or prevent heart attack, and to reduce the severity and frequency of migraine headaches.

<p>Huang Qi (Radix Astragali)</p>	<ul style="list-style-type: none"> • Huang Qi has preliminary in vivo data demonstrating antiviral activity, increased T-helper cell type 1 cytokines and improved cell-mediated immune response. One animal study showed that Huang Qi potentiated <u>acyclovir</u> against HSV 1 infected mice more than using either agent alone. • Huang Qi increases <u>endogenous interferon</u> production by leukocytes. In a human trial, healthy volunteers were given 8g of Huang Qi per day, at 2 week and 2 month intervals, blood levels of interferon were significantly elevated when compared to controls. Human clinical trials on the interaction of Roferon-A with Huang Qi are lacking, however, and it is unknown whether Huang Qi will potentiate or synergize with interferon treatments.
<p>Huang Qin (Radix Scutellariae)</p>	<ul style="list-style-type: none"> • Huang Qin may have a synergistic effect with <u>beta-lactam antibiotics</u> such as ampicillin, amoxicillin and cefotaxime to restore the effectiveness of these drugs against beta-lactam-resistant Staphylococcus aureus and methicillin-resistant Staphylococcus aureus.
<p>Ju Hua (Flos Chrysanthemi)</p>	<ul style="list-style-type: none"> • Ju Hua has been shown to inhibit <u>shigella bacteria</u>, staphylococcus aureus, and b-hemolytic streptococcus. • Shigella infection (shigellosis) is an intestinal disease caused by a family of bacteria known as shigella. The main sign of shigella infection is diarrhea, which often is bloody.
<p>Long Dan Cao (Radix Gentianae)</p>	<ul style="list-style-type: none"> • Long Dan Cao can interact with either sedatives or diuretics. • Concurrent use of Long Dan Cao with <u>sedatives</u> such as barbiturates, antihistamines, narcotic analgesics, benzodiazepines and many others, will lead to prolonged sedation. • Concurrent use of Long Dan Cao with <u>diuretics</u> such as chlorothiazide, hydrochlorothiazide, furosemide (Lasix), bumetanide (Bumex) and torsemide (Demadex) may lead to increased elimination of water and/or electrolytes. • Concurrent use of Long Dan Cao with <u>narcotic analgesics</u> is associated with drowsiness and sedation.
<p>Lu Cha (Folium Camelliae Sinensis)</p>	<ul style="list-style-type: none"> • The combination of Lu Cha (green tea) with caffeine, theophylline or ephedrine may lead to increased thermogenesis, weight loss, agitation, tremors and insomnia. <u>Methylxanthine</u> is a group of naturally occurring agents found in caffeine (coffee), theophylline (asthma drug), and theobromine (chocolate). They act on the CNS, stimulate the myocardium, relax smooth muscle, and promote diuresis. Thermogenesis is the process of heat production in the body. • The caffeine in green tea may be potentiated when given in conjunction with <u>oral contraceptives</u> and <u>cimetidine</u>.
<p>Ma Huang (Herba Ephedrae)</p>	<ul style="list-style-type: none"> • Ma Huang may increase the heart rate. Combining Ma Huang with cardiac glycosides may lead to cardiac arrhythmia. Cardiac glycoside increases the output force of the heart and decreases its rate of contractions. The most commonly used cardiac glycoside is <u>digoxin</u> (Lanoxin). • The effect of <u>beta blockers</u> may be reduced when combined with Ma Huang because of increased levels of norepinephrine caused by the herb. Beta blockers such as atenolol (Tenormin), metoprolol (Lopressor/Toprol), sotalol (Betapace), propranolol (Inderal) and labetalol (Nomordyne/Demadex) slow down heart rate during an episode of abnormally fast heart rhythm.
<p>Man Jing Zi (Fructus Viticis)</p>	<ul style="list-style-type: none"> • Man Jing Zi may interfere with the effectiveness of <u>oral contraceptives</u>, progesterone, and hormone replacement therapy due to its hormone regulation activity.

<p>Ren Shen (Radix Ginseng)</p>	<ul style="list-style-type: none"> • Ren Shen, when co-administered with <u>chemotherapy</u>, has been found to decrease resistance to the medications and decrease suppression of bone marrow. • In a rodent model, the combination of Ren Shen with Paclitaxel provides a synergistic effect to prevent the proliferation of sarcoma and melanoma cell lines; it also restores NK cell activity usually suppressed by the drug. • In gastric cancer patients, Ren Shen combined with chemotherapy was able to preserve CD3/CD4 activity with positive effects on survival.
<p>San Leng (Rhizoma Sparganii)</p>	<ul style="list-style-type: none"> • San Leng and E Zhu promote blood circulation and are therefore synergistic-additive with the blood thinner <u>coumadin</u>. • Both San Leng and E Zhu should be used with caution for patients taking <u>anticoagulants</u> such as heparin, warfarin (Coumadin) and enoxaparin (Lovenox) or <u>antiplatelet</u> drugs such as aspirin, dipyridamole (Persantine) and clopidogrel (Plavix) as concurrent use may have an additive or synergistic effect.
<p>Shan Zha (Fructus Crataegi)</p>	<ul style="list-style-type: none"> • Concurrent use of Shan Zha and <u>digoxin</u> should be monitored to avoid possible side effects. Digoxin increases the output force of the heart and decreases its rate of contractions. • Other herbs that may interact with cardiac glycosides are Ma Huang (can cause arrhythmias when taken with the drug), Lu Hui (can increase toxicity of the drug), Da Huang (can cause potassium loss and increase toxicity of the drug)
<p>Yi Mu Cao (Herba Leonuri)</p>	<ul style="list-style-type: none"> • Use Yi Mu Cao with caution for patients taking <u>anticoagulants</u> such as heparin, warfarin (Coumadin) and enoxaparin (Lovenox) or <u>antiplatelet</u> drugs such as aspirin, dipyridamole (Persantine) and clopidogrel (Plavix) as concurrent use may have an additive or synergistic effect. • Yi Mu Cao is contraindicated during pregnancy as it may cause miscarriage by stimulating <u>uterine contractions</u>.
<p>Zhi Mu (Rhizoma Anemarrhenae)</p>	<ul style="list-style-type: none"> • Use Zhi Mu with caution in conjunction with insulin, sulfonylureas and other <u>antidiabetic</u> drugs such as tolbutamide (Orinase), glipizide (Glucotrol) and glyburide (DiaBeta/Micronase) as there may be a synergistic effect leading to hypoglycemia.
<p>Zhi Shi (Fructus Aurantii Immaturus)</p>	<ul style="list-style-type: none"> • Zhi Shi contains the alkaloid, <u>Synephrine</u>, which can cause an increase in systolic and diastolic BP, and increased heart rate. This was found in a single dose of 900mg with 54mg (6%) total synephrine. • However, the incidence of adverse events are inconsistent and related to genetic variance as well as potentiation with <u>caffeine</u> as a synergist. Synephrine is commonly combined with caffeine to replace Ephedrine/caffeine products for weight loss and which are the subject of controversy and government regulation/bans.
<p>Zhi Zi (Fructus Gardeniae)</p>	<ul style="list-style-type: none"> • Zhi Zi has a sedative effect and may increase drug-induced sleep time when used together with <u>sedatives</u> such as antihistamines, narcotic analgesics, barbiturates, benzodiazepines and others.