

Plant Parts

Pinyin	Common	Latin	Clarifications of some botanical anatomy
Cao	Herb (whole plant)	Herba	<p>rhi·zome: A horizontal, usually underground stem that often sends out roots and shoots from its nodes. Also called rootstalk, rootstock.</p> <p>root 1. The usually underground portion of a plant that lacks buds, leaves, or nodes and serves as support, draws minerals and water from the surrounding soil, and sometimes stores food. 2. Any of various other underground plant parts, especially an underground stem such as a rhizome, corm, or tuber.</p> <p>tu·ber: A swollen, fleshy, usually underground stem, such as the potato, bearing buds from which new plant shoots arise.</p> <p>corm: A short, thick, solid, food-storing underground stem, sometimes bearing papery scale leaves, as in the crocus or gladiolus.</p> <p>axil: angle between upper portion of leaf or stem & supporting branch/stem/vine</p> <p>petiole: slender stalk by which a leaf is attached to the stem</p> <p>pericarp: walls of a ripened fruit</p>
Dan	Gallbladder	Fel	
Dou	Seed	Semen	
Gen	Root	Radix	
Geng	Branch/stem	Caulis	
Gua	Fruit	Fructus	
Hua	Flower	Flos	
Jiao	Horn	Cornu	
Jiao	Gelatin	Gelatinum	
Ke	Shell	Concha	
Mu	Wood	Lignum	
Pi	Bark	Cortex	
Pi	Outer skin	Exocarpium	
pi	Peel/skin	Pericarpium	
Ren	Fruit	Fructus	
Ren	Seed	Semen	
Shi	Stone	Calculus	
Teng	Vine	Caulis	
Ye	Leaf	Folium	
Zhi	Branch/twig	Ramulus	
Zi	Seed	Semen	

The 4 flavors (si qi) – the temperatures

- Hot
- Warm
- Cool
- Cold
- And all gradients in between, including neutral

The 5 tastes (wu wei)

acid/pungent	<p>disperses and moves</p> <ul style="list-style-type: none"> • disperse exopathogens • promote the circulation of the qi and blood
sweet	<p>tonifies, harmonizes, moistens</p> <ul style="list-style-type: none"> • nourish, replenish, tonify, or enriching • normalize the function of the stomach and the spleen • harmonize the properties of different herbs • relieve spasms and pain
bitter	<p>drains and dries</p> <ul style="list-style-type: none"> • clear heat, purge fire • send down rebellious qi to treat cough and vomiting • relax the bowels • eliminate dampness
sour	<p>astringes and binds; prevents leakage of fluid or qi</p> <ul style="list-style-type: none"> • induce astringency and arresting discharge
salty	<p>purges and softens</p> <ul style="list-style-type: none"> • relieve constipation by purgation • soften and resolve hard masses, tumors
plus: bland/tasteless	<p>leeches out dampness; promotes urination</p> <ul style="list-style-type: none"> • excrete dampness, induce diuresis

Reminders:

- Cautions & Contras
 - If not indicated – it is contraindicated and “Do NO Harm”
 - Tonifying herbs when not deficient
 - Ma huang for weight loss
 - Common sense – For fever, do not use hot herbs
 - Pregnancy:
 - Toxic and/or extremely harsh (e.g. ba dou, da ji, e zhu; shui zhi; she xiang)
 - Invigorate blood, dispel stasis (e.g. tao ren, hong hua)
 - Intensely hot (e.g. fu zi; gan jiang)
 - Strongly downward purgative (e.g. da huang)
 - Toxicity
 - inappropriate use (i.e. ma huang and high BP)
 - excessive dosage or extended use (long dan xie gan tang)
 - improper preparation – fu zi, etc
 - drug interaction – coumadin and blood invigorators
 - aconite roots (fu zi, etc) : cardiac arrest
 - anti-cholinergic (stimulates sympathetic): bing lang, man tuo luo, da fu pi
- Dosages – raw versus other, herbs only versus with drugs etc
- Preparation: cooking, pao zhi, etc
 - Basic decoction
 - Individual preparation – pao zhi
- Sulfites - Sulphuring process – pros/cons
- Herb Drug Interaction

Preparation of Decoctions – general guidelines

- earthenware, Corning ware, porcelain, and glass cookware are best
- stainless steel is acceptable but not preferred
- do not cook in aluminum, iron, copper, or non-stick / Teflon cookware
- bring to boil first, then reduce to simmer for cook time
- generally speaking, formulas are cooked for 20-30 minutes, exceptions include:
 - formulas to release to exterior and other aromatic formulas are cooked for a short time (10-15 minutes of simmering)
 - formulas to tonify are cooked for a long time (30 or more minutes of simmering)
- individual herbs may have cook requirements that vary from formulas in which they are included

decoct first	<ul style="list-style-type: none"> ● hard substances with low solubility such as minerals and shells e.g. long gu, mu li ● to reduce side effects or toxicity e.g. fu zi
add near end	<ul style="list-style-type: none"> ● aromatic herbs with volatile oils e.g. bo he ● for the stronger effect of certain substances e.g. da huang
decoct in gauze	<ul style="list-style-type: none"> ● to avoid absorption of decoction by light, fibrous spongy substances e.g. si gua lou ● to avoid drinking small & difficult to strain substances e.g. pu huang, xuan fu hua
decoct separately	<ul style="list-style-type: none"> ● very expensive substances that need extremely long cook e.g. ren shen, lu rong
dissolved in strained decoction	<ul style="list-style-type: none"> ● highly viscous and sticky substances to avoid sticking to pot or being burned e.g. e jiao, yi tang
taken with strained decoction	<ul style="list-style-type: none"> ● too aromatic or easily dissolved in strained decoction e.g. she xiang, mang xiao

Herb- Drug Interactions

Pharmacokinetics	Absorption (skin, GI, RT, etc) Interference: pH, intestinal motility, binding
	Distribution All tissue Protein binding/transport Therapeutic range/safety – coumadin/dilantin Competition for proteins Increased drug activity, decreased safety Lower dosages, monitor closely, gradual increase or decrease
	Metabolism Effect on LV – increase or decrease LV enzymes If LV inducer – increases metabolism, may need to increase dosage, esp. 1-2 months later If LV inhibitor – decreases metabolism, may need to decrease dosage @ ~ 2 weeks
	Elimination (KI, LI, LU) : ex: DMSO (in skin, out LU) Watch for nephrotoxic drugs – compromises elimination
Pharmacodynamics (drug-drug, herb-herb, drug-herb)	Synergistic effect Accentuates, potentiates Blood-movers, sedatives, glucose-lower, diuretics, etc
	Antagonistic effect Eighteen Incompatibles / Nineteen Antagonisms Work against, counteract, make toxic

Treated Forms of the herbs – ones of particular importance

sheng / xian		raw and/or fresh	
chao	chao	dry-fried	moderates herbal properties; increases tonification
	chao jiao	stir-fried until very darkened yellow	moderates herbal properties; increases astringency
	chao tan	charred	stops bleeding
zhi (prepared, fried in)	mi zhi	honey fried	increases tonification, moistening
	cu zhi	vinegar fried	increases astringency, blood invigorating, pain-alleviating, and toxicity-relieving functions
	jiang zhi	ginger juice fried	reduces tendency of bitter and cold to affect Stomach
	jiu zhi	wine/alcohol fried	clears blockages, expels wind, alleviates pain
wei		roasted	moderates herbal properties
duan		calcined	increases astringency
jiao (animal substances)		boiled down to glue or gelatin	increases astringency; more yin & blood nourishing

Herbs that Release the Exterior

Release Exterior Herbs: Wind-cold

Taste: acrid **Flavor/temp:** warm **Channels:** LU

Actions: Dispel wind-cold, release the exterior, induce diaphoresis

Sx: aversion to wind and cold, chills more than fever, body aches, lack of sweat, thin white tongue coat, superficial, tight pulse. Maybe difficulty breathing, cough, wheezing, edema, and bi pain.

Release Exterior Herbs: Wind-heat

Taste: acrid **Flavor/temp:** cool, cold **Channels:** LU, LV

Actions: Dispel wind-heat, release the exterior, reduce swelling and inflammation

Sx: sore throat, aversion to wind and cold, fever, dry throat, thirst, thin white or yellow tongue coat, superficial, rapid pulse. Maybe headache, red eyes, cough, rashes, LV qi stagnation, diarrhea.

General cautions refer to cases of weakness or yin deficiency, spontaneous sweating, night sweating, chronic carbuncles, or bleeding conditions. Overuse can consume yin and qi. Discontinue these herbs as soon as desired effect is achieved. When interior conditions are concurrent with an exterior condition, either treat the exterior condition first or treat both the exterior and interior together.

Several of these herbs have volatile oils, and must be “post-decocted” or added at the end.

Most of the wind-cold herbs are diaphoretics, and some are also diuretic – combined use may lead to electrolyte loss. Many of the wind-heat herbs have antipyretic, antibiotic and sedative functions. Many accentuate OTC drugs, such as aspirin, decongestants, antibiotics, sedatives, etc. Some herbs have more unique actions, such as lowering blood glucose, or stimulating basal metabolic rate.

Herbs that Clear Heat

For treating internal heat. Six subcategories.

General cautions refer to cases of Spleen and Stomach deficiency, yin deficiency, yang deficiency, and true cold with false heat.

Herbs that Drain Fire

Category: Clear heat **Sub-category:** Drain Fire

Taste: sweet, bitter **Flavor/temp:** cool, cold **Channels:** LU, ST, HT, LV

Actions: clear heat and purge fire

Sx: heat in qi level, excess heat in ST or LU

Herbs that Clear Heat and Cool Blood

Category: Clear heat **Sub-category:** Cool blood

Taste: bitter, sweet, salty **Flavor/temp:** cold **Channels:** HT, LV

Actions: clear heat and cool blood

Sx: heat in ying & blood levels – restlessness, irritability, high fever, purpura, bleeding

Herbs that Clear Heat and Dry Dampness

Category: Clear heat **Sub-category:** Dry dampness

Taste: bitter **Flavor/temp:** cold **Channels:** LV, GB, LI, SI

Actions: clear heat, sedate fire, dry dampness

Sx: heat, fire, and dampness, such as hepatitis, jaundice, dysentery, hemorrhoids, infections, sores, abscesses, etc

Herbs that Clear Heat and Relieve Toxicity

Category: Clear heat **Sub-category:** Relieve Toxicity

Taste: bitter **Flavor/temp:** cold **Channels:** varies

Actions: clear heat, eliminate toxins, treat sores and abscesses

Sx: febrile disorders, infection, inflammation, diarrhea, dysentery, sores, abscesses, ulcers, burns, cancer, etc

Herbs That Clear Deficient Heat

Category: Clear heat **Sub-category:** Clear deficient heat

Taste: sweet **Flavor/temp:** cold **Channels:** KI, LV

Actions: clear deficient heat

Sx: steaming bone sensation, hot palms & soles, night sweats, hot flashes, afternoon fever, dry throat & mouth, irritability, insomnia, red tongue & thin or no coat, thin thready pulse

Herbs That Clear Summer Heat

Category: Clear heat **Sub-category:** Clear summer heat

Taste: sweet **Flavor/temp:** cool **Channels:** HT, ST

Actions: clear summer heat

Sx: fever, irritability, thirst, diarrhea, sweating

Chapter 3: Herbs that are Downward Draining

General cautions refer to cases of exterior disorders without a concurrent interior condition. In cases of concurrent exterior and interior conditions, the exterior condition should be treated first, or both the exterior and interior conditions treated simultaneously, so as to not drive the external pathogen in deeper. These herbs are also cautioned during pregnancy or lactation, in the elderly or when there is a Spleen and Stomach deficiency. The use of the harsher purgatives should be stopped immediately when the desired results are evident.

Section 3 A: Purgatives

These herbs are bitter and cold in nature with strong heat clearing properties.

Category: Downward Draining **Sub-category: Purgatives**

Taste: bitter **Flavor/temp:** cold **Channels:** LI

Actions: Clear heat, sedate fire, purge stagnation and relieve constipation

Sx: constipation & stagnation in LI, with heat, fire, toxins, or hardness.

Section 3 B: Moist Laxatives

Herbs with a laxative effect are often nuts or seeds. They lubricate the intestines and are mild in nature.

Category: Downward Draining **Sub-category: Moist Laxatives**

Taste: sweet **Flavor/temp:** neutral **Channels:** SP ST, LI, SI

Actions: Lubricate bowels to relieve constipation

Sx: constipation due to deficiency, weak constitution, body fluid deficiency or blood deficiency.

Section 3 C: Harsh Expellants

Harsh expellants are cathartics, which strongly drive out the excess water via the intestines, inducing diarrhea, and can injure yin and qi.

Category: Downward Draining **Sub-category: Expellants**

Taste: bitter **Flavor/temp:** cold **Channels:** varies

Actions: Promote bowel movement and urination.

Sx: Cathartics – potent effect to purge downwards for severe constipation, ascites, and water accumulation.

Chapter 4: Herbs that Drain Damp

General cautions include cases of yin deficiency, depleted fluids or Kidney deficiency with nocturnal emission and incontinence. When long-term usage is necessary, supplementation with appropriate electrolytes should be considered.

Taste: sweet, bland, or bitter **Flavor/temp:** neutral to cold **Channels:** KI, UB

Actions: Promote diuresis, reduce swelling, treat lin zheng

Sx: dysuria, leucorrhea, edema, phlegm or damp accumulation, jaundice, damp sores, damp-heat disorders and bi zheng.

Section 4 A: Herbs that Promote Urination and Relieve Edema

Often bland (leech dampness, promote urination)

Section 4 B: Herbs that Promote Urination and Relieve PUD

Often bitter (to clear heat)

Section 4 C: Herbs that Drain Damp and Relieve Jaundice

These herbs are mainly used for damp-heat jaundice. If heat is excessive, then combine with clear heat, drain fire or relieve toxicity herbs. If damp is more prevalent, combine with dry damp or aromatic, transform damp herbs. If yin is predominant, combine with warm interior herbs.

Category Overviews

Category	Sub-Category	Primary Fx/Sx	Taste Flavor	Prep.	Safety/ H-D
Release Exterior	Wind-cold	Fx: Dispel wind-cold, release the exterior, induce diaphoresis Sx: aversion to wind and cold, chills more than fever, body aches, lack of sweat, thin white tongue coat, superficial, tight pulse. Maybe difficulty breathing, cough, wheezing, edema, and bi pain.	Acrid Warm	Many decoct for shorter time due to volatile oils. Mi zhi is common to aid with dry cough or to tonify.	Diaphoretics not for long-term as can lead to qi & yin xu. Watch for electrolyte & body fluid loss. Ma huang has drug interact capability.
	Wind-heat	Fx: Dispel wind-heat, release the exterior, reduce swelling and inflammation Sx: sore throat, aversion to wind and cold, fever, dry throat, thirst, thin white or yellow tongue coat, superficial, rapid pulse. Maybe headache, red eyes, cough, rashes, LV qi stagnation.	Acrid Cool Cold	(ma huang, sang ye, chai hu, sheng ma) Chai hu has different dose and paozhi for each function.	Several have blood sugar action. Bai zhi slows LV metabolism.
Clear Heat	Drain Fire	Fx: clear heat and purge fire Sx: heat in qi level, excess heat in ST or LU	Sweet Bitter Cool Cold	shi gao high dose/ xiong dan low dose	various effects may interact with drugs
	Cool Blood	Fx: clear heat and cool blood Sx: heat in ying & blood levels – restlessness, irritability, high fever, purpura, bleeding	Bitter Sweet Salty Cold	xi jiao low dose	various effects may interact with drugs
	Dry Dampness	Fx: clear heat, sedate fire, dry dampness Sx: heat, fire, and dampness, such as hepatitis, jaundice, dysentery, hemorrhoids, infections, sores, abscesses	Bitter Cold	huang lian low dose	
	Relieve Toxicity	Fx: clear heat, eliminate toxins, treat sores and abscesses Sx: febrile disorders, infection, inflammation, diarrhea, dysentery, sores, abscesses, ulcers, burns,	Bitter Cold	qing dai low dose	wide variety of effects may interact with drugs

		cancer			
	Deficient Heat	Fx: clear deficient heat Sx: steaming bone sensation, hot palms & soles, night sweats, hot flashes, afternoon fever, dry throat & mouth, irritability, insomnia, red tongue & thin or no coat, thin thready pulse	Sweet Cold		
	Summer Heat	Fx: clear summer heat Sx: fever, irritability, thirst, diarrhea, sweating	Sweet Cool	often times are foods	
Downward Draining	Purgatives	Fx: Clear heat, sedate fire, purge stagnation and relieve constipation Sx: constipation & stagnation in LI, with heat, fire, toxins, or hardness.	Bitter Cold	Da Huang notes	Yin xu body fluid and electrolyte loss
	Moist Laxatives	Fx: Lubricate bowels to relieve constipation Sx: constipation due to deficiency, weak constitution, body fluid deficiency or blood deficiency.	Sweet Neutral	Crush seeds	
	Harsh Expellants	Fx: Promote bowel movement and urination. Sx: Cathartics – potent effect to purge downwards for severe constipation, ascites, and water accumulation.	Bitter Cold		Very small dose, gan cao incompatibility of 3 herbs
Drain Damp	Promote Urination, Relieve Edema	Fx: Promote diuresis, reduce swelling, treat lin zheng Sx: dysuria, leucorrhea, edema, phlegm or damp accumulation, jaundice, damp sores, damp-heat disorders and bi zheng.	Sweet Bitter Bland		Many have strong Fx to promote urination – may cause yin xu, body fluid & electrolyte loss. Watch for diuretic interaction
	Promote Urination, Relieve PUD		Neutral to Cold		
	Relieve Jaundice				

Pao Zhi	Category	Herb	Special function
sheng/xian	release exterior	ma huang	exterior disorder, strong diaphoretic
		chai hu	for shaoyang syndrome or fever
		sheng ma	exterior syndromes or fever
	clear heat	shi gao	for internal disorders
		lu gen	fresh for generate fluids & diuretic effect
		zhi zi	to drain fire
		xian di huang	more bitter (not sweet) and very cold
promote urination	mu dan pi	clear heat, drain fire, cool blood	
	yi yi ren	to leach dampness and clear heat	
chao (huang)	release exterior	gui zhi	<i>warms & quickens yang, warms channels, quickens blood, disinhibits urination</i>
		fang feng	<i>dispels winds; stops bi, convulsions</i>
		niu bang zi	<i>clears LU, transforms phlegm, stops cough</i>
		man jing zi	<i>brightens eyes, improves hearing, treats bi</i>
	clear heat	zhi zi	to avoid nausea and vomiting
		zhi mu	<i>nourishes KI, moistens dryness</i>
		jin yin hua	<i>clears heat, resolves toxins</i>
	drain downward	huo ma ren	<i>lessens toxicity</i>
promote urination	yi yi ren	tonify SP	
chao jiao	release exterior	ju hua	<i>clears heat, brightens eyes, stops winds & convulsions</i>
		sang ye	<i>nourishes liver, brightens eyes</i>
	clear heat	zhi zi	<i>resolves vexation, clears liver</i>
		jue ming zi	<i>nourishes KI, brightens eyes</i>
		huang qin	<i>harmonizes ST, quiets fetus</i>
chao tan	release exterior	fang feng	<i>stops bleeding & diarrhea</i>
	clear heat	jing jie	to stop bleeding or vaginal discharge
		zhi zi	to stop bleeding
		mu dan pi	to stop bleeding
		huang qin	to stop bleeding
		huang bai	<i>to stop bleeding (stool & uterine)</i>
jin yin hua	<i>to stop bleeding (dysentery)</i>		
drain downward	da huang	to stop bleeding	
mi zhi	release exterior	ma huang	reduces diaphoretic function, helps asthma
		gui zhi	warms center, supplements deficiency
		xi xin	<i>warms LU, transforms phlegm, stops cough</i>
		sang ye	for LU dryness
		chai hu	for SP qi sinking
		sheng ma	for middle sinking qi
	clears deficient heat	bai wei	<i>enriches yin, clears deficient heat</i>
cu zhi	release exterior	chai hu	for LV qi stagnation
	drain downward	da huang	dispels stasis
		gan sui, da ji, yuan hua	reduce toxicity
jiang zhi	clear heat	huang lian	<i>harmonizes ST, stops vomiting</i>
jiu zhi	clear heat	mu dan pi	invigorates blood
		chi shao	<i>invigorates blood</i>
		huang qin	to enhance LU damp-heat energetics
	huang lian	<i>clears HT heat; LV channel damp-heat</i>	
drain downward	da huang	dispels stasis	
wei	release exterior	sheng jiang	<i>warms middle jiao, stops pain, stops bleeding</i>
		ge gen	less cooling action, for diarrhea when SP xu
duan	clear heat	shi gao	for external disorders
jiao			

Herb-drug interaction

Especially take note of coumadin (thins blood) and dilantin (anti-seizure)

Aristolonic acid – xi xin, guan mu tong – nephrotoxic

As a category of herbs – watch dampness drainers for loss of fluid & electrolytes

cardiac-glycosides	ma huang
	da huang
	fan xie ye
sympathomimetics (ephedrine, caffeine, pseudoephedrine)	ma huang
MAOIs	ma huang
diuretics	ma huang
	gui zhi
	jue ming zi
	long dan cao
	ban bian lian
	xi gua
	fan xie ye
	fu ling
	zhu ling
	ze xie
	bian xu
	qu mai
	che qian zi
	tong cao
jin qian cao	
beta-blockers	ma huang
slows LV metabolism	bai zhi
anti-diabetics	cang er zi
	niu bang zi
	zhi mu
	dan zhu ye
	xuan shen
	di gu pi
	che qian zi
	hu zhang
sedatives	chan tui
	zhi zi
	xi jiao
	long dan cao
	bai jiang cao
interferon	chai hu
inhibits peristalsis	lu gen
anti-coagulant	chi shao
	ban lan gen
	ye ju hua
antibiotics – synergistic	huang qin
antibiotics – antagonist	pu gong ying
antibiotics – sulfur sensitivities	da qing ye
	qing dai
	ban lan gen
neoplastic drugs- potentiates	bai xian pi