

Drug Nutrient/Herb Interactions

This list provides common drug and nutrient interactions. Please note that the prescription drug listings are not all-inclusive; drugs listed are common examples.

Herb	Drug Class	Type of Interaction
Alfalfa (Medicago sativa) - Leaf	Anticoagulants ^{2,4,9} e.g. Warfarin ³	Interact Reduced drug action due to Vitamin K content in alfalfa
	Hormone replacement therapy ^{2,4,9}	Interact
	Oral contraceptive ^{2,4,9}	Interact
	Xenobiotics ³	Increases rate of metabolism
Remedies: Nutritional support, retained water, Cholesterol, menopause, addiction, urinary, bowel problems		
Aloe Vera - (A. vera) Latex Powder	All drugs ¹²	Aloe latex will bind all drugs
	Antiarrhythmic agents ^{5,11,12} e.g. Quinidine	Interact
	Cardiac glycosides ^{2,3,5,11,12} e.g. Digoxin ⁵	Increases toxicity. Increases effect due to potassium loss, hypokalemia
	Cortico-adrenal steroids ^{5,11}	Increases potassium deficiency
	Diuretics ³ e.g. Loop diuretics ⁵ e.g. Thiazide diuretics ^{5,11}	Increases potassium loss Interact Interact
	Laxative, stimulant ²⁰	Increases diarrhea, abdominal pain and fluid loss
	Oral drugs ^{3,11}	Decreases absorption of drug due to reduction in bowel transit time
	Glyburide ⁴	Increases hypoglycemic effect
Aloe Vera - Gel or Juice	Glibenclamide ^{3,4}	Increases hypoglycemic effect
Remedies: Immune system, Cancer, Heartburn, Arthritis		
Anise or Aniseed (Pimpinella anisum) - Seed	Anticoagulants ⁹	Excessive doses of Anise may interact with anticoagulants
	Hormone Replacement Therapy ⁹	Excessive doses of Anise may interact with HRT
	Iron ⁵	Enhances iron absorption across the intestinal mucosa
	Oral contraceptive ⁹ MAOIs ⁹	Excessive doses of Anise may interact Excessive doses of Anise may interact with MAOI therapy
Remedies: Digestion, Infection, Respiratory problems and infections, Menopause		
Astragalus (Astragalus membranaceus) - Root	Acycloir ²⁰	Drugs incompatible with herb
	Aldesleukin ²⁰	Astragalus with low dose Aldesleukin resulted in a 10-fold potentiation of Aldesleukin's tumor cell killing activity with decreased side effects
	Anticoagulants/Antiplatelet ²⁰	Increases risk of bleeding
Remedies: Alzheimer's, Common cold, Sore throat, Chemotherapy support		
Basil (Ocimum basilicum) - Leaf	Antidiabetic agents ⁵	May enhance hypoglycemic effects
	Insulin ⁵	May enhance hypoglycemic effects
	Sulfonylureas ⁵	May enhance hypoglycemic effects
Remedies: Digestion, Stomach cramps, Vomiting, Constipation, Anxiety, Headaches		
Bay (Laurus nobilis) - Leaf	Insulin ⁵	Herb enhances hypoglycemic actions - may increase insulin's effect more than

three fold⁵

Remedies: Stomach problems, Rheumatism			
Bearberry Uva Ursi (Arctostaphylos uva-ursi) - Leaf	Drugs that acidify the urine ^{3,4,5,7} e.g. Vita. C (Ascorbic Acid)	May decrease the urinary antimicrobial action	
	Drugs known to interact with hydroquinone ²	Theoretically, caution should be exercised	
	Diuretics ⁵	Enhances electrolyte loss	
Remedies: Arthritis, Urinary problems, Diarrhea, Bronchitis, Fever, Hemorrhoids			
Bee Pollen	Antidiabetic agents ⁵ Hypoglycemic agents ⁵ Insulin ⁵	Interact - May promote hyperglycemia	
	Bilberry (Vaccinium myrtillus) - Fruit	Anticoagulants ⁵ e.g. Warfarin ^{4,20}	Increases risk of bleeding Increases bleeding time
		ASA ⁴	Interact
Bilberry - Leaves	Insulin ³	May cause hypoglycemia	
Remedies: Prevent cataracts, Enhance night vision, Blood circulation, Diarrhea, Liver & stomach problems			
Birch (Betula) - Leaf	None reported ^{5,10}		
Remedies: Lessens inflammation, Diuretic, Joint pain, Urinary tract infections			
Black Cohosh (Actaea racemosa) - Root	Antihypertensives ⁵	Increases hypotensive effects	
	Estrogen ^{7,12}	Interact	
	Hormone treatments ¹⁴	Interact	
	Tamoxifen ⁴	Augments antiproliferative action (in vitro)	
Remedies: PMS, Menstruation problems, Hot flashes			
Black Walnut (Juglans nigra) - Bark, leaf hull	Atropine ²³	Interact	
	Codeine ²³	Decreased absorption	
Remedies: Candida, Skin problems			
Blue Cohosh (Caulophyllum thalictroides) - Root	Angina therapy ^{4,5,9}	Interact	
	Antihypertensives ⁵	Decreases effect of drug, increases blood pressure	
	Nicotine ⁵	Increases effects of nicotine	
Remedies: Muscle spasms, Menstrual disorders, Nervous & memory disorders			
Borage (Borago officinalis) - Seed Oil	Epileptogenic drugs ²⁰	May manifest seizures (theoretical)	
	Phenothiazines ⁹	Interact	
Remedies: Skin & nail health			
Broom (Cytisus scoparius) - Aerial parts	MAOIs ²³	Contains tyramine	
	Beta blockers ⁵	Potentiates drug	
	Antihypertensives ⁵	Interact	
Remedies: Diuretic, Emetic, Purgative			
Bugleweed (Lycopus ssp) - Aerial parts	Thyroid therapy ²³	Interact	
	Beta blockers ⁵	May mask symptoms	

Remedies: Hyperthyroidism, Mood, Overactive heart

Bupleurum (*Bupleurum* ssp) - Root Interferon²³ May lead to serious lung disease

Remedies: Liver disease, Hemorrhoids, Digestion

Burdock (*Arctium lappa*) Oral hypoglycemics^{2,4,5,9} Increases hypoglycemia

- Fruit & Roots

Insulin^{3,5} Hypoglycemic effect

- Leaves Oral hypoglycemics⁴ Increases hypoglycemia

Remedies: Acne, Psoriasis, Rheumatoid arthritis

Calendula (*Calendula officinalis*) - Hexobarbital^{2,3} Extends duration of drug action (rats)
Flowers

Remedies: Eczema, Gastritis, Sunburn, Minor burns and wounds

Catnip (*Nepeta cataria*) - Aerial Dextromethorphan²³ Potentiates effect of drug
parts

Remedies: Sedation, Colic

Cat's Claw (*Uncaria tomentosa*) - Anticoagulants⁵ Potentiates effect of drug
Rootbark

Antihypertensives⁵ Potentiates effect of drug

Oral contraceptives⁴ May antagonize effect of drug

Hormone replacement therapy^{4,7} May antagonize effect of drug

Immunosuppressives⁴ May antagonize effect of drug

Insulins⁷ Interact

Ulcer medications¹⁰ Interact

Vaccines⁷ Interact

Remedies: Stimulates immune system (taken by HIV and cancer patients), Rheumatism, Gastric, Ulcers, Tumors & Dysentery

Cayenne Pepper (Capsicum frutescens) - All Drugs² Increases hepatic metabolism
Fruit

Antihypertensives^{2,5,9} Interact

ACE Inhibitors^{3,16} May increase cough

Centrally acting adrenergic agents⁵ Decreases effect of drug
e.g. Clonidine, Methyldopa⁵

Hexobarbital³ Increases plasma concentration and sleep with acute use and decreases with chronic use (rats)

MAOI^{2,5,9} Interact, hypertensive crisis

Theophylline^{3,16} Increases absorption and bioavailability of drug

Remedies: Digestion, Blood circulation, Arthritis, Colds, Sore throat, Sinus problems

Chamomile, German (*Matricaria recutita*) - flowers All Drugs⁵ Decreases absorption of drugs secondary to Chamomile
Antispasmodic activity in GI tract

Anticoagulants^{5,9} Large doses of herb may interact

Remedies: Digestion, Diuretic, Sleep aid, Colitis, Diverticulosis, Fever, Headaches, Stress

Chaparral (*Larrea tridentata*) - Aerial Parts Anticoagulants²⁰ Chaparral has been shown to interact with platelet adhesion and aggregation in aspirin-treated patients

Barbiturates⁴ Inhibits metabolism

MAOIs⁹ Excessive doses of Chaparral may interact with MAOI therapy

Remedies: Diuretic, Laxative

Chasteberry (*Vitex agnus-castus*) - Dopamine-receptor antagonists^{1,4,13} Decreases therapeutic effect of drug

Berry	e.g. Antipsychotics & Metaclopramide ¹⁴	(animal)
	Dopaminergic drugs	Interact
	Hormone therapy ⁴	Interact
	Oral contraceptives ^{3,4}	Interact with efficacy of drugw
Remedies: Colds, Coughs		
Chondroitin sulfate	Anticoagulants ⁵	Potentiates effects of drug
Remedies: Joint health, Arthritis		
Cinnamon (Cinnamomum Zeylanicum) - Bark	None reported ^{1,5}	
Remedies: Diarrhea, Nausea, Blood circulation, Fungal infection, Digestion		
Cloves (Syzgium aromaticum) - Buds	Anticoagulants ⁹	Potentiates anticoagulant effects of drug
Remedies: Antiseptic, Anti parasitic, Digestive aid, Dental problems		
Coltsfoot (Tussilago farfara) - Leaf	Antihypertensives ^{4,5,9}	Interact
	Cardiovascular therapy ^{4,9}	Interact
Remedies: Coughs, Respiratory ailments, Diabetes		
Comfrey (Symphytum officinale) - Leaf or Root	None reported ^{4,5}	
Remedies: Wounds and many skin problems		
Cranberry (Vaccinium macrocarpon) - Berry	Renally excreted drugs ⁵	May increase elimination of some drugs excreted in the urine.
Remedies: Urinary tract infections		
Dandelion (Taraxacum officinale) - Root	Antidiabetic agents ^{5,9}	May potentiate effect of drug, promoting hypoglycemia
	Antihypertensives ⁵	Additive or synergistic hypotensive effect
	Lithium ^{3,4}	Toxic effect of lithium worsened
- Leaf	Diuretics ^{2,4,5,9}	Potentiates the diuretic action of drug (Herb is rich in potassium)
Remedies: Constipation, Indigestion, Water retention, Alcoholism		
Devil's Claw (Harpagophytum procumbens) - Root	Cardiac therapy ^{2,9}	Interact
	Antiarrhythmic drugs ^{2,4,5}	Theoretical possibility of interaction due to herb's protective action against arrhythmia
	Hypo/hypertensive therapy ^{2,9}	Interact
	Warfarin ¹⁶	Increases risk of Purpura
Remedies: Indigestion, Heartburn and Arthritis		
Dong Quai (Angelica sinensis) - Root	Anticoagulants ^{2,5,12}	Interact
	ASA ¹²	Interact
	Warfarin ^{4,20}	Herb may enhance the anticoagulant effect of drug
	HRT - Hormone Therapy ²²	Interact
Remedies: Breast cysts, Menopause and PMS symptoms		
Echinacea (Echinacea species) - Root/Leaf	Cancer treatments ⁴	Herb stimulated immune system
	Econazole nitrate cream ³	Recurrence rate of vaginal candida infection decreases when the herb juice is used simultaneously
	Immunosuppressive agents ^{2,4,9} e.g. Corticosteroids & Cyclosporine ⁴	Herb stimulates immune system

Hepatotoxic drugs¹²

Increases liver toxicity with other hepatotoxic drugs

Warfarin⁴

Increases bleeding time (anecdotal reports)

Remedies: Boost immune system to prevent colds, flu, ear infections, sore throats, mouth ulcers (cankers), gingivitis and yeast infections

Elder (*Sambucus nigra*) - Berry None reported^{1,2,5,10}

Remedies: Colds, Herpes simplex, Sore throat, Flu, Inflammation

Evening Primrose Oil (<i>Oenothera biennis</i>) - Seed	Anticoagulants ^{2,14,20}	Interact, may reduce platelet aggregation and potentiate drug action
	Beta-blockers ^{2,14}	Decreases action of herb
	Corticosteroids ^{2,14}	Theoretically interact
	Epileptogenic drugs ^{2,4,9} e.g. Phenothiazines ^{2,5,9,14,19}	Increases epileptic attacks
	Lithium carbonate ²	Decreases neurotoxicity
	NSAIDs ^{2,14}	Theoretically interact
	Vasodilators ²⁰	May potentiate effect of drug

Remedies: Arteriosclerosis, Diabetes, Eczema, Fibrocystic breast disease, PMS, Rheumatoid arthritis

Fenugreek (<i>Trigonella foenumgraecum</i>) - Seed	All Drugs ^{3,5,9,20}	Absorption of all drugs may be affected due to mucilaginous fiber content and high viscosity in gut
	Anticoagulants ^{5,9,10}	Interact
	Heart medications ¹⁰	Interact
	Hormonal therapy ^{9,10}	Interact
	Hypoglycemic therapy ^{5,9}	Interact
	Insulin ^{3,20}	Dose may need adjustment due to hypoglycemic activity
	MAOIs ^{9,10}	Interact

Remedies: Lowering cholesterol and triglyceride levels, Diabetes, Arteriosclerosis

Feverfew (<i>Tanacetum parthenium</i>) - Leaf	Anticoagulants ^{2,4,12,13} e.g. Warfarin ^{2,4}	Potentiates effect of drug
	Aspirin ^{12,13}	Increases antithrombotic effect
	Corticosteroids ²	Decreases effect of herb
	Imitrex ¹²	Decreases efficacy of drug
	NSAIDs ^{2,12}	Decreases effect of herb
	Tylenol ¹²	Decreases efficacy of drug

Remedies: Migraines

Flax (<i>Linum usitatissimum</i>) - Seed	All Drugs ^{1,3,4,5,13,20}	Absorption of drug delayed when herb used as a bulk laxative
	Insulin ²¹	Potentiates effect of drug due to delayed absorption of glucose
	Laxatives ⁵	Increase in laxative actions of flax
	NSAIDs ⁴ e.g. Indomethacin ⁴	Increases prevalence of stomach/intestinal ulcers

Remedies: Bone, Nail, Teeth, Skin health

Forskohlii (<i>Coleus forskohlii</i>) - Root	Clonidine ²³	Potential interaction
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Remedies: Allergies, Asthma, Eczema, Irritable bowel syndrome, Menstrual cramps, High blood pressure, Glaucoma

Herb	Drug Class	Type of Interaction
Garlic (<i>Allium sativum</i>) -	Anticoagulants ^{2,4,5,7,9,19}	Interact

Bulb	e.g. Warfarin ^{1,3,11,12,16,19,20}	
	Antiplatelet therapy ⁵	Anticoagulant activity of drug enhances (may double clotting time)
	ASA ^{2,9,12}	Enhances effects of antiplatelet therapy Potentiates the anti-thrombotic effect of ASA
	Diabetic Therapy ^{2,9} e.g. Insulin ³	Dose of drug may need adjusting due to hypoglycemic effects of herb

Remedies: Cardiovascular system, Congestive heart failure, Lowering cholesterol and triglyceride levels

Ginger (Zingiber officinate) - Root	All drugs ³	Increases absorption of drug
	Anticoagulants ^{2,4,5,9,11,19,20}	Inhibitory effect on thromboxane synthesis
	Cardiac therapy ^{2,9}	Interact
	Cyclophosphamide ³	Side effect of vomiting prevented by prior administration of acetone extract of ginger or its component 6-gingerol (PO in Suncus/shrew)
	Diabetic therapy ^{2,9}	Interact
	Sulfaguanidine ^{3,4}	Increases absorption of drug (rats)

Remedies: Anti-nausea, Anti-vomiting, Blood circulation, Indigestion

Ginko (Ginko biloba) - Leaf	Anticoagulants ^{1,2,4,5,12,13,14,19} & Antiplatelet therapy ²⁰	Potentiates effect of drug - Monitor coagulation
	e.g. Aspirin ^{3,12,16,20} NSAIDs ⁴ Warfarin ^{16,20} Ticlopidine ²⁰	May introduce spontaneous bleeding Interact Potentiates effect of drug
	MAOIs ^{3,20}	May potentiate effects of drug
	Papaverine ³	Potentiates effect of intracavernosal injection for impotence (in 20% of patients for whom previously ineffective)
	SSRIs ²⁰	Ginkgo may counter the sexual dysfunction that may be experienced with SSRIs
	Thiazide diuretic ¹⁸	Herb decreases effect of drug, the interaction causes hypertension

Remedies: Alzheimer's disease, Blood circulatory diseases, Depression, Diabetes, Male impotence, Migraine, Multiple sclerosis, Tinnitus

Ginseng North American (Panax quinquefolius) - Root	Anticoagulation therapy ^{3,4,12,16} e.g. Warfarin ²⁰	Interact Decreases INR levels
	Antihypertensives ⁴ e.g. Diuretics ²⁰	Interact Decreases diuretic action
	Digitalis ¹²	Increases toxicity
	Estrogen Therapy ^{4,9}	Interact
	Oral Hypoglycemia therapy ^{4,5}	Interact
	Insulin ³	Dose adjustment due to hypoglycemic effect
	MAOIs ^{1,3,4,5,9,11,12,20}	Interact
	Oral contraceptives ¹²	Interact
	Psychotherapeutic medication ^{4,12} /Antipsychotics ¹⁹ e.g. Phenzelzine ^{4,9,16,20}	Interact
	Steroids ^{12,19}	Interact

Remedies: Flu, Common cold, Sore throat, Chronic fatigue syndrome, Fibromyalgia, Alzheimer's disease, Arteriosclerosis, Chemotherapy support, Male reproductive health, Stress, Diabetes

Ginseng Siberian (Eleuthero coccus senticosus) - Root	Anticoagulants ^{2,4}	Interact
	Antipsychotics ^{4,9}	Interact (Stimulant activity)
	Barbiturates ^{2,4} e.g. Hexobarbital ^{3,5}	Potentiates effects of drug Increases effect of drug due to inhibition of its metabolic breakdown

Cardiac therapy ^{2,9}	Interact
Diabetes therapy ^{2,4,9}	Interact
Digoxin ^{2,5,16,19}	Increases serum digoxin levels
Estrogen ⁴	Potentiates effect of drug
Hypertension therapy ^{2,4}	Contra-indicated
Hypotension therapy ^{2,9}	Interact
Insulin ³	May need to adjust dose due to hypoglycemic effect
Monomycin & Kanamycin ³	Increases efficacy in treating Shigella dysentery and Proteus enterocolitis probably due to enhancement of t-lymphocyte activity

Remedies: Alzheimer's disease, Attention deficit disorder, Adjunctive chemotherapy, Chronic fatigue syndrome, Common cold, Diabetes, Flu, Fibromyalgia, Stress

Glucosamine Sulfate (2-Amino-2-deoxyglucose) Diabetic medication¹⁵ Causes a decrease in insulin secretion and in insulin sensitivity (in animal studies)

Remedies: Arthritis, Joint pain

Goldenseal (Hydrastis canadensis) - Anticoagulants^{4,5,9} Potential interaction

Root

Antihypertensives⁵
e.g. Beta blockers⁵
Calcium channel blockers⁵ Increases effect of drug

Barbiturates^{2,4}
e.g. Barbitu Increases sleeping times (rats)

Cardiovascular medications⁴
e.g. Digoxin⁵ Interact
Increases effect of drug

CNS depressants⁵
e.g. Alcohol, benzodiazepines⁵ Enhances sedative effects

Oral Hypoglycemia Therapy²² Herb lowers blood sugar levels

Remedies: Common cold, Chronic ear infections, Urinary tract infections, Crohn's disease

Grapefruit (Citrus paradisi) - All Drugs including: Increases bioavailability
Fruit/Juice Benzodiazepines^{3,18} Inhibits metabolism by cytochrome P450-3A enzymes
e.g. Midazolam, triazolam, alprazolam¹⁸, Buspirone¹⁸

Calcium Antagonists^{3,18}
e.g. Amiodipine, verapamil, nisoldipine, nifedipine, nitrenipine, felodipine, nimodipine, nicardipine

Cavedilol¹⁸

Cisapride¹⁸

Clomipramine¹⁸

Coumarin³

Cyclosporin^{3,18}

Ethinyl estradiol^{3,18}

HMG CoA reductase inhibitors¹⁸
e.g. Atorvastatin, cerivastatin, lovastatin, simvastatin¹⁸

Saquinavir¹⁸

Tacrolimus¹⁸

Terfenadine³

Remedies: Appetite stimulant, Digestion, Diuretic

Grape Seed Extract None reported⁵

Remedies: Good nutritional value

Green Tea (<i>Camellia sinensis</i>) - Leaf	All Drugs	Green Tea has similar interactions as occur with caffeine
	Calcium ¹²	Decreases absorption of calcium
	Doxorubicin ⁵	May enhance the antitumor activity of doxorubicin

Remedies: Stimulates immune system, Infections, Gum disease, some cancer risk reduction, Lowers cholesterol level, High blood pressure, High triglyceride levels

Hawthorn (<i>Crataegus laevigata</i>) - Aerial parts	Antihypertensives ⁵	Increases hypotension
	Cardiac glycosides ^{3,5,12,19} e.g. Digitoxin, Digoxin ³ , Digitalis ^{1,3,4}	Potentiates effect of drug (helps lower digoxin levels where toxicity is a concern)
	Cardiac medications ^{7,9} e.g. Nitrates ⁵	Interact Increases hypotension
	CNS depressants ⁵	Addictive effects

Remedies: Angina, Arteriosclerosis, High blood pressure

Hops (<i>Humulus lupulus</i>) - Strobiles	Alcohol ^{2,9,14,20}	Potentiates action of alcohol
	CNS depressants ⁵	Increases effect of drug
	Cytochrome P450 metabolized drugs ^{2,5}	Yet to be evaluated
	Pentobarbital ⁸	Increases sleeping time (mice)
	Phenothiazine-type antipsychotics ⁵	Combination of herb and drug increases hyperthermia
	Sedative-hypnotics ^{2,9,14,20}	Potentiates effect of drug

Remedies: Anxiety, Insomnia

Horse Chestnut (<i>Aesculus hippocastanum</i>) - Seed	Anticoagulants ^{3,5} ASA ^{3,5}	Increased risk of bleeding
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Remedies: Varicose veins, Hemorrhoids, Blood circulation

Horseradish (<i>Armoracia rusticana</i>) - Root	Thyroid medications ⁹	Interact
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Remedies: Coughs, Diuretic, Sinus, Throat and lung problems

Juniper (<i>Juniperus communis</i>) - Berry	Diuretic therapy ^{2,9}	Potentiates effect of drug
	Hypoglycemic therapy ^{2,9}	Potentiates effect of drug

Remedies: Urinary tract infections, water retention

Kava (<i>Piper methysticum</i>) - Root	Alcohol ^{1,2,3,5,7,12,14}	Potentiates action of herb
	Anticoagulants ¹⁹	Interact
	Antidepressants ^{7,12}	Interact
	Antipsychotics ⁷	Interact
	Barbiturates ^{1,2,4,5,7} e.g. Hexobarbital ² e.g. Pentobarbital ^{3,5}	Potentiates action of barbiturates Potentiates effect of drug (animals) Potentiates effect of drug
	Benzodiazepines ^{2,3,4,12,14,19} /Tranquillizers ¹² e.g. Alprazolam ^{2,5,20}	Potential interaction Potentiates effect of drug
	Centrally acting drugs ^{1,2,4,7,20}	Potentiates effect of drug
	CNS depressants ^{3,5}	Potentiates effect of drug

Levodopa ³	Decreases efficacy
Hepato toxic drugs	Potentiates effect of drug

Remedies: Anxiety

Lemon Balm (<i>Melissa officinalis</i>) - Leaf	CNS depressants ¹⁴	Interact
	Hexobarbital ³	Enhances effect of drug
	Pentobarbital ^{2,3,4}	Promotes hypnotic action (mice)
	Thyroid medications ^{2,4,14}	Interact

Remedies: Herpes simplex, Indigestion, Insomnia, Nerve pain, Hyperthyroidism

Licorice (<i>Glycyrrhiza glabra</i>) - Root	Agents that prolong the QT interval ⁵ e.g. procainamide, quinidine, terfenadine ⁵	May prolong the QT interval
	Antihypertensives ^{4,5,12}	Interact
	Aspirin ^{3,20}	Deglycyrrhizinated licorice decreases ulcer formation (rats) & gave greater protection from ASA-induced gastric mucosal damage when used with cimetidine (rats)
	Cardiac glycosides ^{2,3,11} e.g. Digitalis ^{1,3,12,20} Digoxin ⁵	Affect potassium levels increases toxicity due to decreases in potassium
	Cardiovascular drugs ⁴	Interact
	Cathartics ⁴ e.g. Stimulant laxatives ³	Interact Additive effect - increases potassium loss
	Corticosteroids ^{3,4,5,11,20} e.g. Hydrocortisone ^{2,3,16} , Prednisolone ^{2,16}	Interact Potentiates effect of drug Inhibit metabolism, increases plasma concentration
	Diuretics ^{3,4,5,11,12,20} e.g. Loop diuretics ^{2,11} , Potassium-sparing diuretics ² , Potassium-excreting agents or amiloride ⁴ , Spironolactone ^{3,4,5,11} , Thiazide ^{1,3,11}	Affects potassium, potentiates potassium depletion
	Hormonal therapy ^{4,9} e.g. Oral contraceptives ¹⁶	Interact Hypertension, edema, hypokalemia
	Estrogen & antiestrogen ²	Interact
	Insulin ^{2,3,4,9}	Increases electrolyte disturbances
	Nitrofurantoin ²	Increases bioavailability

Remedies: Asthma, Bronchitis, Canker sores, Eczema, Herpes simplex, Indigestion, Heartburn, Peptic ulcer, Chronic fatigue syndrome

Lobelia (<i>Lobelia inflata</i>) - Aerial parts	Nicotine therapy ⁵ (smoking cessation treatments)	Contra-indicated - Nicotine and Lobelin are chemically similar in structure
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Remedies: Coughs, Colds, Asthma, Bronchitis, Flu, cardiovascular, Epilepsy

Herb	Drug Class	Type of Interaction
Ma Huang (<i>Ephedra sinica</i>) - Aerial parts	All Drugs ²	Herb has similar interactions to those occurring with Ephedrine
	Anesthetics ⁴	Interact
	Agents that influence urine pH	Interact

e.g. Antacids ^{3,4} Acetazolamide ²⁰	Acetazolamide may cause increased concentration of ephedrine due to alkalinization of the urine
ASA ⁴	Potentiates effect of drug
B adrenergic blockers ^{4,5}	Interact
Cardiac glycosides ^{1,4,11,13} e.g. Digitoxin ⁷	Disturb heart rhythm Interact
Corticosteroids ² e.g. Dexamethasone ³	Interact Increases clearance and thereby reduces effect
Centrally acting medications ^{2,4} e.g. Antidepressants ² Antihypertensives ^{2,4} Clonidine ²⁰	Interact Interact Interact Clonidine may augment the pressor response to ephedrine
Ephedra alkaloids ⁵	Hypertensive crisis
Ergot alkaloid derivatives ¹¹	Interact
Guanethidine ^{1,2,4,7,11,13,20}	Increases sympathomimetic effect
Halothane ^{1,2,11,13,20}	Disturbs heart rhythm
MAOIs ^{1,2,3,4,7,11,13} e.g. Tranylcypromine, selegiline, phenelzine, moclobamide ³ , isocarboxazid ²⁰	Increases sympathomimetic effect Severe hypertension
Methyl Xanthines ³ e.g. Theophylline ^{2,3,4,5,20}	Interact, increases side effect (GI and CNS) of both herb and drug
Oxytocin ^{1,2,4,11,13}	Hypertension
Phenothiazine ⁵	Hypotension
Reserpine ^{3,20}	Indirect sympathomimetic effects of ephedrine are antagonized
Secale alkaloid derivatives ^{1,2}	Hypertension
Sodium Bicarbonate ²⁰	Ephedrine toxicity increases due to decreased elimination
Stimulants ²	Interact
Sympathomimetic agents ^{4,20}	Interact

Remedies: Breathing problems, Asthma, Nasal congestion

Marshmallow (<i>Althaea officinalis</i>) - Root	All Drugs ^{1,3,4,5,10}	Delays absorption of drug
	Dexamethasone ⁴	Potentiates effect of drug
	Hypoglycemic therapy ^{9,10}	Interact
	Insulin ⁵	Increases hypoglycemic effects
	Sulfonylureas ⁵	Increases hypoglycemic effects

Remedies: Peptic ulcer, Chron's disease, Diarrhea, Asthma, Common cold, Sore throat

Meadowsweet (<i>Filipendula ulmaria</i>) - Leaf/Flower	All Drugs ^{2,9} e.g. Anticoagulants ²	Herb has similar interactions to those occurring with salicylates Interact
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Remedies: Diarrhea, Stomach problems

Milk Thistle (<i>Silybum marianum</i>) - Seed	All Drugs ²	Increases live metabolism of all drugs
	Acetaminophen ^{4,19}	Reduces hepatotoxicity
	ASA ^{3,4}	Altered metabolism in people with liver cirrhosis might be improved
	Butyrophenones ²⁰	Reduces lipid peroxidation
	Carbon tetrachloride ^{4,19}	Reduces hepatotoxicity

Cisplatin ^{3,4}	Reduces hepatotoxicity
Cyclosporine ⁴	Reduces hepatotoxicity Synergistic antiproliferative effect on human ovarian and breast cancer cell lines
Doxorubicin ⁴	Synergistic antiproliferative effect on human ovarian/breast cancer cell lines
Ethanol ^{4,19}	Reduces hepatotoxicity
Iron ⁴	Reduces hepatotoxicity
Phenothiazines ^{4,20}	Reduces hepatotoxicity
Phenytoin ²¹	Reduces hepatotoxicity

Remedies: Gallstones, Psoriasis, Liver health

Mistletoe (<i>Viscum album</i>) - Aerial parts	Anticoagulant therapies ⁹	Interact
	Antihypertensives ^{4,5,10}	Increases hypotensive effects/check blood pressure regularly
	Antidepressants ^{9,10}	Interact
	Cardiac drug ^{5,9,10}	Increases cardiac depression
	Coagulant therapies ⁹	Interact
	CNS depressants ⁵	Increases sedative effects
	Hypotensive therapies ⁹	Interact
	Immunosuppressants ^{5,9}	Cytotoxic and immunostimulant effects
MAOIs ⁴	Interact/monitor	

Remedies: Blood pressure and heart, Mood, Migraine

Nettle (<i>Urtica dioica</i>) - Leaf	Anticoagulants ⁴ / Coagulant therapy ⁴	Interact
	Antihypertensives ^{2,4,9}	Interact
	CNS depressants ^{4,9}	Potentiates effect of drug
	Diabetic medication ^{2,4,9}	Interact
	Diclofenac (low dose) ^{3,4}	Leaf extract enhances anti-inflammatory effect of diclofenac Potentiates effect of drug
	Diuretics ^{2,5}	Potentiates effect of drug
	Hypotension medication ^{4,9}	Interact
- Root	Prostatic Hyperplasia Therapy ²² e.g. Tamsulosin	Potentiates effect of drug

Remedies: BPH (enlarged prostate), hay fever

Passionflower (<i>Passiflora incarnata</i>) - Leaf	Barbiturates ⁴ e.g. Hexobarbital, Pentobarbital ^{2,3}	Increases hypnotic action Increases sleeping time (animal)
	Centrally Acting Medications ^{2,4,5}	Increases hypnotic action and potential for monoamine oxidase inhibition
	CNS depressants ²⁰	Potential for additive effects and increases sedation
	MAOI Antidepressants ^{5,7,9}	Interact

Remedies: Anxiety, Insomnia

Pau D'arco (*Tabebuia impetiginosa*) - Bark
 Anticoagulants^{5,20} May potentiate effects of drug, prolongation of prothrombin time²⁰
 Iron⁵ Decreases absorption of iron

Remedies: Infections and yeast infections

Peppermint (*Mentha x piperita*) - Leaf
 Ulcer treatment e.g. H2 Receptor Blockers May antagonize achlohydria

Remedies: Migraine, Nerves, Stomach disorder, Heartburn, Herpes, Abdominal cramps

Pine Bark Extract (*Pinus maritima*) None reported^{4,5}

Remedies: Chronic venous insufficiency

Propolis - Resin
 Tetracycline²⁴ Increases effectiveness

Remedies: Anemia, Skin healing, Respiratory problems, Immune system support, Digestion

Psyllium (*Plantago psyllium*) - Seed
 All drugs^{1,3} May delay absorption of drugs
 Anti-coagulants²¹ Delays absorption of drug
 Anti-convulsants e.g. Carbamazepine^{5,20} Decreases absorption and concentration of drug
 Cardioactive drug⁵ e.g. Beta blockers, calcium channel blockers, digitalis⁵ A possibility that the herb enhances digitalis effect of the drug (highly speculative)
 Insulin³ Drug dosage must be adjusted due to slowing of dietary carbohydrate absorption
 Lithium^{3,5,16} Decreases concentration due to reduction of drug absorption

Remedies: Constipation, Diarrhea, Hemorrhoids, Irritable bowel syndrome, Obesity, Arteriosclerosis, High cholesterol, High triglyceride level, Psoriasis

Puncture Vine (*Tribulus terrestris*) None reported⁴

Remedies: Vitiligo (whitening of skin), Impotence, Female infertility, Urinary problems

Pygeum (*Prunus africana*) - Bark
 Antibiotics for prostate and bladder infections⁴ Enhances effectiveness of drug

Remedies: Urinary problems, Enlarged prostate

Red Clover (*Trifolium pratense*) - Blossoms
 Anticoagulants^{5,9,10} e.g. Heparin, Warfarin⁵ May increase risk of bleeding
 Antiplatelet agents⁵ e.g. ASA, clopidogrel, ticlopidine⁵ May increase risk of bleeding
 Hormone Replacement Therapy^{9,10} Interact
 Oral Contraceptive^{5,9,10} May enhance action of drug by increasing estrogen components

Remedies: Coughs Eczema, Possible cancer reduction

Red Raspberry (*Rubus idaeus*) - Leaf
 Antidiabetic agents^{5,9} Increases effectiveness of hypoglycemic action

Remedies: Menstrual problems, Diarrhea, Canker sores

Red Yeast Rice
 Iloprost²³
 Simvastatin²³
 Atorvastatin²³ Additive effect similar in (Cholestin)

Remedies: Lowering cholesterol levels

Rosehips (*Rosa canina*) None reported⁵

Remedies: Colds, Infection

Rosemary (*Rosmarium officinalis*) - Leaf Disulfiram⁵ Disulfiram reaction if herbal product contains alcohol

Remedies: Circulatory system, Heart problems, High blood pressure, Menstruation

Royal Jelly Antidiabetic agents⁵ May lead to loss of glycemic control in diabetic patients

Remedies: Appetite stimulant, Chronic fatigue syndrome, Liver disease, Insomnia, Multiple sclerosis

Herb	Drug Class	Type of Interaction
Sage (<i>Salvia officinalis</i>) - Leaf	Anticonvulsants ^{5,9}	Lowers seizure threshold
	Antidiabetic agents ^{5,9} e.g. Insulin ⁵	Antagonizes glycemic control
	Sedatives ⁹	Herb may potentiate sedative effects of other drugs

Remedies: Menopause, Tonsillitis, Fever

Saw Palmetto (<i>Serenoa repens</i>) - Berry	Hormone replacement therapy ^{2,4,9}	Interacts because of its anti-androgen and estrogenic activity
	Oral contraceptives ^{2,4,9}	Interacts because of its anti-androgen and estrogenic activity

Remedies: BPH (enlarged prostate)

Schisandra (<i>S. chinensis</i>) - Berry	Acetaminophen ²³	Reduces hepatotoxicity
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Remedies: Coughs, Asthma, Urinary problems, Tonic

Scullcap (<i>Scutellaria laterifolia</i>) - Aerial parts	Centrally-acting medications ²	Potentiates effect of drug
	Sedatives and tranquilizers ^{3,4}	Interact

Remedies: Infertility, Nerve disorders

Scullcap, Chinese (<i>Scutellaria baicalensis</i>) - Root	Immunosuppressives ⁵	Possible interaction
	Platelet aggregation inhibitors ^{3,4}	Potentiates effect of drug

Senna (<i>Cassia ssp</i>) - Leaf, Pod	Indomethacin ⁵	Decreases drug levels
	Calcium channel blockers ⁵	Potentiates potassium depletion
	Digoxin ²³	Interacts

Remedies: Sore throat, Fevers, Heart problems

Slippery Elm (<i>Ulmus rubra</i>) - Aerial parts	All Drugs ⁷	May interfere with the absorption of drugs taken simultaneously
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Remedies: Gastritis, Chron's disease, Cough, Common cold, Sore throat

St. John's Wort (<i>Hypericum perforatum</i>) - Aerial parts	All Drugs ^{21,22}	Drugs metabolized by cytochrome P450 3A4 enzyme system have potential to interact
	Antabase ¹²	Interact
	Anitdepressants ^{4,5,12,17} e.g. Trazadone nefazodone ^{16,17} see MAOIs & SSRIs below	Serotonin syndrome
	Anti-epilepsy drugs ¹⁷ e.g. Phenytoin	Interact

Uva Ursi see Bearberry

Remedies: Urinary tract infection

Valerian (<i>Valeriana officinalis</i>) - Root	Alcohol ^{5,11,16}	Potentiates effects of alcohol
	Anticonvulsants ¹²	Increases seizures
	Barbiturates ¹⁹ e.g. Pentobarbital, thiobarbital ³	Increases sleeping time
	Benzodiazepines ^{3,19} e.g. Diazepam ³	May be helpful in withdrawal from benzodiazepines
	CNS depressants ^{2,5,14,19}	Potentiates effects of drug
	Sedative medications ^{4,9,11,12,14}	Potentiates effects of drug

Remedies: Insomnia

Wild Yam (<i>Dioscorea vilosa</i>) - Root	Oral Contraceptive ²²	Interact - may interfere with effectiveness of contraceptive
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Remedies: High cholesterol, High triglyceride levels, Abdominal cramps, Menopause, Muscle pain and spasms

Willow (<i>Salix</i>) - Bark	All Drugs ^{1,2,9}	Willow has similar interaction to those occurring with salicylates. Irreversible inhibition of platelet aggregation by aspirin cannot be induced by structurally different salicin ²¹
	Anticoagulants ^{5,9}	Increases bleeding
	Antihypertensives ⁵	Reduces effect
	Diuretics ⁵	Increases risk of salicylate toxicity (highly speculative)
	Methotrexate ⁹	Interact
	Metoclopramide ⁹	Interact
	NSAIDs ^{5,13}	Interact
	Phenytoin ⁹	Interact
	Probenecid ⁹	Interact
	Salicylates ^{9,13}	Interact (no cases reported)
	Spironolactone ⁹	Interact
Valproate ⁹	Interact	

Remedies: Headache, Pain, Backache, Nerve pain, Toothache

Yarrow (<i>Achillea millefolium</i>) - Aerial parts	Antacids ⁴	Interact
	Anticoagulant therapy ^{4,5,9}	Interact
	CNS depressants ⁵	Increases sedation
	Diuretics ⁴	Interact
	H2receptor antagonists ⁴	Interact
	Hypertensive ^{4,5,9} / Hypotensive therapy ^{4,9}	Interact
	Sedatives ⁴	Interact

Remedies: Inflammation, Improves blood clotting, Diuretic, Fever, Some inflammatory disorders

Yohimbe	a-adrenoceptor blocking agents ³	Increases toxicity of yohimbine
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(Pausinystalia yohimbe) - Bark	e.g. Phenoxybenzamine, phentolamine ³	
	Amobarbital ³	Interact
	Antidepressants ^{5,7,20}	Interact
	Atropine ³	Interact
	Beta blockers ³ e.g. Propranolol, penbutolol, metoprolol ³	Protects against yohimbine toxicity (mice)
	Central α^2 -adrenergic agonists ³ e.g. Guanabenz, α -methylnorepinephrine ³	Reverses hypotensive effects
	Clonidine ³	Reverses hypotensive effects
	Hypotensive drugs ^{1,20}	Potentiates
	MAOIs ^{1,3,20}	Potentiates
	Naloxone ^{3,20}	Affects synergistically enhances
	Phenothiazines ³ e.g. Chlorpromazine, promazine ³	Increases toxicity of yohimbine
	Reserpine ³	Interact
	Sedatives ³	Increases effect of drug
	SSRIs ⁵	Increases stimulation
	Sympathomimetics ^{3,5,10} e.g. Epinephrine, ephedrine, amphetamine, cocaine ³	Increases toxicity of yohimbine
	Thiozanthenes ³ e.g. Chlorprotixene ³	Increases toxicity of yohimbine
	Tricyclic anti-depressants ^{3,5,16} e.g. Clomipramine ^{3,20} , imipramine, amitriptyline ³	Combination of herb and drug may cause hypertension Lower doses of yohimbine may have favorable effect in orthostatic hypotension induced by tricyclic anti-depressants
	Tyramine containing foods ^{5,20}	Increases blood pressure

Remedies: Depression, Male impotence

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