

# **Table of Common Herbs and Supplements**

| COMMON NAME OF HERB/<br>BIOLOGICAL NAME OF HERB   | DESIRABLE MEDICINAL<br>ACTIONS OF HERB  | CONTRAINDICATIONS AND RISKS<br>(Adverse Drug Reactions or ADRs) OF HERB   | USUAL DOSING<br>OF HERB  |
|---|---|---|--|
| <p><b>Acai</b> (ah-sigh-EE)</p> <ul style="list-style-type: none"> <li>Berry from South and Central America</li> </ul>  | <p>Anti-cancer<br/>Anti-oxidant<br/>Anti-inflammatory<br/>No scientific studies done on use for medical conditions</p>  | <p>Allergic to acai or plants in palm family<br/>May affect MRI results<br/><b>ADRs:</b><br/>Hypertension<br/>GI bleeding<br/>Ulcers</p>  | <p>Juice, capsule, powder, tablets<br/>Widely used, no specific dosing</p>   |
| <p><b>Aloe Vera</b> “burn plant”<br/>“lily of the desert”</p> <ul style="list-style-type: none"> <li>Leaves contain a clear gel that can be used topically</li> <li>Green part of leaf that surrounds gel produces juice or dried substance (latex) that can be taken orally</li> <li>Used back 6000 years to Egyptian times</li> </ul> | <p>Scientific studies show benefit for topical gel healing burns and abrasions; however, may not work for deep surgical wounds or radiation wounds<br/>Laxative affect taken orally<br/>Inactivates HSV2 virus<br/>Bacteriostatic properties<br/>Contains sterols with anti-inflammatory properties</p> | <p>*Toxicology study of oral whole leaf extract found risk of carcinogenicity in lab animals<br/>*Topical aloe has no known side effects<br/>ADRs with oral aloe:<br/>Lowers blood sugar by stimulating insulin<br/>Diarrhea/abd.cramps<br/>Arrhythmia from hypokalemia<br/>Contac dermatitis, stinging, soreness<br/>Acute hepatitis, renal failure, nephritis<br/>Abortifacient, may ↑ uterine bleeding<br/>Avoid in pregnancy and lactation<br/>Avoid perioperatively; has caused bleeding</p> | <p>Topical aloe only<br/>Use of oral aloe not recommended due to safety concerns<br/>Use of IM and IV aloe have been associated with death<br/>Avoid if hx of allergies to any member of Liliaceae family (tulips, lilies, hyacinths, onions, asparagus, and garlic)</p> |
| <p><b>Ashwaganda</b> “withania somnifera”</p>   | <p>Uses: Adaptogen<br/>Anti-arthritis<br/>Anti-aging<br/>Type 2 Diabetes Mellitus<br/>Hyperlipidemia<br/>Parkinson’s disease</p>  | <p>*Do not use in pregnancy: has been used as abortifacient<br/><b>ADRs:</b><br/>↓bp<br/>↓bs<br/>↑WBC↑platelets<br/>↓ testosterone/FSH levels<br/><b>DRUG INTERACTIONS:</b><br/>Alcohol, sedatives, anxiolytics ↑ sedation<br/>Avoid with diuretics-↑effects<br/>Anticoagulants ↑bleeding<br/>Antidiabetic agents ↑hypoglycemia<br/>Antihypertensives ↑hypotension<br/>Thyroid hormones-alter effect</p>  | <p>In capsules, tablets, tea<br/>Tablets are standardized<br/>Dose: 1-6 g in capsule or tea qd<br/>Or 3-12 g in combination with other herbs<br/>Pediatric dosage: (8-12 years only) 2g qd for no &gt;60 days</p>  |

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| <p><b>Asian Ginseng</b><br/>           “Korean ginseng” “Chinese ginseng”<br/>           ♦ Note: Siberian ginseng is not ginseng at all</p> | <p>Uses: adaptogen, stamina, mental and physical performance<br/>           Hepatitis C<br/>           Menopause<br/>           Erectile dysfunction<br/>           Hypertension<br/>           Diabetes mellitus<br/>           Studies: may lower blood glucose; may help immune function<br/>           NCCAM research currently in cancer and Alzheimer’s disease<br/>           ↑T cell and lymphocyte activity<br/>           May inhibit RNA type viruses<br/>           May have antioxidant properties</p> | <p>* Risk allergic reactions<br/>           * Not recommended in pregnancy/lactation due to hormonal and toxic effects, teratogen<br/>           * ↑ risk breast cancer-stimulates breast cancer cells<br/>           * avoid in asthma, arrhythmia, HTN, psychiatric disorder<br/>           * stop pre-operatively due to bleeding effect<br/> <b>ADRs:</b><br/>           H/A<br/>           GI disturbance, appetite changes<br/>           Sleep disturbance<br/>           Arrhythmia<br/>           Anemia<br/>           Stevens-Johnsons Syndrome<br/>           ↑ estrogenic effects<br/>           Menstrual changes, ↑ bleeding<br/>           Mastalgia, breast growth<br/>           Mania in bipolar disorder<br/> <b>DRUG INTERACTIONS:</b><br/>           anticoagulants ↑ bleeding<br/>           antidiabetic agents ↑ or ↓ bs<br/>           antihypertensives-alter effect<br/>           antipsychotics ↑ sedation, ↑ effect<br/>           estrogen ↑ effect<br/>           sedatives ↑ sedation</p> | <p>Root is dried for tablets, capsules, extracts, teas<br/>           Tablet and capsule standardized to 4% ginsenosides (active ingredient)<br/>           Short term use: up to 2 g/day Panax ginseng<br/>           Long-term use: 1 g/day Panax ginseng<br/>           Note: ginseng is added to many commercial beverages currently</p> |

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| <p><b>Panax Ginseng</b> “American ginseng”</p>  | <p>See Asian Ginseng<br/>Uses: ADHD, chronic Hepatitis B, CHF, dementia, CAD, hyperlipidemia, menopausal symptoms, ITP, MRSA, diabetic renal disease</p>   | <p>See above</p>   | <p>See above</p>  |
| <p><b>Astragalus</b> “milk vetch”</p> <ul style="list-style-type: none"> <li>◆ Traditional Chinese Medicine for immunity, cancers, and hepatitis</li> <li>◆ In legume family</li> <li>◆ 300 species grow in North America; some toxic to livestock</li> </ul> | <p>Under study: potential benefits for immune system, liver, heart, and adjunctive cancer therapy</p> <p>2005 Cochrane study: some immune stimulation and ↓N/V in colorectal cancer</p> <p>Antioxidant effects</p> <p>Used in CAD and DM</p> <p>Used in hepatitis, HIV, hepatoprotection</p> <p>Chemotherapy side effects</p> <p>Mental performance</p> <p>Smoking cessation</p> <p>URI, burns</p> | <p><b>*some astragalus species, mostly not found in dietary supplements used, might be toxic. Some species toxic levels of selenium and some contain neurotoxin swainsonine which has caused “loco-weed” poisoning in animals.</b></p> <p>Dietary supplement astragalus is generally considered safe for most adults</p> <p><b>DRUG INTERACTIONS</b></p> <p>may interact with immune suppressants, such as cancer drug cyclophosphamide and organ transplant drugs.</p> <p><b>ADRs:</b></p> <p>↓BS, ↓HR, ↓BS</p> <p>Diarrhea</p> <p><b>Bleeding:</b> interacts with anticoagulants</p> <p>Avoid in pregnancy and lactation</p> <p>Avoid in immune disorders, transplants, bleeding disorders</p> | <p>Root used in teas, soups, capsules, extracts, tincture, IM and IV</p> <p>No specific dosing recommendations</p> <p>Mostly used as dried root; considered non-toxic</p> |

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| <p><b>Bilberry</b> “Huckleberry”<br/>“European blueberry”</p> <ul style="list-style-type: none"> <li>◆ Related to blueberry</li> <li>◆ Berries or dried leaves are medicinal</li> <li>◆ Used for 1000 years in European folk medicines, especially for scurvy and diarrhea</li> </ul> | <p>Contains anthocyanosides (type of flavinoid); ↑ microcirculation, antioxidant; platelet inhibitor, anti-inflammatory, ↓ capillary fragility, preserves endothelium</p> <p>Atherosclerosis</p> <p>Peripheral vascular disease</p> <p>Diabetes mellitus</p> <p>Peptic ulcer disease</p> <p>Diarrhea</p> <p>Cataracts and glaucoma</p> <p>Retinopathy</p> <p>4 studies showed no benefit for night vision</p> <p>1 study showed possible antiproliferative effects on colon cancer cells</p> <p>Not enough scientific evidence for other indications</p> | <p><b>ADR:</b></p> <p>↓BP</p> <p>↓ or ↑ blood sugar</p> <p>Diarrhea, nausea</p> <p>Hepatotoxicity</p> <p>Bleeding</p> <p><b>Drug interactions:</b></p> <p>anticoagulants → ↑ bleeding</p> <p>antidiabetic agents - ↑ ↓ blood sugar</p> <p>antihypertensives → ↓ BP</p> <p>estrogen - may ↓ absorption</p> <p>Avoid in allergy to blueberries or same family of berries</p> <p>Avoid in pregnancy and lactation</p> | <p>In dried leaves, berries, extract, tincture, capsules, tablets</p> <p>No specific dosing recommendations</p> |

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| <p><b>Black Cohosh</b> “black snakeroot”<br/>“bugbane” “bugwort”</p> <ul style="list-style-type: none"> <li>◆ Not same as blue cohosh</li> <li>◆ Contains salicylic acid</li> <li>◆ Member of buttercup family</li> <li>◆ Used in Native American and American folk medicine for menopausal sx, induction of labor, rheumatism</li> </ul> | <p>Menopausal symptoms most traditional</p> <p>Study results mixed on this.</p> <ul style="list-style-type: none"> <li>◆ NCCAM study—failed to relieve night sweats and hot flashes</li> <li>◆ NIH 2008—inadequate support for use</li> <li>◆ German E Commission—approved for menopausal sx, not &gt;6 months</li> <li>◆ North American Menopause Society (2004) recommends</li> <li>◆ Insufficient studies for safety &gt;6 months or for rheumatism</li> </ul> | <p>*United States Pharmacopeia: women should <b>discontinue use of black cohosh and consult a health care practitioner if they have a liver disorder or develop symptoms of liver trouble, such as abdominal pain, dark urine, or jaundice.</b></p> <p>several case reports of hepatitis and liver failure; not known if black cohosh was cause</p> <p>Avoid in pregnancy/lactation; can induce labor</p> <p><b>ADRs:</b></p> <p>Stomach pain, constipation</p> <p>H/A, rash, dizziness</p> <p>Bleeding, bruising</p> <p>↑risk CVA</p> <p>Mastalgia, uterine bleeding</p> <p>↑risk hormone-associated female cancers</p> <p>Hepatotoxicity</p> <p><b>Drug Interactions</b></p> <p>CYP 450 2D6 drugs</p> <p>Anticoagulant drugs ↑ bleeding from salicylate ingredient</p> <p>Antihypertensives-↓ BP</p> <p>Hepatotoxic drugs → liver failure</p> <p>Chemotherapeutic drugs</p> <p>Tamoxifen, antiestrogens, HRT, OCP → estrogenic effect</p> <p>thyroid → hyperthyroidism</p> | <p>Extract from dried rhizome and root</p> <p>In caplets, capsules, powdered root, dried rhizome, tea, tincture</p> <p>OTC: Black Cohosh as Remifemin in dosage 20mg bid</p> <p>Other brands:</p> <p>Menopause Support</p> <p>Estroven (includes other ingredients)</p> |

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| <p>Butterbur "Petadolex"<br/>patented name</p> <ul style="list-style-type: none"> <li>◆ perennial shrub</li> <li>◆ leaf, root and rhizome used for extract</li> </ul> | <p>Asthma<br/>Allergic rhinitis<br/>Migraine prophylaxis<br/>smooth muscle relaxant<br/>leukotriene and COX-2 inhibitor<br/>anticholinergic effect possible<br/>Studies show as much effectiveness as antihistamine for allergies<br/>Some studies show effectiveness for migraine treatment<br/>Conflicting results on asthma</p> | <p><b>DANGER: NATURAL PRODUCT CONTAINS PYRROLIZIDINE ALKALOID(PA'S) →CAUSE LIVER DAMAGE AND RISK CARCINOGENICITY</b></p> <p><b>*Only butterbur products that have been processed to remove PAs and are labeled or certified as PA-free should be used.</b></p> <p>Avoid if allergic to Asteraceae family =ragweed, marigold, daisies, chrysanthemums</p> <p>Avoid in pregnancy/lactation</p> <p><b>ADRs:</b><br/>Belching, abd pain, N/V/D<br/>Depression<br/>Urinary retention<br/>Rash, pruritus<br/>Pruritus eyes, asthma<br/>drowsiness</p> <p><b>Drug Interactions</b><br/>Calcium channel blockers<br/>Anticholinergics ↑ sx<br/>Vasodilators (vasodilates)<br/>Testosterone ↓ it<br/>Chronotropes and isotropes →negative activity</p> | <p>Softgel, powder, tincture, extract, capsule<br/>Extract is standardized<br/>Allergic rhinitis: Petasin (Tesalin) 8mg up to QID<br/>Asthma: Petaforce 50-150mg bid-tid prn<br/>Migraine prevention: Petadolex 50-75mg bid up to 4 months</p> |

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| <p><b>Cat's Claw</b></p> <ul style="list-style-type: none"> <li>◆ Central and South America</li> <li>◆ Dates to use by Incas</li> </ul> | <p>Studies show possible benefit in rheumatoid arthritis and osteoarthritis</p> <p>In vitro study: possible use as antiviral, antitumor agent</p> <p>immunostimulant</p> <p>Anti-inflammatory effect</p> <p>Enhances DNA repair</p> <p>↑ phagocytosis</p> <p>Free radical scavenger</p> <p>Possible research on Alzheimer's disease benefit</p> | <p>* some preparations from Peru may be contaminated with fungus, other herbs, aerobes and be toxic</p> <p>ADRs:</p> <p>Sedation</p> <p>↓BP</p> <p>↓estradiol and progesterone</p> <p>One report renal failure in SLE patient</p> <p>Avoid in pregnancy/lactation; traditional use as abortifacient</p> <p>Avoid with hx autoimmune disease, hypotension, renal transplant; renal disease, immunosuppression, bleeding disorders</p> <p><b>DRUG INTERACTIONS:</b></p> <p>CYP 3A4 ↑ levels</p> <p>antihypertensives ↓BP</p> <p>antiarrhythmics: ↑ arrhythmias</p> <p>anticoagulants: ↑bleeding risk</p> <p>calcium channel blockers: ↑ effect</p> <p>immunosuppressants: ↓ levels</p> <p>nephrotoxic drugs: →renal failure</p> <p>iron: ↓ absorption</p> | <p>Capsule, tablet, tincture, tea, bark/leaves/roots in dried, cut or powdered forms</p> <p>General use: 250-1000mg 1-3 x/day</p> <p>Freeze dried extract: 100mg/day</p> <p>Other forms available</p> |



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| <p><b>Chamomile</b></p> <ul style="list-style-type: none"> <li>German chamomile is more common for supplements</li> </ul> | <p>Studies:</p> <ul style="list-style-type: none"> <li>indicate some benefit for generalized anxiety disorder</li> <li>benefit for infant colic, children's diarrhea, GI upset</li> <li>benefit for mouth ulcers in radiation or chemotherapy</li> </ul> <p>Common uses for radiation skin issues, wound healing, anxiety</p> <p>Anti-inflammatory and anti-spasmodic effects</p> <p>Sedative effects may be from binding to benzodiazepine receptors</p> | <ul style="list-style-type: none"> <li>*Avoid in allergies to daisy family: ragweed, chrysanthemums, marigolds, and daisies: risk of anaphylaxis or other allergic reaction</li> <li>*avoid with allergies to onions, garlic, and artemisia</li> <li>*avoid taking with alcohol</li> </ul> <p><b>ADRs:</b></p> <p>Sedation</p> <p>↓BP, BS, ↑heart rate</p> <p>Vomiting</p> <p>Asthma</p> <p>Alter menses</p> <p>↑ bleeding risk</p> <p><b>DRUG INTERACTIONS:</b></p> <p>CYP450 interactions</p> <p>CNS depressants: ↑sedation</p> <p>Warfarin: ↑INR</p> <p>Antidiabetic agents: ↓ BS</p> <p>Anticoagulants: ↑bleeding risk</p> <p>Antiarrhythmics: ↑ heart rate</p> | <p>Flowers used to make tablets, extract, tea, creams, mouth rinse, bath additives</p> <p>Tea: up to 8g dried flowers</p> <p>Capsules: up to 1600 mg/day</p> <p>Cream: 2%-10% chamomile extract</p> |

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| <p><b>Dandelion</b></p> <ul style="list-style-type: none"> <li>♦ used in Native American and Arabic medicine</li> </ul>           | <p>Uses: liver or kidney tonics<br/>Diuretics<br/>GI disturbances<br/>High Vitamin A content and high potassium content in dried herb<br/>Studies: no scientific evidence for medical conditions<br/>May have diuretic and immunomodulating effects<br/>May have antioxidant effects</p> | <p>*some allergies/anaphylaxis to dandelions<br/>*some reports of GI upset with use<br/>*do not use with gallbladder disease as ↑bile secretion</p> <p><b>ADRs:</b><br/>Asthma exacerbation<br/>↓ platelets<br/>↑ potassium<br/>V tach, V fib<br/>↓ bs</p> <p>Alters estrogen, progesterone, FSH</p> <p><b>DRUG INTERACTIONS:</b><br/>Antidiabetic agents, estrogens (↑effect), diuretics (↑effect), niacin (↑effect); antiarrhythmics ↑ arrhythmia</p> | <p>Leaves and roots or whole plant, used fresh or dried in teas, capsules, or extracts.<br/>Dandelion leaves used in salads or as cooked green<br/>Flowers used for wine</p> |
| <p><b>Dong Quai</b></p> <ul style="list-style-type: none"> <li>♦ from <i>Angelica sinensis</i> plant<br/>Dysmenorrheal</li> </ul> | <p>Menopausal symptoms<br/>Menstrual H/A<br/>Possible anti-inflammatory, antioxidant effects<br/>Possible antispasmodic, GI stimulant effects<br/>Possible antiplatelet effect (coumarin derivative)<br/>Antiarrhythmic effect</p>   | <p>*avoid in pregnancy/lactation; can cause uterine contractions and congenital malformations<br/>*avoid in bleeding disorders, do not use with anticoagulants<br/>*possible carcinogenic potential</p> <p><b>ADRs:</b><br/>Sedation<br/>↓ bp<br/>GI symptoms<br/>Bleeding</p> <p><b>DRUG INTERACTIONS:</b><br/>Anticoagulants<br/>Hormonal medications<br/>antihypertensives</p>   | <p>Root used for capsule or tablets<br/>Medicinal use safety is unclear</p>  |

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| <p>Echinacea<br/>"purple coneflower"</p>        | <p>Immune-stimulant<br/>Used for URIs and other infections, including wounds<br/>Studies: conflicting studies on usefulness for treating URIs, some positive<br/>NCCAM studying usefulness for immunity<br/>German E commission approved for treatment of colds, chronic respiratory and GU tract infections<br/>Used for genital herpes<br/>May have anti-inflammatory, antifungal, and free radical scavenger effects<br/>May be immune suppressant or immune stimulant</p> | <p>*Potential anaphylactic or allergic reactions, asthma, especially with allergy to daisy family: marigolds, chrysanthemums, daisies, ragweed.<br/>*Allergies more common in those who are atopic, with eczema or asthma<br/>*Avoid in people needing immunosuppression<br/>*Avoid in pregnancy/lactation<br/>*Discontinue before surgery or may affect wound healing and infection rate<br/>*Avoid in autoimmune disease, collagen vascular disease, HIV, liver disease, MS, TB<br/><b>ADRs:</b><br/>Rashes<br/>GI side effects<br/>Dizziness, nervousness, H/A<br/>Atrial fibrillation, palpitations<br/>HTN<br/>Asthma exacerbation<br/>May aggravate autoimmune disease or increase immune response<br/><b>DRUG INTERACTIONS:</b><br/>Amoxicillin: rhabdomyolysis, death<br/>Anticoagulants: ↑bleeding<br/>Corticosteroids: ↓immunosuppressive effect<br/>Statins, acetaminophen: ↑risk hepatotoxicity</p> | <p>Plant and roots used to make juice (expressed), teas, extracts, other forms.<br/>Dose: URI 500-1000mg tid<br/>Dose: pediatric dosing usually weight-based, see other sources</p> |

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| <p><b>Ephedra</b> “ma huang”</p> <ul style="list-style-type: none"> <li>◆ evergreen shrub that has been used 5000 years in India and China</li> <li>◆ powerful stimulant of nervous system and heart used to treat respiratory conditions, flu, asthma, fever</li> </ul> | <p>Uses:</p> <p>Weight loss</p> <p>Energy supplement</p> <p>Athletic performance</p> <p>Amphetamine-like; primary component is ephedrine</p> <p>Studies: higher rate of calls to poison control centers about severe side effects</p> <p>Studies: ↑risk stroke, HTN, cardiac problems, GI side effects</p> <p>Risks of benefit for short term weight loss is outweighed by risks</p> | <p>*US banned sale of dietary supplements with ephedra in 2004</p> <p>*reports of stroke, MI, sudden death</p> <p>*can worsen diabetes, CVD, renal disease</p> <p>*can cause seizures</p> <p>*Do not use in pregnancy/lactation</p> <p><b>ADRs:</b></p> <p>Anxiety, psychosis, tremors</p> <p>Dry mouth, GI irritation, nausea</p> <p>HTN, arrhythmia, heart damage</p> <p>Urinary obstruction</p> <p>Sleep problems</p> <p><b>DRUG INTERACTIONS:</b></p> <p>Anesthetics-alter effect, ↑ bp</p> <p>ETOH-psychosis with caffeine</p> <p>Caffeine- ↑ toxicity</p> <p>Antidiabetic agents ↓ effect</p> <p>anticonvulsants ↓ effect</p> <p>ergot alkaloids ↑ hypertensive crisis</p> <p>phenothiazines ↑ arrhythmia, death</p> | <p>Dried stems and leaves make tablets, tinctures, capsules, teas</p> <p>Ephedra still allowed in Chinese herbal remedies and teas</p> |

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| <p><b>Evening Primrose Oil (EPO)</b><br/>Yellow flower:</p> <ul style="list-style-type: none"> <li>contains gamma-linolenic acid (GLA), essential fatty acid, required by the body and obtained from the diet.</li> </ul> | <p>Uses: eczema, inflammation<br/>Mastalgia, PMS<br/>Menopause symptoms<br/>Cancer<br/>Diabetes mellitus</p> <p>Studies: show some benefit for rheumatoid arthritis, eczema, PMS, mastalgia<br/>May have anti-inflammatory, vasodilatory, and anti-platelet effects</p> | <p>*Not for pregnancy/lactation: ↑ risk complications, rupture of membranes</p> <p><b>ADRs:</b><br/>GI upset<br/>H/A<br/>Rash<br/>Depression<br/>Seizures in pts without seizure risk</p> <p><b>DRUG INTERACTIONS:</b><br/>Anesthesia: ↓ seizure threshold<br/>Anticoagulants: ↑ bleeding risk<br/>Antihypertensives: ↓ bp<br/>TCAs: ↓ seizure threshold<br/>Antiseizure agents: ↑ risk seizures</p> | <p>Oil extracted from seeds and put in capsules<br/>Products standardized for 8% GLA and 72% linoleic acid</p>      |
| <p><b>Fenugreek</b></p> <ul style="list-style-type: none"> <li>used back to Egyptian times</li> <li>Used to induce childbirth</li> <li>Used to help digestion and menopause symptoms</li> </ul>                           | <p>Used in cooking<br/>Used for diabetes mellitus<br/>Hyperlipidemia<br/>Loss of appetite<br/>Stimulates milk production</p>  | <p>* Avoid in pregnancy</p> <p><b>ADRs:</b><br/>Bloating, flatulence, diarrhea<br/>Hypoglycemia<br/>Hypokalemia<br/>Miscarriage</p> <p><b>DRUG INTERACTIONS:</b><br/>Alcohol- ↓ hepatotoxicity<br/>Analgesics-additive effects<br/>Anticoagulants- ↑ bleeding risk<br/>Antidiabetic agents- ↑ hypoglycemia</p>   | <p>Seeds are ground and taken orally or put in paste for skin<br/>Dose: 25 g seed powder daily in divided doses</p> |

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| <p>Feverfew “bachelor’s buttons”<br/>“wild chamomile”</p> <ul style="list-style-type: none"> <li>♦ Used as antipyretic by ancient Greeks</li> </ul> | <p>Migraine headaches<br/>Psoriasis<br/>Asthma<br/>Tinnitus<br/>N/V<br/>Studies:<br/>Suggest may help prevent (not acutely treat) migraine headaches and rheumatoid arthritis pain</p>  | <p>*Allergic risk with ragweed, chrysanthemum allergies<br/>*Not for use in pregnancy/lactation, can cause miscarriage, premature birth<br/>* Avoid in children<br/>* Avoid prior to surgery or dental procedures</p> <p><b>ADRs:</b><br/>Canker sores, sore tongue<br/>Loss of appetite<br/>Nausea/GI symptoms<br/>Risk worsened depression<br/>Dizziness, fatigue, anxiety<br/>Palpitations, ↑ heart rate</p> <p><b>DRUG INTERACTIONS:</b><br/>Anticoagulants: ↑ bleeding risk<br/>Vasodilators: ↑ vasodilatation</p>  | <p>Dried leaves primarily used<br/>Stems and roots some-<br/>times used<br/>Extracts, tablets, capsules<br/>Standardized dose: up to<br/>250mg daily<br/>Take with food</p>                                       |
| <p><b>Garlic</b></p> <ul style="list-style-type: none"> <li>♦ edible herb from Lily family</li> </ul>   | <p>Uses: hyperlipidemia<br/>CAD, HTN<br/>Colon and gastric cancer<br/>URI prevention<br/>PVD<br/>Studies: on lowering cholesterol, had varying benefit<br/>Studies: positive for decreasing BP and decreasing atherosclerosis<br/>Study: shows affects dilation and constriction of blood vessels</p> | <p>* safe for most adults<br/>* does have blood-thinning effect; stop pre-operatively<br/>* mild risk allergy, mostly raw form; cross-allergies with onions, leeks, chives</p> <p><b>ADRs:</b><br/>Raw: halitosis, GI upset, body odor<br/>Contact dermatitis, blisters<br/>Bleeding<br/>Asthma, rhinitis</p> <p><b>DRUG INTERACTIONS:</b><br/>Anticoagulants ↑ bleeding<br/>Antihypertensives ↓ bp<br/>Antidiabetic agents ↓ or ↑ bs<br/>Anesthetics prolong effect<br/>Acetaminophen-alters effect<br/>Protease inhibitors ↓ effect<br/>OCP with estrogen ↓ effect</p> | <p>Raw, cooked, dried,<br/>powdered<br/>Dose: 600-900 mg garlic powder (in standardized 1.3% allicin active ingredi-ent) daily in divided doses<br/>Or 3-5mg allicin daily (equivalent to 2-5 g fresh garlic)</p> |

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| <p><b>Ginger</b></p> <ul style="list-style-type: none"> <li>♦ tropical plant often used in Asian medicine</li> </ul> | <p>Uses: post-surgical and motion nausea<br/>GI upset<br/>Chemotherapy nausea<br/>Pregnancy nausea (hyperemesis gravidarum)<br/>Arthritis pain, muscle pain<br/>Studies: short-term effectiveness in pregnancy nausea, variable effectiveness in other forms nausea<br/>Studies: on inflammation ongoing<br/>May inhibit serotonin 5-HT<sub>3</sub> receptors in GI tract<br/>May inhibit platelet aggregation<br/>May have lipid-lowering, antihypertensive effect</p> | <p>*Avoid in lactation/safety not established<br/>*Avoid peri-operatively due to bleeding risk<br/>*Avoid in CAD, arrhythmia history<br/><b>ADRs:</b><br/>Mostly with powdered ginger: bloating, gas, heartburn, nausea<br/>Depression<br/>Arrhythmias<br/>↑ bleeding risk<br/><b>DRUG INTERACTIONS:</b><br/>Calcium channel blockers ↓ bp<br/>Antidiabetic agents ↓ bs<br/>Cardiac agents-may alter effect<br/>anticoagulants ↑ bleeding risk<br/>antiarrhythmics ↑ risk</p> | <p>Fresh, powder, tablets<br/>Dose: up to 4 g/day in divided doses</p> |

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| <p><b>Ginkgo</b> "Japanese silver apricot"<br/>"fossil tree"</p> <ul style="list-style-type: none"> <li>◆ seeds of Ginkgo tree used for thousands of years in Traditional Chinese Medicine</li> </ul> | <p>Uses: memory enhancement<br/>Prevention Alzheimer's disease and dementias<br/>Ischemic stroke<br/>Decrease intermittent claudication<br/>MS<br/>Tinnitus<br/>Sexual dysfunction<br/>Studies: most studies show no improvement for memory or prevention of dementia or decreasing BP<br/>Studies: minimal benefit possible for intermittent claudication and tinnitus (variable); being studied for electric shock memory loss</p> | <p>*Possible severe allergic reactions<br/>*Avoid pre-operatively or before dental procedures, increased bleeding risk<br/>*<b>No raw ginkgo seeds, contain toxin that can cause seizures and death</b><br/><b>ADRs:</b><br/>H/A, dizziness<br/>GI symptoms<br/>↑bleeding risk<br/><b>DRUG INTERACTIONS</b><br/>Antidiabetic agents: ↑bs<br/>Anticoagulants ↑bleeding<br/>Anticonvulsants ↓effect<br/>Antihypertensives ↓bp<br/>Antipsychotics can cause priapism<br/>Estrogens may have estrogenic effect<br/>Nifedipine ↑concentrations<br/>Prlolsec ↓levels<br/>SSRIs ↑ serotonin syndrome<br/>Trazadone risk coma</p> | <p>Ginkgo leaf abstracts used in tablets, capsules, teas and skin preparations<br/>Also in nutrition bars, sublingual spray<br/>Standardized extracts<br/>Dose: 80-240mg/day divided in bid-tid</p> |



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| <p><b>Goldenseal</b> “yellow root”</p> <ul style="list-style-type: none"> <li>◆ Native American remedy</li> <li>◆ Now grown commercially due to short supplies</li> </ul> | <p>URI's<br/>Digestive disorders, diarrhea<br/>Some cancers<br/>Vaginitis<br/>Wounds<br/>Canker sores<br/>Chloroquine resistant malaria<br/>Hyperlipidemia<br/>Stimulates immune system<br/>Studies: show some antibacterial effect and lipid-lowering effect;<br/>Studies: possible benefit for diarrhea and eye infections</p> | <p>*Avoid in pregnancy/lactation; contains berberine which can cause jaundice<br/>*Not for infants or young children<br/><b>ADRs:</b><br/>Arrhythmias, Bradycardia<br/>H/A, ↓BP<br/>↓blood sugar<br/>GI irritation, nausea<br/>Dry mucous membranes<br/>Seizures<br/><b>DRUG INTERACTIONS:</b><br/>Antiplatelet agents<br/>Antilipemic agents ↑effect<br/>Antimalarials-additive effects<br/>Beta blockers-changes effect<br/>Phenylephrine- ↑effects<br/>Warfarin- ↓effects</p> | <p>Stems and roots dried for extracts and teas<br/>Mouth rinses<br/>Sometimes combined with Echinacea for URIs<br/>Tablets/capsules<br/>0.5-1g po tid<br/>Extract: 0.3ml-1ml<br/>Also IV and ophthalmic forms</p> |
| <p><b>Hoodia</b> “kalahari cactus”</p> <ul style="list-style-type: none"> <li>◆ Kalahari bushmen ate this to suppress hunger and thirst while hunting</li> </ul>          | <p>Appetite suppressant (weight loss) while elevating energy<br/>Studies: none published</p>   | <p>Drug risks, interactions, adverse effects have not been studied<br/>Avoid in pregnancy</p>  | <p>Often combined with green tea or chromium<br/>Dried extracts from stems and roots make capsules, extracts, powders, teas, chewable tablets<br/>Dose: Dried extract up to 800mg/day</p>                         |

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| <p><b>Horse Chestnut</b> “buckeye”</p> <ul style="list-style-type: none"> <li>◆ Only seed extract is safe</li> <li>◆ Do not use any other parts of plant, which may be toxic</li> </ul> | <p>Used for chronic venous insufficiency<br/>Used for ankle edema,<br/>night leg cramps<br/>Studies show it is as effective for<br/>venous insufficiency as supportive<br/>compression stockings</p>  | <p>*Contraindicated in hepatic and renal impairment;<br/>inflammatory bowel disease<br/>*Contraindicated in latex allergy<br/>Avoid in pregnancy/lactation<br/><b>ADRs:</b> calf spasm<br/>GI upset<br/>Bleeding<br/>Renal/liver damage<br/><b>DRUG INTERACTIONS:</b><br/>anticoagulants ↑bleeding<br/>antidiabetic agents ↑hypoglycemia<br/>antihypertensive ↑ hypotension</p>   | <p>Dose: 300 mg extract bid<br/>Topical gel 3-4 x/day<br/>Use for short term only<br/>Standardized for<br/>15-20% escin</p> |
| <p><b>Kava</b> “kava kava”</p> <ul style="list-style-type: none"> <li>◆ Member of pepper family</li> <li>◆ Ceremonial beverage in South Pacific</li> </ul>                              | <p>Uses: anxiety<br/>Insomnia<br/>Menopausal symptoms<br/>NCCAM studies halted due to risk<br/>of severe liver damage<br/>Earlier studies showed some benefit<br/>with anxiety, but dangers<br/>outweigh risks<br/>May impact cerebellar and<br/>GABA functions</p> | <p>*<b>Risk of severe liver damage, including liver failure and hepatitis</b><br/>*<b>Risk dystonia (abnormal muscle movements)</b><br/><b>ADRs:</b><br/>Drowsiness<br/>Ataxia<br/>Dizziness, dyskinesia<br/>H/A<br/>Tachycardia<br/>Contact dermatitis, kava dermatopathy (rash from long-term with yellow discoloration)<br/>GI upset, ↑transaminases<br/>Parkinsonism<br/><b>DRUG INTERACTIONS:</b><br/>Acetaminophen ↑liver toxicity<br/>Psychotropics-altered mental status<br/>ETOH ↑toxicity<br/>Anxiolytics ↑effect<br/>Sedatives ↑effect<br/>Opioids ↑sedation, CNS depression</p> | <p>Root and rhizome make<br/>beverages, capsules,<br/>tablets, extracts,<br/>topical solutions</p>                          |

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| Lavender “English lavender”  | <p>Uses: anxiety, depression</p> <p>Insomnia</p> <p>GI upset</p> <p>Alopecia</p> <p>Topical antiseptic aromatherapy</p> <p>Studies: do not confirm any benefits for certain except for alopecia used topically</p> | <p>*Avoid in pregnancy/lactation</p> <p><b>ADRs:</b></p> <p>H/A, photosensitivity</p> <p>GI symptoms</p> <p>Skin pigment changes</p> <p><b>DRUG INTERACTIONS</b></p> <p>Anxiolytics ↑side effect</p> <p>Sedatives ↑ side effect</p> <p>Antidepressants ↑ side effect</p>  | <p>Dried lavender teas or extracts can be taken orally</p> <p>Essential oils can be made from flowers and used topically and in aromatherapy; poisonous if taken internally</p> |
| <p><b>Licorice Root</b></p> <ul style="list-style-type: none"> <li>◆ Glycyrrhizin is most dangerous compound</li> <li>◆ Declycyrhizinated form “DGL” is safer</li> </ul> | <p>Uses: stomach ulcer, hepatitis</p> <p>Sore throat, bronchitis</p> <p>Studies: none show significant effectiveness except IV form for Hepatitis C, not available in US</p>                                       | <p>*glycyrrhizin can → low potassium, high blood pressure, salt and water retention, all risks for CVD: <b>AVOID</b></p> <p>*high levels of licorice affect cortisone</p> <p>*Not for pregnancy—can cause preterm labor</p> <p>*Not for hypertension or CAD</p> <p><b>ADRs:</b></p> <p><b>DRUG INTERACTIONS:</b></p> <p>Avoid with medications that affect potassium, diuretics, prednisone</p> <p>Antiarrhythmics- ↑ risk</p> <p>Anticoagulants ↑bleeding</p> <p>Immunosuppressants ↓effect</p> <p>Antidiabetics alter effect</p> <p>Antihypertensives ↓effect</p> | <p>Use DGL form instead—much safer</p>  |

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| <p><b>Milk Thistle</b> “holy thistle”,<br/>“silymarin”</p> <ul style="list-style-type: none"> <li>♦ Used for thousands of years for liver assistance</li> </ul> | <p>Uses: chronic hepatitis<br/>Cirrhosis<br/>Liver damage from drugs and toxins; alcoholic liver disease<br/>Hyperlipidemia<br/>Decrease insulin resistance if have DM and cirrhosis<br/>Anti-breast, cervical, prostate cancer<br/>Studies: prior studies showed benefit protecting and promoting growth of liver cells; later studies conflicting results<br/>Study: benefit in Hepatitis C showed fewer, milder liver disease symptoms but no affect on amount of viral load</p> | <p>*Avoid in allergies in daisy family: ragweed, chrysanthemums, daisies, marigold.<br/>*Not recommended in pregnancy/lactation</p> <p><b>ADRs:</b><br/>↓bs<br/>GI side effects<br/>H/A, insomnia<br/>Exacerbates hemochomatosis arthralgia</p> <p><b>DRUG INTERACTIONS</b><br/>Alcohol ↓alcohol-induced hepatotoxicity<br/>Statins-inhibits effects<br/>Antineoplastic drugs ↑effects<br/>Antidiabetic agents ↓bs</p> | <p>Silymarin, active ingredient, from seeds used to make tinctures, capsules, extracts<br/>Generally considered safe<br/>Dose: 230-800mg/day divided in 2-3 doses</p> |
| <p><b>Noni</b> “Indian mulberry”</p> <ul style="list-style-type: none"> <li>♦ History of topical use for joint pain and dermatological issues</li> </ul>        | <p>Used in juice as health tonic<br/>Used for chronic conditions e.g. diabetes, cardiovascular disease<br/>Used for cancer, hearing loss<br/>Studies: early studies show anti-cancer effect, antioxidant, and immune-stimulating effects<br/>NCCAM study-on prostate cancer<br/>NCI study-on breast cancer prevention</p>   | <p>*Risk of liver toxicity<br/>*High in potassium-avoid in renal disease<br/>*Not for use in pregnancy (has been traditional abortifacient)</p> <p><b>ADRs:</b><br/>↓bp</p> <p><b>DRUG INTERACTIONS:</b><br/>Anticoagulants-contains Vitamin K in some, not all preparations<br/>ACE inhibitors ↑potassium<br/>Numerous others that affect potassium</p>   | <p>Fruit used in fruit juices, mostly with grape<br/>Fruit and leaves can make tablets, capsules, teas<br/>Dose: up to 2 oz twice daily x 3 months</p>                |

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| <p><b>Peppermint Oil</b></p> <ul style="list-style-type: none"> <li>◆ Cross between spearmint and watermint</li> </ul>  | <p>Seasoning and medicinal<br/>Nausea, GI upset, indigestion<br/>IBS<br/>URI, H/A<br/>asthma<br/>Muscular, antispasmodic or nerve pain<br/>Halitosis<br/>Nasal congestion<br/>Studies: peppermint may help IBS<br/>Studies: peppermint with caraway might help indigestion</p>                          | <p>*Oil is safe in small doses<br/>*Not for pregnancy/lactation<br/><b>ADRs:</b><br/>Heartburn<br/>Abdominal pain<br/>Acute renal failure<br/>Contact dermatitis<br/>Burning mouth syndrome<br/><b>DRUG INTERACTIONS:</b><br/>Antacids/H2 blockers/PPIs—may prematurely dissolve enteric coating<br/>CYP450 interactions possible</p>             | <p>Essential oil of peppermint<br/>In small doses in capsules or liquids<br/>In teas<br/>Mixed with other ingredients in topical preparations<br/>Dosing:<br/>PO digestive: 0.2-0.4 ml tid (average qd is 6-12 gtts)<br/>Capsules: 1-2 caps po tid ½ hour ac.<br/>Teas with dried leaves<br/>Topical preparations</p> |
| <p><b>Red Clover</b><br/>“meadow clover”</p> <ul style="list-style-type: none"> <li>◆ Legume family</li> <li>◆ Contains phytoestrogens which act like estrogen</li> <li>◆ Past use pertussis, asthma, bronchitis, cancer</li> </ul> | <p>Used for menopausal symptoms<br/>Mastalgia<br/>Osteoporosis<br/>Benign prostatic hypertrophy<br/>Hyperlipidemia<br/>Studies: not enough evidence for effectiveness or safety in menopause<br/>Studies: NCCAM studying how it affects prostate cells<br/>Study: if causes endometrial cancer risk</p> | <p>*Pregnancy/lactation: unsafe in medicinal amounts<br/>*may increase risk of breast cancer or other hormone-sensitive cancers<br/><b>ADRs:</b><br/>Mastalgia<br/>Menstrual changes<br/>Vaginal spotting<br/>H/A, rash<br/><b>DRUG INTERACTIONS:</b><br/>anticoagulants ↑ bleeding<br/>Tamoxifen-altered effect<br/>Estrogens-altered effect</p> | <p>Flowers used in tablets, capsules, teas, extracts<br/>Dose: 40-80mg red clover isoflavones/day</p>   |

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| <p><b>Rhodiola</b></p> <ul style="list-style-type: none"> <li>◆ considered adaptogen</li> </ul>  | <p>Used for energy and exercise enhancement</p> <p>Fatigue</p> <p>generalized anxiety disorder</p> <p>bladder cancer</p> <p>hypoxia</p>  | <p>Avoid in pregnancy/lactation</p> <p><b>ADRs:</b></p> <p>Insomnia</p> <p>↑ BP</p> <p>Dermatitis</p> <p>Irritability</p> <p>Dry mouth</p> <p>Leukocytosis</p> <p><b>DRUG INTERACTIONS:</b></p> <p>Antidepressants—additive effects</p> <p>Anxiolytics—additive effects</p> <p>CNS depressants—additive effects</p> <p>Opioids—additive effects</p> <p>Antihypertensives—additive effects</p>   | <p>Capsules: 100-4g daily</p>   |
| <p><b>Sage</b></p> <ul style="list-style-type: none"> <li>◆ Fertility drug in ancient Egypt</li> <li>◆ Cleansed and stopped bleeding in ulcers/wounds in ancient Greece</li> </ul> | <p>Spice and seasoning</p> <p>Used for mouth inflammation and sore throats</p> <p>Used for indigestion</p> <p>Used for menopausal symptoms</p> <p>Used to improve mood and boost memory/performance</p> <p>Studies: show mental and mood improvements; memory boosting in older adults</p> <p>Studies: show thinking/learning improvement in Alzheimer's disease</p> <p>Studies: show essential oil has antimicrobial properties</p> | <p>* safe, but some varieties contain THUJONE which can affect nervous system, causing restlessness, tremor, seizures, renal toxicity</p> <p>Ingesting sage powder can cause asthma</p> <p>Inflammation with skin contact</p> <p>* Avoid in pregnancy-risk abortifacient and hormonal effects</p> <p>* Contraindicated in seizure disorders</p> <p><b>ADRs:</b></p> <p>Seizures</p> <p>Contact dermatitis</p> <p>Hypertension</p> <p>Sedation</p> <p><b>DRUG INTERACTION:</b></p> <p>Antidiabetic drugs ↑ hypoglycemia</p> <p>Anticonvulsants-altered effects</p> <p>Thyroid hormones-altered effects</p> | <p>Dried leaves, essential oils, sprays, extracts</p> <p>Menopausal sx: 120mg qd</p> <p>Pharyngitis: 15% spray</p> <p>Mood enhancement: dried leaf, 300-600mg qd</p> <p>Alzheimer's: essential oils</p> |

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| <p>Saw Palmetto “dwarf palm”<br/>native to US<br/>“cabbage palm”</p> <ul style="list-style-type: none"> <li>◆ Seminole Native Americans used for urinary symptoms</li> </ul> | <p>Uses: prostate (BPH) problems<br/>prostatitis<br/>Pelvic pain<br/>Bladder problems<br/>Prostate cancer<br/>Libido issues<br/>Alopecia<br/>Increases testosterone<br/>May be anti-inflammatory and immune stimulant<br/>Studies: conflicting reports of benefits on BPH symptoms<br/>Does not affect PSA on studies<br/>Being studied for affect on prostate cancer<br/>German E Commission approves for BPH early stages I and II</p> | <p>*Mild GI symptoms can be ↓ by taking with food<br/>*Do not use in pregnancy/lactation due to hormonal effects</p> <p><b>ADRs</b><br/>Abdominal pain<br/>Diarrhea<br/>N/V<br/>Fatigue<br/>Sexual dysfunction</p> <p><b>DRUG INTERACTIONS:</b><br/>Antibiotics (Cipro, Azithromycin especially)—additive effects<br/>Androgens—↓ effect<br/>Anticoagulants—↑bleeding<br/>Anti-inflammatories—additive effects</p> | <p>Whole or ground berries or dried fruit.<br/>In liquid extracts, tablets, capsules, as infusion or tea, topical for alopecia<br/>Dose of capsule: 320mg qd<br/>Ground, whole or dried berries—1 or 2 qd</p> |

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| <p><b>SAMe</b><br/><i>S-adenosylmethionine</i><br/>Methionine is converted to SAMe with enzyme methionine adenosyl transferase (MAT)</p> | <p>Alcoholic liver disease → liver disease has ↓ hepatic SAMe which ↓ glutathione needed for hepatic detoxification and prevention of oxidative liver damage</p> <p>Depression</p> <p>Osteoarthritis</p> <p>ADHD</p> <p>Fibromyalgia</p> <p>Analgesic, anti-inflammatory</p> <p>SAMe transmethylation necessary to synthesize and metabolize neurotransmitters, proteins, hormones, and membrane phospholipids</p> <p>Production of SAMe associated with adequate B12 and folate levels</p> <p>SAMe converted to S-adenosyl-homocysteine which → glutathione liver antioxidant</p> <p>Can ↑ dopamine and norepinephrine</p> <p>2006 Cochrane: no evidence for or against use in alcoholic liver disease</p> <p>2008 Cochrane: review on OA use pending</p> | <p>Avoid in pregnancy and lactation</p> <p><b>ADRs:</b></p> <p>Dizziness, H/A, palpitations</p> <p>Diaphoresis, rash, itchy or hot ear</p> <p>Anxiety, insomnia, fatigue</p> <p>Anorexia, constipation, N/V/D, dry mouth</p> <p><b>AVOID IN BIPOLAR DISEASE → MANIA OR HYPOMANIA</b></p> <p><b>AVOID IN CAD, THROMBOEMBOLISM, RISK HOMOCYSTEINEMIA</b></p> <p><b>MAY WORSEN PARKINSONS SX</b></p> <p><b>DRUG INTERACTIONS:</b></p> <p>Serotonergic/SSRI → serotonin syndrome</p> <p>St. John's Wort → serotonin syndrome</p> <p>Tricyclic antidepressants → serotonin syndrome</p> <p>Tramadol → serotonin syndrome</p> <p>MAOI → serotonin syndrome, hypertensive crisis</p> <p>Dextromethorphan → serotonin syndrome</p> <p>Meperidine → serotonin syndrome</p> <p>Levodopa ↓ effect</p> | <p>Tablet only in US</p> <p>Poor bioavailability due to first pass effect</p> <p>Dose: 800-1600 mg/day in 2-3 divided doses</p> <p>Monitor glucose, LFTs</p> |



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| <p><b>St. John's Wort</b> "hypericum"<br/>"goat's weed"</p> <ul style="list-style-type: none"> <li>◆ Flower blooms around feast time of St. John the Baptist in late June.</li> <li>◆ used for centuries to treat mental disease, nervousness, as sedative</li> <li>◆ used to treat malaria, and was balm for wounds, burns, and insect bites.</li> </ul> | <p>Used for depression, anxiety and sleep disorders</p> <p>Used for PMS, seasonal affective disorder, somatoform disorders.</p> <p>Used for ADHD, burning mouth syndrome, OCD.</p> <p>Studies show: there may not be any more effectiveness than placebo for major depression of moderate severity</p> <p>Another study NCCAM and NIMH showed neither antidepressant nor St. John's Wort treated mild depression any more effectively than placebo</p> <p>Cochrane review 2008: better than placebo and similar to standard antidepressants with fewer side effects</p> <p>Hyperforin component inhibits neuronal uptake of dopamine, serotonin, norepinephrine, GABA and L-glutamate</p> | <p>*Avoid use with other antidepressants; can lead to serotonin syndrome. Do not use with MAOIs.</p> <p>*STOP 5-14 days pre-operatively</p> <p>*Do not use with suicidal ideation</p> <p>*Do not use in pregnancy/lactation</p> <p><b>ADRs:</b></p> <p>Drowsiness</p> <p>GI symptoms</p> <p>Hypertension/hypertensive crisis (could act like MAOI)</p> <p>Mania</p> <p>Serotonin syndrome</p> <p>Delirium</p> <p>Confusion</p> <p>psychosis</p> <p>MI</p> <p>Palpitations</p> <p>↑TSH</p> <p>↑ACTH</p> <p>Photosensitivity</p> <p>Dry mouth</p> <p>dizziness</p> | <p>Flowering tops used for teas, tablets, capsule, extracts, liquids, topical agents</p> <p>Standardized extract dose: 300 mg po tid for 4-6 weeks</p> <p>Sudden discontinuation may cause adverse reaction</p> |

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| <p><b>St. John's Wort</b> (<i>continued</i>)</p>   |  | <p><b>DRUG INTERACTIONS:</b><br/>           Anesthetics<br/>           SSRI antidepressants-serotonin syndrome<br/>           Anticancer drugs<br/>           anticoagulants ↓ effect<br/>           antihypertensives ↑ bp<br/>           alcohol-↑ sedation \ oral contraceptives-<br/>           ↓ contraception, possibly break-through bleeding<br/>           Cyclosporin and transplant drugs ↓<br/>           Digoxin- ↓ serum level<br/>           Statins- ↓ level<br/>           HIV drugs-may affect<br/>           Seizure drugs-may affect<br/>           OTC cold/flu meds—may ↑ MAO inhibition</p> |  |
| <p><b>Tea Tree Oil</b><br/>           ♦ Used by Australian aborigines for centuries<br/>           ♦ From tea tree</p> | <p>Uses: athlete's foot (tinea pedis), nail fungus (onychomycosis)<br/>           wounds, and infections<br/>           acne<br/>           dandruff<br/>           lice<br/>           oral candidiasis<br/>           skin lesions<br/>           antibacterial; antifungal; anti-MRSA<br/>           Study: showed benefit for treatment of wounds of MRSA<br/>           Studies: have shown some positive benefit for acne, onychomycosis, tinea pedis and dandruff</p> | <p>*Do not take orally; poisonous, can lead to coma, especially in children<br/>           *Can be topical irritant or cause contact dermatitis<br/>           *Can be used topically in pregnancy according to Ulbright<br/> <b>ADRs:</b><br/>           Contact dermatitis<br/>           Skin dryness<br/>           Ototoxicity if instilled in ear<br/> <b>DRUG INTERACTIONS:</b><br/>           Topical drying agents ↑ dryness<br/>           Tretinoin ↑ dryness</p>   | <p>Used topically, 5%-100% oil, safer in adults<br/>           Topical use in young boy of styling gel and shampoo caused breast growth<br/>           Is in some mouthwashes, but based on the concerns with oral use, do not recommend</p> |

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| <p><b>Thunder God Vine</b></p> <ul style="list-style-type: none"> <li>◆ Found in China</li> <li>◆ Used in Traditional Chinese Medicine for overactivity of immune system or inflammation</li> </ul>   | <p>Uses include MS, SLE, rheumatoid arthritis(RA)<br/>Used for excessive menses<br/>HIV/AIDS<br/>Hyperlipidemia<br/>osteoarthritis<br/>May have immune stimulant effects, too<br/>Studies: show anti-cancer and anti-inflammatory effects<br/>Studies: show suppression of immune system effect<br/>Studies: showed benefits for RA pain as good as sulfasalazine</p> | <p>*HIGHLY POISONOUS LEAVES, FLOWERS AND SKIN OF ROOT<br/>*Avoid in pregnancy/lactation<br/><b>ADRs:</b><br/>GI symptoms<br/>URI symptoms<br/>Loss of bone mineral density<br/>Decrease male fertility<br/>Alopecia, rash, H/A<br/><b>DRUG INTERACTIONS;</b><br/>Antihypertensives-alter effect<br/>DMARDs (anti-inflammatories)- ↑effect<br/>Immunosuppressants- ↓ effects</p>  | <p>Extracts made from SKINNED root<br/>No consistent, high-quality products are made in the US yet; Chinese products may not be reliable</p>  |
| <p><b>Turmeric “Indian saffron”</b></p> <ul style="list-style-type: none"> <li>◆ Related to ginger, bitter taste, gold color</li> <li>◆ Used for spice and color</li> <li>◆ Used in Traditional Chinese Medicine and Ayurvedic Medicine for liver function, digestion, menstrual regulation and arthritis pain</li> </ul> | <p>Topically, used for wound healing and eczema<br/>Used orally for ulcers, cancer, GI problems, inflammation, and gallstones<br/>Studies: curcumin chemical in turmeric has anti-inflammatory, anti-cancer, and antioxidant properties in early studies<br/>NCCAM funding studies on: ARDS, osteoporosis and liver cancer</p>  | <p>*High doses or long term use have caused:<br/>GI problems and liver issues<br/>*Do not use if have gallbladder disease; can worsen<br/>*Considered safe as spice in pregnancy, but can stimulate uterus in high doses, so unsafe there.<br/><b>ADRs:</b><br/>GI problems<br/>Hypotension<br/>Alopecia<br/>Contact dermatitis<br/><b>DRUG INTERACTIONS:</b><br/>anticoagulants ↑bleeding<br/>antidiabetic agents ↑hypoglycemia<br/>antihypertensives ↓BP excessive</p> | <p>Rhizomes (underground stems) ( dried and uses as oral powder, in capsules, teas, or liquid extracts.<br/>Turmeric paste used on skin.<br/>Dose: root 1.5-7g in divided daily doses<br/>Tea: 1-1.5 g dried root steeped 15 minutes in 150ml water bid</p> |

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| <p><b>Valerian</b> “all heal”;<br/>“garden heliotrope”</p> <ul style="list-style-type: none"> <li>◆ Used back to ancient Greece and Rome</li> <li>◆ Described by Hippocrates and Galen (for insomnia)</li> </ul> | <p>Used for sleep disorders</p> <p>Anxiety</p> <p>Depression</p> <p>H/A</p> <p>Arrhythmia</p> <p>May be adenosine agonist</p> <p>May be GABA receptor modulator</p> <p>May have CNS neuroprotective effects</p> <p>NCCAM researching affect on sleep in older adults and Parkinson’s patients</p> <p>Studies: suggest helps insomnia, not enough research on anxiety and depression</p> <p>German E Commission approved to treat sleep disorders from nervous conditions and restlessness</p> | <p>*Studies show safe for short periods, up to 4-6 weeks use</p> <p>*Not for use in pregnancy-possible teratogenic effects</p> <p><b>ADRs:</b></p> <p>Morning fatigue</p> <p>GI upset</p> <p>Dizziness</p> <p>H/A</p> <p>Hallucinations</p> <p>Ataxia</p> <p>↓HR, ↓BP</p> <p>Dry mouth</p> <p>Muscle relaxation</p> <p>One report of withdrawal sx</p> <p><b>DRUG INTERACTIONS:</b></p> <p>Alcohol ↑effect</p> <p>antidepressants ↑effect</p> <p>benzodiazepines ↑effect</p> <p>CNS depressants ↑effect</p> <p>Antihypertensives ↓BP</p> | <p>Roots and rhizomes (underground stems) make tablets, teas, capsules, liquid extracts</p> <p>Use ½ to 2 hours before bed if for sleep</p> <p>Monitor LFTs</p> <p>Dose:</p> <p>Anxiety: 80-300mg po qd</p> <p>Insomnia: 400-900 mg 30-60 min. before hs</p> |

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| <p><b>Yohimbe</b> “yohimbe bark”</p> <ul style="list-style-type: none"> <li>◆ From bark of African evergreen tree</li> </ul> | <p>Yohimbe hydrochloride form has been studied for erectile dysfunction</p> <p>Used for female libido, SSRI-induced libido issues</p> <p>Used for sexual dysfunction, aphrodisiac</p> <p>Used for athletic performance</p> <p>Studies: no adequate studies done</p> <p>Contains alpha-2 blocker → ↑ norepinephrine</p> <p>↑ cholinergic and ↑ sympathetic tone</p> | <p>*Avoid in pregnancy: fetal toxicity, uterine relaxation</p> <p>*Do not use in lactation</p> <p>*Do not use with MAO inhibitors, caution with other antidepressants and phenothiazines</p> <p>*Do not use with psychiatric or renal disorders—can exacerbate</p> <p>*one report hypertensive crisis</p> <p>*overdose-severe effects, possibly fatal</p> <p><b>ADRs:</b></p> <p>Insomnia</p> <p>↑ or ↓ BP</p> <p>Irritability, psychosis</p> <p>N/V</p> <p>Anxiety</p> <p>H/A</p> <p>Renal failure</p> <p>Lupus-like syndrome</p> <p><b>DRUG INTERACTIONS:</b></p> <p>antidiabetic ↓ bs</p> <p>benzodiazepines ↑ sedation</p> <p><b>ETOH</b> ↑ intoxication</p> <p>Naloxone/naltrexone ↑ yohimbe toxicity, alter opioid withdrawal sx</p> <p>CNS stimulants ↑ effect</p> <p>Anticoagulants ↑ bleeding</p> <p>Central sympathomimetics ↑ yohimbe toxicity</p> | <p>Some products contain very little yohimbe</p> <p>Bark used in capsules, tablets, tea</p> <p>Standardized yohimbe available by prescription</p> <p>Dose: 5-50 mg in divided doses for erectile dysfunction</p> <p>Monitor BP, HR</p> |

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| <p><b>Acidophilus</b></p> <ul style="list-style-type: none"> <li>◆ Main types: lactobacillus species (acidophilus, casei, plantarum, delbrueckii)</li> <li>◆ Bifidobacterium species (brevis, infantis, longum)</li> </ul> | <p>Maintain or restore microbial balance in GI and GU tracts; may produce bacteriocins and lactic acid which impair growth of pathogens</p>  | <p><b>* may cause morbidity or mortality if patients immunocompromised or debilitated.</b></p> <p>Avoid in PREGNANCY (risk amnionitis, sepsis, endometritis)</p> <p>Avoid with artificial heart valves, radiation therapy, oral surgery, GI surgery, heme+ diarrhea, immunocompromised, debilitated</p>  | <p>dosage varies depending on number of living organisms in product</p> <p>some yogurts with live cultures</p> <p>liquids, capsules, powders, tablets, milk, vaginal and anal suppositories</p> <p>Some are kept refrigerated</p> <p>Take 2 hours after antibiotics</p> <p>Do not take with immunosuppressants</p> |
| <p><b>Alpha Lipoic Acid (ALA)</b></p> <ul style="list-style-type: none"> <li>◆ Found especially in potatoes, spinach, liver and broccoli</li> </ul>  | <p>Diabetes mellitus, cataracts, retinopathy, peripheral neuropathy, and nephropathy from DM</p> <p>HIV, cirrhosis, glaucoma</p> <p>Lead toxicity</p> <p>Ischemic injury liver, brain, heart</p> <p>Burning mouth syndrome</p> <p>ACTION: IMPROVES MICROCIRCULATION IN PERIPHERAL NEUROPATHY IN DM</p> <p>ACTION: ANTIOXIDANT</p> <p>ACTION: ↑ INSULIN-STIMULATED GLUCOSE USE IN DM</p> <p>ACTION: ↑ CD4 AND CD8 LEVELS IN HIV</p> | <p><b>* avoid in thiamine deficiency (alcoholism especially)</b></p> <p>Avoid in pregnancy and lactation</p> <p>Caution with bleeding disorders</p> <p>Interactions with anticoagulants, antiplatelets, NSAIDs/ASA may ↑ bleeding risk</p> <p>May ↓ effectiveness chemotherapy</p> <p>May ↓ blood sugar and worsen hypoglycemia</p> <p>Vertigo, h/a, N/V, rash</p> | <p>Oral</p> <p>IV</p>  |

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| <p><b>Arginine</b></p> <ul style="list-style-type: none"> <li>◆ Semi-essential amino acid</li> <li>◆ Especially in corn, dairy, oats, meat, grains, brown rice, nuts, chocolate, raisins</li> </ul>  | <p>ACTION: PRECURSOR OF NITRIC OXIDE, A VASODILATOR</p> <p>ACTION: ↑ RELAXATION OF SMOOTH MUSCLE</p> <p>ACTION: ↓ WBC ADHESION, PLATELET AGGREGATION, FIBRIN FORMATION</p> <p>IMMUNE STIMULANT</p> <p>CAD, CHF, HTN, PVD, hyperlipidemia, breast cancer, asthma</p> | <p>* ANAPHYLAXIS TO IV ARGININE IN CHILDREN;</p> <p>* ATRIOVENTRICULAR BLOCK</p> <p>h/a, dizziness, atypical chest pain</p> <p>↑ bleeding risk</p> <p>↑ or ↓ blood sugar</p> <p>↓ bp</p> <p>Avoid in pregnancy and lactation</p> <p>Avoid after acute MI</p> <p>Avoid IV forms in acidosis or hypotension</p>   | <p>Sufficient amounts made in body</p> <p>If supplemented, cream, capsule, IV, nutrient bar</p> <p>No established standards</p>   |
| <p><b>Bee Pollen</b></p> <ul style="list-style-type: none"> <li>◆ Flower pollen collected on bodies of worker bees mixed with nectar and bee saliva</li> <li>◆ Commercial bee pollen may be just pollen harvested from plants</li> <li>◆ NOT same as honey or royal jelly</li> <li>◆ Contains: essential amino acids, essential fatty acids, hormones, minerals, vitamins B and C coenzymes, sterols, lipids, carbohydrates, and more</li> </ul> | <p>Athletic performance</p> <p>Memory booster</p> <p>Multiple sclerosis</p> <p>Menopause and PMS</p> <p>Reduce cancer chemotherapy side effects</p> <p>Antioxidant</p> <p>Immune stimulant</p> <p>Antifungal</p>  | <p>* Allergic reactions: anaphylaxis, edema, shortness of breath, pruritus, eosinophilia, risk asthma exacerbation</p> <p>ADRs:</p> <p>N/V/D, abdominal pain</p> <p>Hepatitis</p> <p>H/A, malaise</p> <p>Photosensitivity</p> <p>Vertigo</p> <p>Hayfever</p> <p>Decreased memory</p> <p>Avoid in pregnancy/lactation</p> <p>Contraindicated in allergy to pollens</p> | <p>Capsules, tablets, liquid, granules, extracts, food supplements</p> <p>No standardized products</p> <p>Often in combination products</p> <p>Pollen content varies depending on plant and geographic location</p> |

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| <p><b>Capsicum</b> “cayenne” “chili pepper” “paprika” “capsaicin”</p> <ul style="list-style-type: none"> <li>◆ Possibly capsaicin releases substance P from neurons, which decreases pain sensation</li> </ul>  | <p>Uses: clotting disorders<br/>GI disorders<br/>Cluster headache<br/>Musculoskeletal pain<br/>Neuropathic pain<br/>Postoperative N/V<br/>Perennial rhinitis<br/>May be immunosuppressant, anti-inflammatory, antimicrobial</p> | <p>* risk allergic reactions<br/><b>ADRs:</b><br/>↑HR, ↑BP transiently<br/>Topical burning on skin, contact dermatitis<br/>Pharyngitis, rhinorrhea (nasal)<br/>Eye burning and tearing<br/>Sweating, flushing<br/><b>DRUG INTERACTIONS</b><br/>ACE inhibitors ↑cough<br/>Antiarrhythmics ↑HR<br/>Anticoagulants ↑bleeding<br/>Antidiabetic agents ↓bs, ↑insulin<br/>Antiulcer agents ↑stomach acid</p> | <p>Powder, topical creams, intranasal spray<br/>Zostrix cream contains 0,025% capsaicin<br/>Law enforcement uses in pepper spray</p> |
| <p><b>Chondroitin Sulfate</b></p> <ul style="list-style-type: none"> <li>◆ Glucuronic acid and galactosamine molecule</li> <li>◆ Found in mammalian cartilage, supplement derived from bovine, shark, or synthetic material</li> <li>◆ Caution with bovine type: risk bovine spongiform encephalopathy (Mad Cow Disease)</li> </ul> | <p>Uses:<br/>Osteoarthritis, especially of hip and knee<br/>Psoriasis<br/>May have anti-inflammatory<br/>May be protective of joint</p>   | <p>* avoid in shellfish allergy<br/>* avoid in bleeding disorder, preoperatively<br/><b>ADRs:</b><br/>↑or↓ BP<br/>Euphoria, H/A<br/>Asthma exacerbation<br/>Bleeding risk, ↓hemoglobin<br/><b>DRUG INTERACTIONS</b><br/>anticoagulants ↑bleeding<br/>Iron ↑absorption</p>  | <p>In capsules or combined with glucosamine<br/>May be able to dose intermittently<br/>200-400mg/d in divided or one dose</p>        |



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| <p><b>Chasteberry</b> “vitex”</p> <ul style="list-style-type: none"> <li>Used by monks to decrease sexual desire, thought to promote chastity</li> </ul> | <p>Uses: menopause symptoms<br/>Breast milk production<br/>PMS symptoms<br/>Infertility<br/>Acne</p> <p>Studies: possible benefit for breast pain, infertility, PMS, but needs more study</p> | <ul style="list-style-type: none"> <li>Do not take in pregnancy /lactation secondary to hormonal effect</li> <li>Do not take with dopamine medications (some antipsychotics, Parkinson’s drugs) because affects dopamine</li> <li>Do not take with oral contraceptives or hormone-related cancer (e.g. breast cancer)</li> </ul> <p><b>ADRs:</b><br/>Acne<br/>GI symptoms<br/>Dizziness<br/>Depression, fatigue</p> <p><b>DRUG INTERACTIONS</b><br/>Antipsychotic agents as above<br/>Dopamine agents as above</p> | <p>Dry commercial extract: up to 40mg/day<br/>Liquid commercial extract: 1.8ml/day<br/>Dried fruit-up to 600mg/day</p> |
| <p><b>Cinnamon</b><br/>From bark of cinnamon tree<br/>Many varieties; Ceylon and Chinese (cassia) cinnamon most common</p>                               | <p>Uses: diabetes mellitus<br/>Bronchitis<br/>GI symptoms, loss of appetite<br/>Angina, CAD<br/>Studies: lacking support</p>  | <ul style="list-style-type: none"> <li>Avoid consuming large amounts of cassia cinnamon, because it contains coumarin, of the anticoagulant family</li> <li>Allergic/hypersensitivity reaction</li> </ul> <p><b>ADRs:</b><br/>Asthma<br/>Glossitis, gingivitis, stomatitis</p> <p><b>DRUG INTERACTIONS</b><br/>Antidiabetic agents ↓bs</p>   | <p>Powders, extracts, capsules, teas<br/>Doses: Type II diabetes mellitus up to 6g/day for 40 days</p>                 |

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| <p><b>Cranberry</b></p> <ul style="list-style-type: none"> <li>◆ No longer thought to acidify urine</li> <li>◆ Instead, contains proanthocyanidins which prevent bacterial adhesion in bladder</li> </ul> | <p>Uses: treat urinary tract infections<br/>Treat H.pylori stomach infections that cause ulcers<br/>Antioxidant<br/>Anticancer<br/>Prevent dental plaque<br/>Studies: dispute that cranberries can treat urinary tract infections, but they may help PREVENT them<br/>Studies: may prevent E.coli organisms from adhering in urinary tract walls and may prevent H.pylori organisms from surviving in stomach<br/>Studies: possible antioxidant properties; possibly prevents dental plaque</p> | <p>*excess cranberry juice can cause GI upset<br/>*use cautiously if taking concomitant anticoagulants or aspirin, or medications that affect liver<br/><b>ADRs:</b><br/>↑risk bleeding<br/><b>DRUG INTERACTIONS</b><br/>Antibiotics –additive<br/>Anticoagulants ↑bleeding<br/>Aspirin ↑ bleeding</p>  | <p>Beverage, sauces and jellies<br/>Tablets, capsules<br/>Dose: capsules 200-800mg daily in divided doses<br/>Dose: juice cocktail—500ml/day</p> |
| <p><b>Creatine</b></p> <ul style="list-style-type: none"> <li>◆ Produced in body from amino acids</li> <li>◆ Stored in muscles</li> </ul>   | <p>Use: athletic performance enhancement<br/>Studies: conflicting reports about possible renal dysfunction<br/>Studies: effects only in short duration physical activity</p>  | <p>*Avoid in bipolar, arrhythmia, DM<br/><b>ADRs:</b><br/>H/A, sedation, seizures<br/>Arrhythmia, edema<br/>GI symptoms<br/>Muscle cramping<br/>Aggression, irritability, mania in bipolar, depression, anxiety<br/><b>DRUG INTERACTIONS:</b><br/>Antiarrhythmics ↑arrhythmia<br/>Antidiabetic agents alter bs<br/>Diuretics ↑effect<br/>NSAIDS ↑nephrotoxicity</p> | <p>Avoid with caffeine products<br/>Dose: up to 25g/daily by mouth</p>   |

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| <p><b>DHEA</b></p> <ul style="list-style-type: none"> <li>◆ Produced by adrenals, liver, testes, neurons</li> <li>◆ Converted to DHEAS-S, can be converted to estrogens and androgens</li> </ul>                   | <p>Uses: adrenal insufficiency</p> <p>Depression</p> <p>Obesity</p> <p>Increase strength</p> <p>Studies:</p> <p>No benefit for improving memory or for diseases</p> <p>Banned substance: by National Collegiate Athletic Association</p> | <p><b>ADRs:</b></p> <p>Deepening voice</p> <p>Arrhythmia, HTN</p> <p>GI symptoms</p> <p>Agitation, confusion, depression, psychosis</p> <p>Insulin resistance</p> <p><b>DRUG INTERACTIONS</b></p> <p>Antihypertensives ↑bp</p> <p>Antipsychotics ↑mania</p> <p>Lithium ↑mania</p> <p>Antidiabetic agents ↑insulin resistance</p>  | <p>Tablets, capsules, creams</p> |
| <p><b>Fish Oil</b> “omega 3 oils” DHA/EPA</p> <ul style="list-style-type: none"> <li>◆ From oily fish</li> <li>◆ Contains DHA omega 3 fatty acid (docosahexaenoic acid) and EPA (eicosapentaenoic acid)</li> </ul> | <p>Uses:</p> <p>Hypertriglyceridemia</p> <p>Prevention CAD</p> <p>May be antithrombogenic</p> <p>Mild ↓BP</p> <p>↓atherosclerotic plaque</p> <p>↓triglyceridemia</p> <p>May be anti-arrhythmic</p>                                       | <p><b>ADRs:</b></p> <p>*avoid in fish allergy</p> <p>*avoid perioperatively due to bleeding risk</p> <p>*avoid in pregnancy/lactation due to risk of mercury contamination</p> <p>*avoid in bleeding disorders</p> <p><b>ADRs:</b></p> <p>↓BP, ↑LDL</p> <p>↑Alt in cystic fibrosis</p> <p>↑risk mania</p> <p>Fishy taste, belching</p> <p><b>DRUG INTERACTIONS</b></p> <p>Anticoagulants ↑bleeding</p> <p>Antihypertensives ↓bp</p> <p>Vit A and D may cause toxicity with cod liver oil</p> <p>Vit E: ↑ bleeding</p> | <p>Dose: 2-4 g EPA+DHA daily</p> |

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| <p><b>Flaxseed oil/seed</b><br/>“linseed oil”</p> <ul style="list-style-type: none"> <li>◆ Flaxseed contains lignans, or phytoestrogens</li> <li>◆ Flaxseed oil does not contain any lignans</li> </ul> | <p>Uses: menopause symptoms</p> <p>Laxative</p> <p>Arthritis</p> <p>Hyperlipidemia</p> <p>Cancer</p> <p>Studies: suggest help lower lipids if lipids are elevated</p> <p>Studies: suggest alpha-linoleic acid (type of omega 3 fatty acid) contained within helps heart disease</p> <p>Studies: mixed results on hot flashes</p> <p>Studies: suggest might reduce some cancers' risks, unclear</p> | <p>* Not for pregnancy due to risk of spontaneous delivery</p> <p>* Risk allergy, type I hypersensitivity</p> <p><b>ADRs:</b></p> <p>Severe diarrhea</p> <p>Abdominal pain, bowel obstruction</p> <p>↓ platelet aggregation</p> <p>↑ triglycerides</p> <p>May affect sex hormones</p> <p><b>DRUG INTERACTIONS:</b></p> <p>acetaminophen ↓ absorption</p> <p>anticoagulants ↑ bleeding</p> <p>antidiabetic agents ↑ or ↓ bs</p> <p>antihypertensives ↓ bp</p> <p>furosemide ↓ absorption</p>           | <p>Flaxseed oil is in liquid or capsule form</p> <p>Flaxseed whole or crushed can be mixed with water or used with food; also in powder form</p> <p>Take both seed and oil in sufficient water to avoid intestinal obstruction and constipation</p> <p>Do not take same time as any other medications or supplements, as may decrease absorption</p> <p>Dose: oil up to 2g/daily</p> <p>Dose: powder/flour up to 60g/daily, divided doses with liquid up to 4 weeks</p> |
| <p><b>Glucosamine</b></p>   | <p>Uses: osteoarthritis, rheumatoid arthritis</p> <p>TMJ</p> <p>Diabetes mellitus</p> <p>Chronic venous insufficiency</p> <p>Most studies use glucosamine sulfate, some with chondroitin</p> <p>Cochrane review: shows good evidence for minimal improvement in pain of O/A knee/hip</p>   | <p>* Avoid in pregnancy/lactation</p> <p>* avoid with hx of shellfish or iodine allergy as some preparations from marine exoskeletons</p> <p>* caution in DM-may ↑ bs</p> <p><b>ADRs:</b></p> <p>Dizziness, H/A, somnolence</p> <p>↑ bp, ↑ heart rate, palpitations</p> <p>GI side effects</p> <p>Asthma exacerbation</p> <p><b>DRUG INTERACTIONS:</b></p> <p>Antihypertensives ↓ effect</p> <p>Anticoagulants ↑ bleeding</p> <p>Antidiabetic agents ↓ insulin production or ↑ insulin resistance</p> | <p>Takes average 2-4 weeks for benefit</p> <p>Dose: 500mg tid for up to 6 months</p>  |

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|---|--|---|--|
| <p><b>Grapeseed Extract</b></p> <ul style="list-style-type: none"> <li>◆ Leaves and fruit of grapes have been used medicinally since ancient Greece</li> <li>◆ Extract made from grape seeds leftover from wine-making</li> </ul> | <p>Uses: atherosclerosis, CAD<br/>Hyperlipidemia<br/>HTN<br/>Circulatory issues from diabetes, in eyes (macular degeneration and vascular disease), periphery<br/>Cancers<br/>edema<br/>Studies: show efficacy for chronic venous insufficiency and extremity edema<br/>Studies: benefit for diabetic retinopathy and antioxidant effects<br/>Studies in process are looking at breast, prostate, colon cancer prevention, Alzheimer's treatment</p> | <ul style="list-style-type: none"> <li>* Avoid in perioperative periods</li> <li>* Avoid in pregnancy/lactation</li> <li>* Avoid with bleeding disorders, iron deficiency</li> </ul> <p><b>ADRs:</b> H/A, dizziness<br/>HTN<br/>Itchy scalp<br/>GI symptoms<br/><b>DRUG INTERACTIONS:</b><br/>Anticoagulants ↑ bleeding<br/>Antihypertensives ↑ effect<br/>Antidiabetic agents ↓ bs<br/>Iron ↓ amount</p> | <p>Dose: up to 300mg/d by mouth in capsules or tablets</p>   |
| <p><b>Green Tea</b> “Chinese Tea”<br/>“Japanese Tea”</p> <ul style="list-style-type: none"> <li>◆ Active ingredient is EGCG</li> </ul>  | <p>Uses: mental alertness<br/>Weight loss<br/>Hyperlipidemia<br/>Cancer treatments—gastric, breast, skin<br/>Studies: mixed results on prevention or slowing of some cancers<br/>Study: improves mental alertness, likely from caffeine</p>  | <ul style="list-style-type: none"> <li>* Avoid if on anticoagulants as contains Vitamin K</li> <li>* Avoid if caffeine-sensitive</li> <li>* Avoid using concentrated green tea extracts if have or develop liver issues; some risk liver toxicity</li> </ul> <p><b>ADRs:</b><br/>Caffeine-related: insomnia, irritability, palpitations, GI upset, urinary frequency, ↑ psychiatric symptoms</p>          | <p>Primarily used as beverage by steaming green tea leaves.<br/>Can be made into capsules or put with other products. Some topical products.<br/>Dose: 250-950ml tea po qd up to 4 weeks for CAD benefits<br/>Dose: 400ml tid for mental alertness</p> |

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|---|---|---|--|
| <p><b>Guarana</b></p> <ul style="list-style-type: none"> <li>◆ Has among highest caffeine content of all plants</li> <li>◆ Guarana=2.5%-7% caffeine</li> <li>◆ Coffee=1%-2% caffeine</li> </ul> | <p>Uses: cognitive and mood enhancement<br/>obesity</p> | <p>*Not to be used in pregnancy/lactation due to high percentage of caffeine and associated risks miscarriage, IUGR</p> <p>*not to be used with anticoagulants, as it decreases platelet aggregation</p> <p><b>ADRs:</b></p> <p>Related to caffeine content</p> <p>Agitation, anxiety, insomnia</p> <p>Arrhythmia, hypertension</p> <p>H/A, GI symptoms</p> <p>Tachycardia, psychosis, others</p> <p>↓platelet aggregation</p> <p><b>DRUG INTERACTIONS:</b></p> <p>Alcohol ↑effect</p> <p>Analgesics ↑effect</p> <p>Anticoagulants ↑bleeding</p> <p>antihypertensives ↓effect</p> <p>antibiotics alter effect</p> <p>CNS depressants-antagonistic</p> <p>Ephedrine-additive</p> <p>Dopaminergic-additive</p> <p>Betablockers-antagonistic</p> <p>others</p> | <p>Dry extract doses should not be &gt;3g/day</p> <p>Found in Brazilian sodas, and increasingly in US energy products and energy drinks.</p> |

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|--|--|--|--|
| <p><b>Kelp</b> “seaweed”</p> <ul style="list-style-type: none"> <li>◆ Brown seaweed has been used for food and medicine</li> <li>◆ Contains sodium alginate</li> </ul> | <p>Uses: anticoagulant<br/>Antiviral<br/>Wound repair<br/>goiter<br/>Weight loss<br/>Cancer<br/>Evidence antioxidant and antibacterial actions<br/>Anticoagulant effect in lab</p> | <p>*Iodine may cause hypersensitivity rash including angioedema, TTP, death<br/>*Not for pregnancy/lactation-abortion effect</p> <p><b>ADRs:</b><br/>↓bp in some species<br/>Increase or decrease thyroid<br/>Laxative effect<br/>Bleeding<br/>Peripheral neuropathy from arsenic content<br/>Nephrotoxicity</p> <p><b>DRUG INTERACTIONS</b><br/>Laxatives ↑ effect<br/>Antidiabetic agents ↓bs<br/>Anticoagulants ↑bleeding<br/>Antihypertensives ↓bp in some<br/>Estrogens-antiestrogenic effect</p> | <p>Aqueous extract, powder, granules, capsules, tablets<br/>No standardization of iodine content</p> |
| <p><b>Melatonin</b><br/>Neurohormone secreted by pineal gland due to darkness<br/>Influences circadian rhythm and sleep initiation</p>                                 | <p>Use: sleep disorders<br/>ADHD<br/>Alzheimer’s disease<br/>May impact brain sleep center<br/>Immune stimulant<br/>Antioxidant<br/>Jet lag</p>                                    | <p>*Do not use in pregnancy/lactation</p> <p><b>ADRs:</b> confusion<br/>Depression (transient)<br/>Dizziness<br/>Dream disturbance<br/>Drowsiness<br/>Irritability<br/>Neurobehavioral alteration</p> <p><b>DRUG INTERACTIONS</b><br/>Anticoagulants ↓effectiveness<br/>Antihyperlipidemics ↑atherosclerosis<br/>Antiseizure drugs ↑seizure risk<br/>Sedatives ↑sedation</p>   | <p>Not approved for safety over &gt;3 months use<br/>Dose: 0.1-5 mg in evening po</p>                |

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|---|--|--|---|
| <p><b>Policosanol</b></p> <ul style="list-style-type: none"> <li>◆ Alcohols from sugar cane wax</li> </ul>  | <p>Use: hypercholesterolemia<br/>           Inhibits cholesterol synthesis in liver<br/>           LDL degradation<br/>           Antioxidant<br/>           Studies: many from Cuba, source of sugar cane, some conflicting data from non-Cuban studies</p> | <p><b>ADRs</b><br/>           Antiplatelet effect<br/>           H/A, dizzy, ↓ BP</p> <p><b>DRUG INTERACTIONS</b><br/>           Antidiabetic agents ↓ bs<br/>           Antihypertensives ↓ bp<br/>           Antiparkinsonians ↑ dyskinesias<br/>           Anticoagulants ↑ bleeding<br/>           Nitrates ↓ bp</p>   | <p>Capsules, tablets<br/>           Dose: 5-80mg/day up to 3 years</p>          |
| <p><b>Red Yeast Rice</b></p> <ul style="list-style-type: none"> <li>◆ Extract from fermenting rice with yeast</li> <li>◆ FDA banned sale in US due to violation, supplement contained lovastatin (prescription statin)</li> <li>◆ FDA warns not to buy on internet due to lovastatin component</li> </ul> | <p>Use: hyperlipidemia<br/>           Contain sterols, fatty acids, isoflavones<br/>           Anti-inflammatory potential</p>   | <p>*avoid in pregnancy/lactation</p> <p><b>ADRs</b><br/>           Rash, anaphylaxis<br/>           Dizziness, H/A,<br/>           ↓bp<br/>           ↓bs<br/>           GI symptoms<br/>           ↓Hgb, ↓BUN</p> <p><b>DRUG INTERACTIONS</b><br/>           Alcohol ↑ liver toxicity<br/>           CoQ10 ↓, needs supplement<br/>           Antidiabetic ↓ or ↑ bs<br/>           Antihyperlipidemics ↑ risk adverse effects<br/>           Statins ↑ risk adverse effects<br/>           ↑ risk rhabdomyolysis with azalides, cyclosporine, nefazodone, others</p> | <p>Gel capsules<br/>           Do not take with grapefruit juice or alcohol</p> |



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| <p><b>Soy</b></p> <ul style="list-style-type: none"> <li>◆ Soybeans contain isoflavones, similar to estrogen</li> </ul> | <p>Uses: menopausal symptoms<br/>HTN<br/>Hyperlipidemia<br/>Osteoporosis<br/>Breast and prostate cancer (may be now contraindicated in breast cancer)<br/>Studies: reduces LDL cholesterol<br/>Studies: reduces hot flashes</p> | <p>*Rare allergies<br/>*Avoid soy in hormone-related cancers or risk of cancers (breast, endometrial, ovarian)<br/><b>ADRs:</b><br/>Mild GI symptoms<br/>H/A<br/><b>DRUG INTERACTIONS</b><br/>Anticoagulants ↑ bleeding<br/>Antihypertensives ↓ bp<br/>Tamoxifen interferes with effects<br/>Estrogen interferes with effects</p> | <p>Soybeans, tofu, soy milk<br/>Powders, capsules, supplements and nutrition bars<br/>Dose: 10-106g po bid<br/>Dose: 25 g soy daily for CAD risk</p> |
| <p><b>Spirulina</b> “blue-green algae”</p>  | <p>Uses: diabetes, hyperlipidemia<br/>Allergic rhinitis<br/>Weight loss</p>   | <p>*avoid in pregnancy/lactation<br/>ADRs: H/A, N/V<br/>hepatotoxicity</p>  | <p>Dose: DM 1 g po bid with meals<br/>Dose: allergic rhinitis 1000-2000mg qdx12 weeks</p>  |
| <p><b>Wild Yam</b></p>  | <p>Uses: hyperlipidemia<br/>Menopausal symptoms</p>   | <p>*avoid in pregnancy/lactation<br/><b>ADRs:</b><br/>GI upset, contact dermatitis<br/><b>DRUG INTERACTIONS</b><br/>Antidiabetic agents ↓ bs<br/>Hormones altered effects</p>   | <p>Topical-vaginal creams<br/>Capsules: 250mg 1-3x/day</p>   |

## ■ REFERENCES:

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