

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Aloe Vera, (external use)	Polysaccharides	Aids in the healing of burns/ eases pain.			- Allergy is rare - Processing and storage may effect retention of activity
Aloe Vera, <i>Aloe Barbadenis</i> (internal use)	1,8-dihydroxy anthraecne derivative	Laxative in acute constipation.			- May cause cramps or diarrhea - Alters GI absorption of some drugs and vitamins - <b>Lethal Dose: 1gm/d for 10 days</b>
Androstenedion	Steroid precursor to testosterone	- Increase muscle mass - decrease body fat - Improve physical performance.	JAMA 1999;281 Study concluded that andro. does not increase serum testosterone levels.	Supposedly forms testosterone in the body.	- Possibly same side effects of anabolic steroids. - Banned by NCAA and all professional sports except baseball.
Bilberry fruit <i>Vaccinium myrtilluse</i>	Used in tea form, contains tannins, plant acids, anthocyan, flavonoids & pectins	Supportive treatment of acute, non-specific diarrhea. Internal treatment of mild inflammation of mucous membranes of mouth and throat.			- Effects of ingesting large doses unknown. - No known side effects or interactions with other drugs.
Black Cohash <i>Cimicifunga Racemosa</i> baneberry black snakeroot bugbane	Alkaloids, tannins, terpenoids, many organic acids	Relief for menopausal women (hot flashes, sweating depressed mood).	Estrogen-like effect no longer upheld. Couples with estrogen receptors in vitro; but this is now interpreted as a blockade of the receptor.		- Large doses cause dizziness, nausea, headaches, stiffness, visual disturbances, reduced pulse rate, limb pain and decreased blood pressure - May induce miscarriage. - <b>Contraindicated in:</b> pregnancy and pt's w/ heart dz.
Bloodroot <i>Sanguinaria Canadensis</i>	Isoquionline derivatives	In toothpaste and oral rinses helps reduce deposition of dental plaque.		Contains a negatively charged ion which binds to dental plaque Also effective against common oral bacteria.	- <b>Should not be ingested</b> - <b>Side effects if ingested: CNS depression, nausea and vomiting</b>

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Cascara <i>Rhamnus Purshianus</i> Buckthorn cascara sagrada	1,8-dihydroxy-anthracene derivatives Dried bark	Laxative		Inhibits stationary and stimulation propulsive contractions in colon, resulting in accelerated intestinal passage and reduction in liquid absorption.	- Side Effects: spasmodic GI complaints. - Long term use leads to losses of electrolytes, in particular K <sup>+</sup> ions. In rare cases can cause heart arrhythmias, nephropathies, edemas and accelerated bone deterioration. - <b>Should not be used over an extended period of time (1-2 weeks) w/o medical advice.</b> - <b>Contraindicated in:</b> Crohn's dz, colitis, and abdominal pain of unknown origin. children under 12 yrs and if pregnant or nursing. Dose: 1g (if using capsules of powered bark).
Chamomile <i>Matricaria Chamomilla</i>	Flower head contains essential oil, teas contain small amts, but if used over long periods, may have a cumulative effect.	- Anti-inflammatory for various afflictions of the skin and mucous membranes. - Gastrointestinal anti-spasmodic.	Antiphlogistic, antispasmodic, and antibacterial effects. Anti-inflammatory effect caused by camomile flavones.		Potential allergic reaction resulting in dermatitis, anaphylaxis and other severe hypersensitivity reactions in persons allergic to ragweed, asters, and chrysanthemums.
Chaparral	Nordihydroquaiaretic acid (NDGA)	Believed to be an anti-cancer agent.	Ineffective and totally unsafe for human consumption.		Side effects: <b>Irreversible liver damage hepatitis</b>
Chaste Tree <i>Vitex Agnus-Castus</i> Chaste Berry	Dried ripe fruit from the Chaste tree. Iridoid glycosides, flavonoids, volatile oil, fatty oils	- PMS - menstrual irregularities	No data regarding lowering of prolactin levels in humans.	Inhibits prolactin secretion <i>in vitro</i> .	- Side effects: Mild side effects include: nausea, GI complaints and rash. - Because of the dopaminergic effect of the drug, a reciprocal weakening of the effect can occur in case of ingestion of dopamine-receptor antagonists. - Dose: 20mg of fruit - <b>Contraindicated in:</b> pregnancy and nursing.

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Choline	- An amine, part of phospholipids found in plant and animal foods - A precursor of acetylcholine and phosphatidylcholine (lecithin)	Increased strength, facilitate loss of body fat, affect nerve transmission	- No proof of increased strength or loss of body fat - Improvements in long distance run (20+miles) and swim (2+ hrs) times. - No improvement on stationary bicycle More research needed.	Reduction in plasma Choline levels after exercise may reduce acetylcholine contents and it's release, which in turn would affect nerve impulses (this would hinder endurance and performance).	Dose: 2g free Choline prior to exercise
Chromium Picolinate * FTC ordered Nutrition 21 and other companies to stop making unsubstantiated claims	Picolinic acid is a natural derivative of tryptophan.	- Increased muscle mass - Decreased body fat - Increase energy	- Claims based on two unpublished research studies. - No benefit seen in other studies (increased urine chromium).	-Chromium augments the effect of insulin at target tissues and promotes glucose transport. Picolinic acid facilitates Chromium absorption.	Animal studies resulted in damage to DNA.
Co Enzyme Q10	Essential electron and proton carrier that supports ATP synthesis in mitochondria.	Anti oxidant	Studies show it may be beneficial in enhancing the resistance of LDL to oxidation		8 of 2500 patient supplemented with 100 mg of CoQ10 reported epigastric distress.
Comfrey <i>Symphytum Officinale</i>	Pyrrolizidine alkaloids		Well documented toxicity if taken internally.		<b>Do not use internally Hepatotoxic.</b> Linked to several cases of blocked hepatic veins.
Creatine Monohydrate	Derivative of the amino acids arginine, glycine, and methionine.	- Increased endurance - Increased LBM - Improved performance  * Clinical Studies – creatine supplementation has no effect in aerobic exercise performance.	- Increase in CR and PCR concentration by up to 30% -Improve maximal intermittent exercise. - 20-30% non-responders 2` high baseline muscle Creatine levels.	- Wt. gain attributed to water retention. - Increased Creatine and Phosphocreatine levels slow ATP degradation during high-intensity muscular activity, which delays the accumulation of lactate .	- Long-term consequences of doses >1g/day is unknown Possibility of kidney damage. - Advise client to consume large quantities of water if choosing to take creatine.  - Dosing: 3g/day (1-2tsp) taking w/ CHO drink will help maximize muscle loading of creatine.

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
DHAP Dihydroxyacetone and Pyruvate	Two 3-carbon intermediates from the glycolytic process.	- Increase in muscle glycogen  - New type of carbo loading	- 3 well-controlled studies showed an ergogenic effect in untrained subjects. Subjects had a lower perceived exertion level. - Additional studies are needed for trained athletes	Thought to enhance muscle glycogen storage or increase blood glucose extraction by the exercising muscle.	- Diarrhea and intestinal gas seen in a few subjects. - Dosing: Studies showed results with 75g DHA and 25g Pyruvate.  *Commercial products contain only 500mg to 1g Pyruvate and may not contain DHA.
DHEA dehydroepiandrosterone  *Banned by: USOC, NCAA, NFL	- Metabolic precursor to estrogen & testosterone. - Most abundant hormone in blood stream. - Made by adrenal glands and synthesized in the skin and brain.	- Improved mood, energy and libido  - Preserve muscle mass  - “Youth Hormone”	No conclusive research.	Thought to convert to testosterone (mainly) and estrogen in the body.	<b>Not recommended.</b> <b>- High risk of liver and prostate cancer.</b> - Side effects: acne flare-ups, unwanted hair growth (especially in women), irritability, and rapid heartbeat.
Digitalis <i>Digitalis Purpurea</i> foxglove, purple foxglove, throatwort, fairy finger, lady’s thimble	Leaves and seeds. Cardioactive steroid glycosides.	Improve cardiac conduction thereby improving cardiac contractility.	Research favors using angiotensin converting enzyme inhibitors and Ca channel blockers instead of digitalis.	Stimulates contraction of the heart muscles, reduces the frequency of heartbeat and lowers the oxygen req. of the heart (in relation to performance)	- Narrow therapeutic margin. Simultaneous administration w/ arrhythmogenic substances increases the risks of cardiac arrhythmias. <b>- High potential for severe side effects.</b> <b>- Use with great caution.</b>
Don Quai	Coumarin derivatives	- Mild laxative - Uterine tonic - Relief from menopausal symptoms and menstruation disorders	DBPC study of menopausal women indicated no difference in menopausal outcomes between herb (standardized to 0.5mg/kg ferulic acid) and placebo groups.		- Side effects: dermatitis, gastric upset, photosensitivity - Essential oil is carcinogenic and not recommended for ingestion. - All unnecessary exposure should be avoided.

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Echinacea American cone flower, black susans, comb flower, Kansas snakeroot, purple cone flower, Indian head	Isobutylamides, cichoric acid, flavonoids, echinacosides, volatile oil,	Immune stimulant Cure for common cold	- Appears to shorten duration and frequency of the common cold.  - Efficacy of oral capsules and teas is questionable.	Stimulates phagocytic activity, release of interleukin I, tumor necrosis factors and interferon. Increases number of WBC and spleen cells.	- May slightly elevate body temperature. <b>- Contraindicated in:</b> pt's with progressive systemic diseases (TB, leucosis, MS, collagen disorders, HIV, or other auto immune Dz.) - Dose: 15-20 drops of root extract daily or 6-9 mg/day expressed juice. <b>- Do not use for longer than 8 weeks.</b>
Ephedra <i>Ephedra Sinica</i> Ma Huang Desert Herb Ephedrine	Ephedrine and pseudoephedrine  Alkaloids of the 2-aminophenylpropane type.	- Decongestant - Bronchodilator - Stimulates CNS - Touted as a wt loss aid.	- Not a safe and effective wt loss aid.  - Tolerance is built up after 7 days  - Most weight loss products have a dose of 24mg.  - Heart palpitations seen at 8mg.	Indirectly stimulates the CNS.	- Side effects: <b>Blamed for 20-30 deaths and more than 800 adverse reactions.</b> - <b>Min dose:</b> 8mg/d will produce heart palpitations, dry mouth, insomnia, nausea, vomiting, motor restlessness, irritability, headaches, and tachycardia. - <b>Higher dose:</b> drastic increase in blood pressure, cardiac arrhythmia, and dependency. <b>Contraindicated in:</b> anxiety and restlessness, high blood pressure, glaucoma, enlarged prostate. Do not use with cardiac glycosides, halothane, guanethidine, MAOIs, Secale alkaloid derivatives or oxytocin.

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Evening Primrose Oil <i>Oenothera Biennis</i>	<ul style="list-style-type: none"> <li>- Rich in gamma-linolenic acid found in oils of borage, currant and hops.</li> <li>- Contains 14% of a fixed oil of which 70% is cis-linolenic acid and 9% is cis-gamma-linolenic acid (GLA)</li> </ul>	<ul style="list-style-type: none"> <li>- Treats itching associated with atopic dermatitis and eczema.</li> <li>- Thought to help with inflammation associated with rheumatoid arthritis.</li> <li>- Anti-arteriosclerotic.</li> </ul>	<ul style="list-style-type: none"> <li>- In Germany 0.5 gm capsule of oil has been approved for use in atopic eczema.</li> <li>- Some support for efficacy in treatment of PMS, MS, and CV dz.</li> </ul>	GLA is precursor to prostaglandin E1, serving as a key intermediate in the biosynthetic pathway leading from cis-linolenic acid to PE1. (This is the limiting step in prostaglandin production.)	<ul style="list-style-type: none"> <li>- Side effects: Mild GI upset, headache and nausea</li> <li>- No data on safety of long term consumption.</li> <li>- Cheaper versions: barage seed oil 20-26% GLA black current oil 14-19% GLA</li> <li>- Dose: 1 to 2 - 0.5 gamma acids taken 3x/day.</li> </ul>
Feverfew <i>Tanacetum Parthenium</i>	<ul style="list-style-type: none"> <li>- Parthenolide</li> <li>- Volatile oil</li> <li>- Commonly consumed by chewing fresh, freeze dried or heat dried leaves, or aromatherapy.</li> </ul>	Treatment of migraine headaches and arthritis.	In animal experiments, impedes or slows down platelet aggregation, prostaglandin synthesis and the release of histamines. Reduces the release of serotonin from thrombocytes and polymorpho-nuclear leucocytes.	Thought to inhibit arachidonic acid, which is a precursor for prostaglandins that are involved in the clotting mechanism.	<ul style="list-style-type: none"> <li>Side Effects: When chewed: mouth ulceration, inflammation of the oral mucosa and tongue, often with swelling and loss of taste.</li> <li>- Long term safety has not been established.</li> <li>- <b>Contraindicated in:</b> Pregnancy or during lactation</li> </ul>
Flaxseed Oil <i>Linum Usitatissimum</i>	Contains alpha-linolenic and linoleic acids and lignans (phytoestrogens)	<ul style="list-style-type: none"> <li>- laxative</li> <li>- reduction in lipids</li> <li>- hypoglycemic agent</li> </ul> <p>Decrease risk of breast cancer and endometrial cancer.</p>	<ul style="list-style-type: none"> <li>- In animals, reduced mammary CA tumor volume by 50%.</li> <li>- In humans low breast tissue levels of alpha-linolenic were associated with greater risk of metastases.</li> <li>- Efficacy of use for purposes other than constipation is undetermined.</li> </ul>	Swelling agent stimulates intestinal peristalsis causing the laxative effect.	<ul style="list-style-type: none"> <li>- <b>Contraindicated in:</b> ileus, stricture of the esophagus and GI area, acute inflammatory illnesses of the intestine, or of the esophagus and of the stomach entrance.. Also contraindicated in hemophiliacs or pt's w/ poor clotting. (Omega-3 FA favor production of prostaglandins that increase bleeding time.)</li> <li>- Very susceptible to oxidation; store in airtight opaque bottle in refrigerator.</li> <li>- Dose: 1 Tbsp./d.</li> </ul>

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Garlic <i>Allium Sativum</i> Allium Kwai	Allicin (active component)	<ul style="list-style-type: none"> <li>- Lower levels of total and LDL cholesterol.</li> <li>- Prevention of atherosclerosis.</li> <li>- Reduce systolic and diastolic BP in pt's w/ mild hypertension.</li> </ul>	<ul style="list-style-type: none"> <li>- Approved by German Com E to support dietetic measure for the treatment of hyperlipoproteinemia.</li> <li>- Reduce BS levels; antibacterial, antioxidant</li> <li>- Increase tone of intestinal smooth muscle an increase peristalsis</li> </ul>	Inhibits platelet aggregation by interfering with thromboxane synthesis; prolongs bleeding and clotting time.	<ul style="list-style-type: none"> <li>- Rare side effects but may include GI symptoms, changes to flora of intestine allergic reactions and hypotensive circulatory reactions.</li> <li>- May potentate the effect of antihypertensive and anticoagulant medications.</li> <li>- Dose: 4 gm of fresh garlic or 8 mg of essential oil. One fresh garlic clove, 1-2 times daily.</li> </ul>
Gentain <i>Gentiana Lutea</i>	Usually consumed as a tea. Irodoide monoterpenes, sugars, xanthone derivatives, volatile oil.	<ul style="list-style-type: none"> <li>- Stimulate appetite</li> <li>- Improve digestion</li> <li>- Simulate taste buds</li> </ul>	Causes increased saliva and digestive juices.	Increase by reflex action the flow of saliva and stomach secretions 2` to taste bud stimulation.	<ul style="list-style-type: none"> <li>- Side Effects: May cause headache and gastric irritation, resulting in nausea and vomiting.</li> <li>- <b>Contraindicated in:</b> presence of stomach or duodenal ulcers.</li> <li>- Dose: 1gm 2-4x/d.</li> </ul>
Ginger <i>Zingiber Officinale</i>	Contains volatile oil and olesresin.	<ul style="list-style-type: none"> <li>- Thought to possess carminative, stimulant, diuretic and anti-emetic properties.</li> <li>- Used for motion sickness, flu symptoms, upset stomach, symptomatic relief of hyperemesis gravidarum.</li> </ul>	<ul style="list-style-type: none"> <li>- Promotes secretion of saliva and gastric juices, and is a cholagongue.</li> <li>- In animals it acts as an antispasmodic.</li> <li>- In humans it increases the tone and peristalsis of the intestines.</li> <li>- Antiemetic.</li> </ul>		<ul style="list-style-type: none"> <li>- No reports of toxicity</li> <li>- Large overdoses carry potential for causing CNS depression and cardiac arrhythmias. Do not consume large amts during pregnancy</li> <li>- <b>Contraindicated in:</b> morning sickness, or in the presence of gallstone conditions except after consultaion w/ a doctor.</li> <li>- Dose: 2-4g/day rec. dose for hyperemesis 250mg, 4x/d</li> </ul>

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Ginkgo Biloba	<ul style="list-style-type: none"> <li>- Flavone glycosides and terpene lactones.</li> <li>- Standardized extract (GBE) from leaves contains 24% flavone glycosides and 6% terpene lactones.</li> </ul>	<ul style="list-style-type: none"> <li>- Improved memory</li> </ul>	<ul style="list-style-type: none"> <li>- Randomized DBPC multi center trial, 120mg/day for 52 wks pt's cognitive performance and social functioning improved for 6 months to 1 yr. (JAMA 278: 1327-32, 1997)</li> <li>- Improved concentration and memory deficits as a result of peripheral arterial occlusive dz.</li> </ul>	<ul style="list-style-type: none"> <li>- Inhibits binding of platelet-activating factor to membrane receptors.</li> <li>- Enhances cerebral blood flow.</li> <li>- <b>Anti coagulant</b></li> </ul>	<ul style="list-style-type: none"> <li>- Possible side effects: headache, dizziness, heart palpitations.</li> <li>- <b>Do not take with aspirin, Vit E, garlic, ginger, coumadin, heparin.</b></li> <li>- Dose: 40mg 3x/d. Should be taken consistently for 12wks to be effective.</li> </ul>
Ginseng, Asian <i>Panax Ginseng</i> American, Russian, Japanese	terperpenoid saponins, ginsenosides, panaxosides	<ul style="list-style-type: none"> <li>- Reported to be an adaptogen.</li> <li>- Increase resistance to physical, chemical and biological stress.</li> <li>- Build vitality.</li> </ul>	<ul style="list-style-type: none"> <li>- Extensively studied in animals, not in humans.</li> <li>- No proven efficacy for humans, long term studies needed.</li> </ul>	In animals: stimulate hepatic ribosome production.	<ul style="list-style-type: none"> <li>- Side effects: Not usually associated with serious adverse effects. Most common effects are nervousness, excitation, insomnia, and loose stools.</li> <li>- May have hypoglycemic effect especially with insulin, but also seen in Type II DM.</li> </ul>
Ginseng, Siberian eleuthero ginsana	Eleutherosides, coumarins, flavonoids, polysaccharides	<ul style="list-style-type: none"> <li>- Increased energy</li> </ul> <p>* Russian Studies were not double-blind and lacked adequate controls.</p>	<ul style="list-style-type: none"> <li>- Commission E recommends its use "as a tonic to counteract fatigue and weakness"</li> <li>- Reported in Russian literature as an adaptogen with a wide range of properties, including a positive effect on diabetes, hyperlipidemia, and on human physical working capacity.</li> </ul>		<ul style="list-style-type: none"> <li>- Side effects: slight languor or drowsiness immediately after administration.</li> <li>- <b>Contraindicated in:</b> pt's w/ hypertension.</li> <li>- Consumption as a tonic/adaptogen cannot now be recommended.</li> </ul>

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Glucosamine/ Chondroitin sulfate		Cure for osteoarthritis (maintenance and repair of cartilage)	<ul style="list-style-type: none"> <li>- More research is necessary, current studies show positive results.</li> <li>- Glucosamine can not influence the repair of cartilage when there is insufficient or no cartilage on joints.</li> </ul>	<p>Theories:</p> <ul style="list-style-type: none"> <li>- Inhibits activity of proteolytic enzymes that contribute to cartilage breakdown.</li> <li>- Stimulates cartilage cells to synthesize glycosaminoglycans and proteoglycans ( the building blocks of cartilage)</li> </ul>	<ul style="list-style-type: none"> <li>- Side Effects: Mild gastrointestinal symptoms (heartburn, diarrhea).</li> <li>- Results take up to 4wks.</li> <li>- Dose: 500mg 3x/d continued indefinitely.</li> </ul>
Golden Seal <i>Hydrastis Canadensis</i>	Hyrastine and berberine  Isoquinoline alkaloids	<ul style="list-style-type: none"> <li>-Used as an eye wash</li> <li>- Treatment for minor oral problems.</li> </ul>	<ul style="list-style-type: none"> <li>- Little clinical evidence for its effectiveness as an eyewash.</li> <li>- Weak antiseptic properties may be modestly effective in treating minor oral problems.</li> </ul>		<ul style="list-style-type: none"> <li>- Small amts of the plant can be ingested with no side effects.</li> <li>- Large doses are toxic.</li> <li>- Long term use can lead to digestive disorders, constipation, excitatory states, and hallucinations.</li> <li>- <b>Contraindicated in:</b> pregnancy and in children.</li> </ul>
Goto Kola <i>Centella Asiatica</i> Indian pennywort hydrocotyl	Madecassol, asiatic acid, glycoside asiaticoside  Triterpene acids	Promotes wound healing	Efficacy of drug has not been proven.		Side Effects: Contact dermatitis reported in some patients
Hawthorne <i>Crataegus Species</i>	Leaf with flower, flavonoids, procyanidins, catechins	<ul style="list-style-type: none"> <li>- Improve cardiac performance</li> <li>- Stabilize heart rhythm</li> </ul>	Monopreparations of hawthorn flower, fruit, and leaf are <b>not approved herbs</b> according to Commission E.	Peripheral vasodilator and positive inotropic agent (associated with lengthening of the refractory period).	Side effects: nausea and headache (mild).
HMB beta-hydroxy beta-methylbutyrate	<ul style="list-style-type: none"> <li>- Compound made in the body.</li> <li>- Metabolite of leucine</li> </ul>	<ul style="list-style-type: none"> <li>- Increase strength</li> <li>- Increase LBM</li> </ul>	<ul style="list-style-type: none"> <li>- Decreased stress-induced muscle protein breakdown, which will lead to increase strength and LBM.</li> </ul>	Theories: Essential component in cell membranes, stress alters enzymes which decrease normal HMB production	<ul style="list-style-type: none"> <li>- Safe and effective in short-term studies.</li> <li>- No long-term research has been conducted.</li> <li>Dose: 4g/day up to 4 wks</li> </ul>

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Horehound <i>Ballota Nigra</i>	7-acetoxymarrubiia volatile oils	- Expectorant - Antiemetic - Stimulant - antispasmodic - lower blood pressure	Drugs efficacy has not been adequately proven		- Side effects: none noted - Tea prepared from 2 tsp. cut herb steeped in one cup boiling water. - hard candy or lozenge.
Horse Chestnut Seed California buckeye Ohio buckeye	Dry extract manufactured from seeds, adj. to a content of 16-20% triterpene glycosides	Treatment of: - varicose veins - edema - hemorrhoids		Anti-exudative and vascular tightening effect via reduction of vascular permeability.	Side effects: pruritis, nausea, and gastric complaints.
Iceland moss <i>Lichen islandicus</i>		Cough suppressant			Do not use in large quantities over extended period of time due to lead content. Dose:1-2% infusion (1-2tsp./150mL) Drink 1 cup 3x/d.
Kava Kava Piper methysticum	Kava pyrones (kawain) found in rhizome (root).	Aids with anxiety and depression.	5 studies conducted in Germany found:  - Sedative effect and sleep enhancement (CND depressant effect).  - Reduced non- psychotic type anxiety.	Unknown      * Juice appears to be addictive. Pt's experiences shaking, headaches and other withdrawal symptoms	- Mastic ated kava causes numbness of mouth. - May adversely affect motor reflexes and judgement for driving. - Side effects: dry flaking yellow skin, scaly rash, red eyes, puffy face, and muscle weakness. - Do not use with EtOH, barbiturates and psychoactive agents. - Contraindicated in pregnancy, nursing, and endogenous depression.
Kombucha mushrooms stephania/magnolia Jin Bu Huan					Noted to be toxic but further information not found at this time.

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Licorice Root <i>Glycyrrhiza glabra</i>	Dried rhizome and roots containing at least 4% triterpene glycoside.	<ul style="list-style-type: none"> <li>- Treatment of peptic ulcers.</li> <li>- Expectorant</li> <li>- Lowers chol and TG</li> <li>- Anti-microbial</li> </ul>	<ul style="list-style-type: none"> <li>- German Commission E approved use for ulcer therapy but <math>\leq</math> 4-6 weeks of 200-400mg g/d.</li> <li>- Adequate evidence not available to support other uses ( decrease chol/TG, anti-plaque, anti-microbial, immunosuppressive, anti-anemic, and anti-hepatotoxic).</li> </ul>	Inhibits 2 enzymes that alter prostaglandin E and F.	<ul style="list-style-type: none"> <li>- Side effects: headache, lethargy, sodium and water retention.</li> <li>- Contraindicated w/ HTN, cardiac conditions, kidney dz, glaucoma. Or when using spironolactone or amiloride, or with corticoid treatment.</li> <li>- Potentates toxicity of cardiac glycosides such as those in digitalis due to K loss in urine .</li> </ul>
Lobelia	Pyridine-derived alkaloids	“Natural way to stop smoking.”		Thought to act as nicotine (initial action excites CNS, the depresses it).	<p><b>Not recommended. Risk of overdose is very high.</b></p> <ul style="list-style-type: none"> <li>- Overdoes results in respiratory failure, sweating, rapid heartbeat, decreased blood pressure, coma, convulsions and death.</li> <li>- <b>Never use with people on nicotine patches or with those who smoke (drastically raises heart rate and blood pressure)</b></li> </ul>
Ma Huang	See Ephedra				
Marshmallow root/ Mallow leaf <i>althaea officinalis</i> <i>malvae folium</i>	Consumed in form of tea	Cough suppressant			<ul style="list-style-type: none"> <li>- Side effects: Absorption of oral drugs taken simultaneously may be delayed.</li> <li>- Dose: 1-2 tsp. (5-6g) in 150mL water (daily dose 6g)</li> </ul>

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Melatonin	N-acetyl-5-methoxytryptamine	<ul style="list-style-type: none"> <li>- Sleep aid</li> <li>- Helps with jet lag</li> </ul>	<ul style="list-style-type: none"> <li>- Induces sleep but does not help maintain sleep.</li> <li>- May alter circadian rhythms and-or direct sleep-inducing effect.</li> <li>- Associated with a decrease in body temperature.</li> </ul>		<ul style="list-style-type: none"> <li>- Side effects: vivid nightmares.</li> <li>- <b>Contraindicated in:</b> children, people taking steroids, pregnant and nursing women, women trying to conceive, and those with severe allergies or autoimmune diseases.</li> </ul>
Milk Thistle holy thistle lady's thistle	From fruits ("seeds"), 70% contains silymarin a mixture of 4 isomers, including silybin	<ul style="list-style-type: none"> <li>- Antioxidant</li> <li>- Anti-hepatotoxic</li> <li>- For supportive treatment in chronic inflammatory liver disease and hepatic cirrhosis.</li> </ul>	<ul style="list-style-type: none"> <li>- German research shows potential for regeneration of hepatocytes.</li> </ul>	Alters structure of outer cell membrane of hepatocytes to prevent penetration of liver toxin into interior of the liver and formation of new hepatocytes	<ul style="list-style-type: none"> <li>- No known side effects or contraindications.</li> <li>- Dose 12-15g; formulations equivalent to 200-400 mg silymarin, calculated as silybinin. Teas do not work.</li> </ul>
Mullein flowers <i>Verbascum thapsus</i>		Cough suppressant			3-4 tsp. or 1/5-2g used to prepare tea, drink several times daily.
Myrrh- Myrrha <i>Commiphora molmol</i>	Oleo-gum-resin that contains from 1.5-17% (typically ~8%) of a volatile oil composed of more than 6 fragrant compounds.	<ul style="list-style-type: none"> <li>- Aid sore throats</li> <li>- Treat mouth sores (canker sores)</li> <li>- Added to mouthwash, used in fragrances and used as food flavoring.</li> </ul>			Side effects: Generally considered to be nonirritating, though several cases of dermatitis have been reported.
Peppermint Oil	Volatile oil composed primarily of menthol.	Used in treatment of: <ul style="list-style-type: none"> <li>- Irritable bowel</li> <li>- Abdominal pain</li> </ul>		Antispasmodic effects on smooth muscle.	<ul style="list-style-type: none"> <li>- Persons with hiatal hernia may experience worsening of symptoms due to its relaxing effect on lower esophageal sphincter.</li> <li>- <b>Contraindicated in:</b> pregnancy or in presence of gallstones.</li> </ul>
Plantain <i>Plantago lanceolata</i>		<ul style="list-style-type: none"> <li>- Cough suppressant</li> <li>- inflammatory conditions of the oral cavity</li> </ul>			Tea prepared from 2-3g of herb and 150mL water.

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Psyllium seed psyllium, Indian Plantago seed, flea seed, black psyllium	Dried ripe seed, containing mucilages.	Used for chronic constipation; irritable bowel.	- Acts as a bulk laxative. Mixed with water produces a mucilaginous mass. - Regulates intestinal peristalsis. - May lower cholesterol.		- Varying degrees of psyllium allergy including anaphylaxis, chest congestion sneezing and watery eyes. - Take with adequate fluid to avoid blockages. May inhibit absorption of lithium and carbamazeping
Pygeum <i>Pygeum africanum</i>	Major bark components are fat-soluble compounds. Standardized extract to contain 14% triterpenes (betasitosterol) and 0.5% n-docosanol.	Reduces symptoms of benign prostatic hyperplasia.	May increase bladder elasticity, reduce gland size and increase prostate secretions.	Partially blocks action of 5-alpha-reductase and aromatase, enzymes involved in dihydro-testosterone and estrogen production.	- Low incidence of toxicity reported. GI irritation ranging from nausea to severe stomach pain has been documented. - Dose: 100-200mg/d in 6 to 8 week cycles.
Sage Garden sage, true sage, meadow sage, scarlet sage, salvia officinalis	Contains 1-2/8% of a volatile oil.	Topical use as an antiseptic and astringent.		Exerts anti-microbial activity against Staphylococcus aureus.	- Side effects: Reports of cheilitis and stomatitis in some cases following ingestion of sage tea. - Large amounts may cause dry mouth or local irritation.
Saw Palmetto American dwarf palm tree, cabbage palm, Serenoa repens	Berries contain 1.5% of a volatile oil, steroidal sapins. A purified fat- soluble extract is standardized to contain 85-95% fatty acids and sterols.	Management of benign prostatic hyperplasia.	- Increases urinary flow rate  - Decreases residual urine volume	- Inhibits enzyme testosterone-5-alpha reductase. Prevents conversion of testosterone to dihydrotestosterone (DHT);  - Inhibits DHT binding to receptor sites, increasing metabolism and excretion of DHT.	Side effects minimal.  Headache reported.
Senega snake root <i>Polygala senega</i>		Expectorant			- Decoction prepared from 0.5 and 1 cup water. - Daily dose should not exceed 3g due to tendency to cause upset stomach, nausea, and diarrhea

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Senna <i>Cassia acutifolia</i> , Senna leaf, Black Draught Granules, Senokot	Leaves contain anthraquinones and sennosides	Laxative	Decreases intestinal transit time.		- Found in dieters teas.  - Chronic use may result in “laxative-dependency syndrome” characterized by poor gastric motility in the absence or repeated laxative administration.  - Abuse can result in diarrhea, altered electrolytes. Aggravates loss of potassium associated with use of diuretics.  - <b>Contraindicated in:</b> Crohn’s dz, colitis, and abdominal pain of unknown origin. children under 12 yrs and if pregnant or nursing.
Slippery elm		cough suppressant			Lozenges most effective form
St John’s Wort <i>Hypericum perforatum</i>  klamath weed, amber tough-and-heal, goatweed	Anthraquinone derivatives hypericin and pseudohypericin.	“Natural prozac”	Approved by Com E for treatment of :  - psychotic disturbances  - depression  - anxiety  - nervous unrest	- Exact mechanism unknown.  - Thought to inhibit serotonin reuptake by postsynaptic receptors, or maybe an MAO antagonist.	- Rare side effects, most common GI irritation (0.6%) allergic reaction (0.5%) or fatigue (0.4%), and restlessness (0.3%). - No known drug interventions but not recommended to be used with other antidepressants (SSRIs, MAOIs) - May cause photosensitivity.
Tea Tree Oil Dessert essence, <i>Melaleuca alternifolia</i>	Essential oil obtained by steam distillation of leaves. Main constituent is terpin-4-ol (at least 30%)	Used to treat: - acne - tinea pedis (athlete’s foot)	Anti-microbial effects w/out irritating sensitive tissues.		- Side effects: allergic reactions including contact eczema and dermatitis.  - <b>Do not ingest.</b>

Herb/Supplement	Definition	Claims	Research	Mechanism of Action	Side Effects, Dosing...
Thyme		Expectorant			Tea prepared from 1 tsp. herb per cup water, drink up to 3s/d; may be sweetened with honey which also acts as a demulcent.
Turmeric root Turmeric, curcuma, Indian saffron, <i>Curcuma aromatica</i>	Rhizome, contains volatile oil consisting of about 60% of sesquiterpene ketones known as turmerones.	Digestive aid	Stimulates production of bile.		- No side effects reported.  - <b>Contraindicated in:</b> pt's with obstruction of bile passages, gallstones, and in pt's w/ pancreatic cancer.
Valerian Root <i>Valeriana officinalis</i>	Volatile essential oils (monoterpenes and sesquiterpenes) from dried root and rhizome.	Sleep aid (for sleep disorders based on nervous conditions).	- Reduced sleep latency; improved perception of sleep quality.  - Delayed onset of action 2-4wks therapy needed to achieve results.	- Weakly binds GABA and benzodiazepine receptors <i>in vitro</i> .  - May also inhibit degradation of GABA.	- Side effects: mild headache, excitability uneasiness. Too much may cause severe headache, nausea, morning grogginess, and blurry vision.  - <b>Caution when driving or operating machinery.</b>  - <b>Do not take with sedatives, anxiolytics or alcohol.</b>
Yam, wild	Diosgenin	- Believed to relax muscles of the abdominal area.  - Anti-inflammatory	No clinical trials to assess efficacy have been published.	Diosgenin has no hormonal activity and is not converted into either estrogen or progesterone in the body.	No known toxicity.
Yohimbe pausinyntalia yohimbe  * FDA has declared Yohimbe unsafe and ineffective for over the counter sale.	Bark of Yohimbe tree contains 6% yohimbine, an indole analog. Also obtained from <i>Aspidosperma quebracho blanco</i> and <i>Rauwolfia serpentina</i> . Sometimes combined with hormones such as methyltestosterone.	- Improved physical performance.  - Aphrodisiac  - Used to treat impotence.	- Increases norepinephrine levels  - No proof of anabolic effects.  - <b>Contraindicated in:</b> renal or liver dz, - Do not use with MAO Inhibitors or Blood Pressure Meds.	- Competitive antagonist for alpha-2-adrenergic receptors (increasing norepinephrine and epinephrine).  - Dilates peripheral and mucous membrane blood vessels. CNS stimulant.	- <b>Not recommended.</b> - Side effects: increased BP, anxiety, urinary output, and headache. High doses may cause severe hypotension, abdominal distress, weakness, CNS stimulation and paralysis. - <b>Also linked to kidney failure, seizures, coma and death.</b>

