

# MUSCULOSKELETAL SYSTEM

## ACTION CATEGORIES & HERBS

### ALTERATIVES:

***Arctium lappa*** (Burdock, *Asteraceae*, Composite or Aster Family)

Rids the body of long term toxic material, cleanses lymphatic system, soothes kidneys.

Has inulin sugars to be soothing to GI and acts as prebiotic, helps LV process oil, cleansing the body.

TCM--seeds for respiratory ailments.

This is the root of the end of the 1st year plant, rosette at the ground--energy held there to then go up the stem to make the burrs--after 2nd year.

***Berberis vulgaris*** (Barberry, *Berberidaceae*, Barberry Family)

Berberine inhibits production of pro-inflammatory cytokines and necrosis factor NfKB--to be used with OsteoArth.--

inflammatory molecules setting up a loop where synovia of the joint where the immune cells are active--the berberine stops this and helps to reduce hyperinsulinemia

***Equisetum arvense*** (Horsetail, *Equisetaceae*, Horsetail Family)

High in silica (SiO<sub>2</sub>), also inhibits elevation of serum triglycerides and cholesterol (not main function). Main: Provide minerals and diuretic. As diuretic can remove excess uric acid (gathering in joints) causing inflammation and breakdown.

***Guaicum officinale*** (Lignum vitae, *Zygophyllaceae*)

High resin content, excellent for congestion, anti-rheumatic, anti-inflammatory

\$300 a lb!!! (needed for LT use)--made from the hardwood of the tree--"tree of life"--stacked kindling in boxed form and build a fire inside of it and the head allows the resin to escape, forming tears (resin scraped for use)

One of best antirheumatic compounds. (\*\*\*)this is happening to a lot of herbs i.e. NEVER buy wild Echinacea etc.)

***Iris versicolor*** (Blue Flag, *Iridaceae*, Iris Family)

Stimulates the entire glandular system, the lymphatics and the skin.

A wetland plant, used for eruptive skin disease when lymph and LV affected (overlap in Kupffer cells).

***Menyanthes trifoliata*** (Bogbean, *Menyanthaceae*, Bogbean Family)

A wetland plant, grows in bogs/swamps near pond lilies(nymphaea), works through Liver to remove toxins which would lead to inflammatory products in your body.

Aside: Kidneys process water soluble elements, Liver processes everything and what can be turned into water soluble, it does so that the Kidneys can process, otherwise bile is involved.

***Phytolacca decandra*** (Pokeweed, *Phytolaccaceae*, Pokeweed Family)

Pulls fluids out of tissues/lymphatics.

**Strongest**--used in CA treatment--powerful lymphatic--pushes fluids into lymph filters into the bloodstream -->urination or back into tissue (i.e. like a cleaning mechanism) USED with CAUTION, mitigated with mild herbs.

***Rumex crispus*** (Yellow Dock, *Polygonaceae*, Buckwheat Family)

Cleanses blood, astringent/laxative (normalizing effect).

**SAFE!** Works through Liver and gentle for stimulating Liver activity--causing least amt of cathartic, one below laxative--gentle and thorough, improves iron absorption.

***Smilax spp.*** (Sarsaparilla, *Smilacaceae*, Sarsaparilla/Greenbrier Family)

Nutritive sugars. Spring tonic--John prefers North American version (grows in Mexico, although called "Jamaican") --sometimes the herbs are substituted and not necessarily the same energetic patterns. Good for moving lymph, esp. eruptive skin conditions--toxins overloaded (sweat glands, oil glands) and going through blood and this herbs re-direct to Kidneys via the blood. Also an adaptogen. A "Cowboy drink"---root beer flavour with benefit of giving energy! (Where ginseng wasn't available).

<p><b><i>Urtica dioica fol.</i></b> (Nettle leaf, <i>Urticaceae</i>, Nettle Family)  Very high in calcium(nerve transmission), good for inflamed joints, edema, anti-allergenic, helps liver process and produce blood proteins, reducing allergic responses and subsequent inflammation.  <b>Tea:</b> diuretic and nutritive  <b>Urtication/ Rubifacient:</b> fresh plant as inserts formic acid via its needles, forms a temporary reaction on skin to counteract inflammation (benefits can last for weeks). Method: Swack joints--burns at first and then feel 10 years younger!  Older persons don't react as strongly.  Aside: Kerosene (from pine sap) and cayenne can benefit joints.</p>
<p><b>ANALGESIC:</b></p>
<p><b><i>Arnica montana</i></b> (Mountain Arnica, <i>Asteraceae</i>, Composite or Aster Family)  <b>*FIRST AID to have on hand</b> good for mental and physical shock, excellent for broken bones, dental extractions <b>Only wildcrafted at higher altitudes.</b> Being substituted from India.  Rupture of tissue, large hematoma, can watch it break down and turn green (compounds removed)--with cream/oil or tincture diluted* extract---one of the best tincture/ salve extracts for <b>emergency use on UNBROKEN skin trauma.</b></p>
<p><b><i>Corydalis ambigua</i></b> (Corydalis, <i>Papaveraceae</i>, Poppy Family)  Helps increases pain tolerance.  Deep bone pain of Cancer.  In TCM--Yan Hu Suo --blockages of qi that turn into tumours--opens the flow of life force.  Note: Pain and heat is a sign of blockage of qi, no flow--benefit of acupuncture!</p>
<p><b><i>Eschscholzia californica</i></b> (California Poppy, <i>Papaveraceae</i>, Poppy Family)  A variety of <b>isoquinoline alkaloids</b> (small amounts of morphine and codeine) account for the analgesic effect (mild and mild sedative). Can help pain tolerance, keeping the pain to yourself! Used for patients who want to feel better but don't need to tell the world about it.</p>
<p><b><i>Gelsemium sempervirens</i></b> (Jasmine, <i>Gelsemiaceae</i>, Jasmine Family)  Work in NS, if extreme pain of meningitis (head, neck, pain and fever) perfect herb for symptoms, but does not treat infection.</p>
<p><b><i>Lactuca virosa</i></b> (Wild Lettuce, <i>Asteraceae</i>, Composite or Aster Family)  Dried latex or juice of the plant, Excellent anodyne and sedative (i.e. in pain and can't sleep).</p>
<p><b><i>Myristica fragrans</i></b> (Nutmeg/mace, <i>Myristicaceae</i>, Nutmeg Family)  Used in massage oils for muscular pain. Oil extract, locally anesthetizing.</p>
<p><b><i>Piper methysticum</i></b> (Kava Kava, <i>Piperaceae</i>, Piper Family)  Kava lactones or pyrones. Anesthetize GI and UT and anxiolytic. Doesn't address the pain per se.</p>
<p><b><i>Piscidia erythrina</i></b> (Jamaican Dogwood, <i>Fabaceae</i>, Pea Family)  Powerful sedative, cooling to central nervous system and musculoskeletal activity  <b>Not to be taken before operating vehicles.</b> This is a 'big gun'. Consider using another herb first as this is the strongest.</p>
<p><b><i>Syzygium aromaticum</i></b> (Clove, <i>Myrtaceae</i>, Myrtle Family)  Eugenol is classified as a dental analgesic  Added to oil based salve or cream, perfuse local tissue, numbs nerves and reduces pain transmission.</p>
<p><b><i>Valeriana officinalis</i></b> (Valerian, <i>Caprifoliaceae</i>, Honeysuckle Family)  Anti-spasmodic, sedative---A types are mentally aggressive, they are more stimulated by valerian More body conscious respond better to the relaxation. Can be used topically.</p>
<p><b><i>Viola tricolor</i></b> (Heartsease, <i>Violaceae</i>, Violet Family)  flavonoids, <b>salicylates</b>, traditionally used to 'mend a broken heart.' Fresh paste poultice or drink as a tea.</p>

ANTI-INFLAMMATORIES:
Rheumatoid arthritis is an immune based inflammatory condition--vascular tissues are more permeable to cytokines and tissue is being attacked by rest of body. This action intercepts this process. Improper feedback loops can lead to chronic, degenerative tissue damage.
<i>Angelica archangelica/atropurpurea</i> (Garden Angelica, <i>Apiaceae</i> , Carrot or Parsley Family) GI bitter and in the blood a diuretic the compounds are anti-inflammatory--a cooling herb and its cousin the <i>Apium graveolens</i> is John's fav--diuretic to spec. remove uric acid from tissues.
<i>Apium graveolens</i> (Celery seed, <i>Apiaceae</i> , Carrot or Parsley Family) Spoonful into tea***, soup or sauerkraut, or ground in mortar and pestle, diuretic.
<i>Betula species</i> (Birch, <i>Betulaceae</i> , Birch Family) High in tannins, betulinic acid containing herbs--familiar flavour of wintergreen and there is a salicylate. Can get birch juice/syrup--nourishing in the spring, can also take the leave and drink as a tea. Chaga that grows on the tree is a betulinic acid aggregator and lives on the sap, and concentrates it 40x (immunomodulator). Also learning about the Betulinic family is that it repairs mitochondria!!!** i.e. in CA cell death related in part to lack of mitochondria (reverses fermentative glycolysis)**look for research for next CA In a few weeks--pollen season begins--to treat yourself is to expose yourself to it, and attempt to calm your bodily response.
<i>Boswellia thurifera</i> (Frankincense, <i>Burseraceae</i> , Torchwood Family) One of best anti-inflammatory we have that crosses brain tissues, resinous constituents can pass through the blood brain barrier. (Can be applied to scalp to have effect on tumour beneath). Effect GI tract and blood stream (uncertain of source of benefit). For mms aches and pain. In Middle East (Iran, and Persia and N. Africa) doing excellent research --topical. Used topically for patients with RA, and trigeminal neuralgia.
<i>Capsicum annuum</i> (Cayenne Pepper, <i>Solanaceae</i> , Nightshade Family) Blocks transmission of substance P-- Recipe: Myrrh, rubbing etOH, cayenne, opening up the blood supply to move pain out (makes tissue expand vs increasing permeability).
<i>Curcuma longa</i> (Turmeric, <i>Zingiberaceae</i> , Ginger Family) <i>NB</i> : Research of products often a conflict of interest with these "best product claims" India-- <b>boil in milk</b> and drink or <b>heat in oil (i.e. ghee), add turmeric then add rice, lentil and chickpeas</b> Blk pepper (piperidine) irritating the GI lining and allowing the curcuma entrance into the blood faster and absorption higher ALWAYS compounded with fat for high absorption.
<i>Dioscorea villosa</i> (Wild Yam, <i>Dioscoreaceae</i> , Yam Family) Saponins and similar to and stimulates production of corticosteroids. Conventional medicine: prednisone (exogenous cortisone). This herb doesn't suppress the immune response, but does suppress the inflammation of the body (body's intelligence to balance body's own cortisol response).
<i>Filipendula ulmaria</i> (Meadowsweet, <i>Rosaceae</i> , Rose Family) Salicylates, Colitis --, can use for a bleeding ulcer, without the irritation. Using Salix--will begin to irritate ST. Remember to address the cause though, will provide only temporary relief.
<i>Glycyrrhiza glabra</i> (Licorice, <i>Fabaceae</i> , Pea Family) Corticosteroids, mucilage. Used with <i>Dioscorea</i> --feeds the adrenals and helps endogenous corticosteroid production. Don't use the concentrated version in formulations--otherwise can change K.
<i>Guaicum officinale</i> (Lignum-vitae, <i>Zygophyllaceae</i> ) Resins, really works, difficult to find/expensive.

<p><b><i>Menyanthes trifoliata</i></b> (Bogbean, <i>Menyanthaceae</i>, Bogbean Family) Removal of inflxn products from LV.</p>
<p><b><i>Populus candicans</i></b> (Poplar/Aspen, <i>Salicaceae</i>, Willow Family) Resin, balm of Gilead Relative of birch--populus buds (when resin visible prior to cotton stage) gives a sticky coating that the bees gather to make propolis !!!!! Cook buds in coconut oil, extract into oil and have strong salicylate in aromatic oil (Natives used animal fat) USED topically. AKA balm of Gilead or bag balm (Lee Valley sells it although petroleum based!) ** Ethnobotanist study of people of Nfld--home remedies over 100 years--John K. Crellin, prof at Dal</p>
<p><b><i>Salix alba</i></b> (White Willow, <i>Salicaceae</i>, Willow Family) Salicylates. Water soluble. For Short Term use. Pain more than spasm, if more spasm, use Valerian. Apply heat locally after injury and drink, cooling to address nerves.</p>
<p><b><i>Scutellaria baicalensis</i></b> (Baikal Skullcap, <i>Lamiaceae</i>, Mint Family) Internal use. Cytokine storm --when virus enters immune system (naive) overreacts i.e. a person with RA and exacerbates with food or exposure.</p>
<p><b><i>Viburnum prunifolium/opulus</i></b> (Blackhaw/Cramp Bark, <i>Caprifoliaceae</i>, Honeysuckle Family) Antispasmodic and contins salicylates--internal use. Aside: Cimicifuga--men would say for arthritis (looks like gnarly hand) women would say for stopping miscarriage etc.</p>
<p><b><i>Viola tricolor</i></b> (Heartsease, <i>Violaceae</i>, Violet Family) Mucilage, cooling.</p>
<p><b><i>Zingiber officinalis</i></b> (Wild Ginger, <i>Zingiberaceae</i>, Ginger Family) Cousin of curcuma, if reduce inflammation in GI --overall inflammatory stress in body improved, added to tea.</p>
<p><b>ANTISPASMODICS: Reduce spasms</b></p>
<p><b><i>Cimicifuga/Actea racemosa</i></b> (Black Cohosh, <i>Ranunculaceae</i>, Buttercup Family) For congestion of cerebrospinal fluids(throughout NS), with cramping and spasms, antispasmodic for liver/gallbladder Nervousness, spasms, convulsions, menstrual cramps.</p>
<p><b><i>Eschscholzia californica</i></b> (California Poppy, <i>Papaveraceae</i>, Poppy Family) Mild, relaxing, sedative.</p>
<p><b><i>Lactuca virosa</i></b> (Wild Lettuce, <i>Asteraceae</i>, Aster or Composite Family), Much stronger, sedative.</p>
<p><b><i>Lobelia inflata</i></b> (Pukeweed, <i>Campanulaceae</i>, Harebell Family) Internally anti-spasmodic, amazing for transdermal application in an etOH or oil extract, or fomentation with mullein (Dr. Christopher), Farm folk mixed it with fat/ oil or kerosene to use topically.</p>
<p><b><i>Paeonia lactiflora</i></b> (White Peony, <i>Paeoniaceae</i>, Peony Family) Not topical--improves circulation in gut--not often thought of as antispasmodic, although it clears congestion that would cause spasms.</p>
<p><b><i>Valeriana officinalis</i></b> (Valerian, <i>Caprifoliaceae</i>, Honeysuckle Family) Smooth, striated muscle types and excellent for vigorous exercise folk.</p>
<p><b><i>Viburnum opulus</i></b> (Cramp Bark, <i>Adoxaceae</i>, Adoxa Family) Vigorous exercise folk--lower back issues, as tincture or tea.</p>

**DIURETICS: Remove compounds that gather in the inflamed tissue, as circulation has been reduced, and permeability is allowing a 'swamp' to occur**

*Achillea millefolium* (Yarrow, *Asteraceae*, Aster or Composite Family)

*Apium graveolens* (Celery Seed, *Apiaceae*, Carrot or Parsley Family)  
Inc diuresis to remove uric acid \* a favourite

*Betula species* (Birch, *Betulaceae*, Birch Family)  
Analgesic properties too.

*Eupatorium perfoliatum* (Boneset, *Asteraceae*, Aster or Composite Family)  
Also anti-cytokine--blocking certain cytokine activity (IL-2 for fever?), Immune modulator.

*Eupatorium purpureum* (Gravel Root, *Asteraceae*, Composite or Aster Family)  
Grows near water/ river banks, likes to be in watery places, helps dissolve mineral deposits/calculi.

*Filipendula ulmaria* (Meadowsweet, *Rosaceae*, Rose Family)  
Astringes, 'squeezes' fluids out of tissues, minor diuretic, astringent moreso and has analgesia from salicylates.

*Viola tricolor* (Heartsease, *Violaceae*, Violet Family)  
Topically, when fresh, made into poultice excellent, mucilaginous and draws things out.

#### **CIRCULATORY STIMULANTS:**

When patient has arthritis, the overall sensation to cold. Stiffness is irritated by cold.

To warm them, you bring more blood to their joints

However, can use alternating hot/cold **hydrotherapy** (Father Kneipp) --Princenez (sp?) was his teacher

"End in cold"--Spas in Europe are more medical all with water, clay, salt water (review: Nature Cure NDNR section at end)

Book company to find the father Kneipp

John Harvey Kellogg (7th Day Adventist) also has excellent book on hydrotherapy (added Galvinism)--Mockumentary--Road to Wellville\*\*\*

Air, water, fire (light), earth are the elements of healing that we need

Anywhere there are hot springs (i.e. Western Canada)---bring a shovel and dig a whole

Dead Sea is super (lowest point of Earth so right UV mix comes onto skin)--NaCl is constantly building--and formed over marsh and highly mineralized (can buy Dead Sea Salts, epsom and sea salt) to clean skin and relax muscles\*\*\*after this take a bath, do not use soap (8-9pH), pH too high (alkaline) can burn skin.

**Dose per bathtub:** 1 kilogram in full deep tub is major therapeutic dose--for bleeding psoriatic arthritis (when patient has Ag lesions--if so do not tear them off, will fall off naturally)--1 or 2 soaks a week, more so in winter will help

Skin grows at up to 7x a rate than other tissues---shedding toxins

½ kg is moderate tx bath

¼ kg is light tx bath

--need to figure out the wt of scoops

NB: Himalayan salt --once a sea--can also be put in tub

Those with skin problems--heal

Utah--also high levels of saline

Ancaster--sulphur spring will be odorous (i.e. rotten eggs)

*Capsicum annuum* (Cayenne Pepper, *Solanaceae*, Nightshade Family)

Topically or internally brings blood to surface. In formula less than 5%. Feet in foot tub of lukewarm water, a tbs of powdered cayenne (stir in first, don't want it to clump onto foot), will have beads of sweat, cold and chill will be gone, pain gone, or sprinkle in socks and keep blood in feet. Does not raise a welt.

<p><b><i>Rosmarinus officinalis</i></b> (Rosemary, <i>Lamiaceae</i>, Mint Family) Cerebral circulatory stimulant.</p>
<p><b><i>Zanthoxylum clava-herculis</i></b> (Prickly Ash, <i>Rutaceae</i>, Citrus Family) <i>Bring blood from center to periphery--its good when it tingles (same as what tingles in Echinacea).</i></p>
<p><b><i>Zingiber officinalis</i></b> (Wild Ginger, <i>Zingiberaceae</i>, Ginger Family) Warms in center (less dramatic than cayenne). Topical application- Put a face cloth over hot/steaming water with ginger, cloth applied to sore joints---and placed over kidneys-- will be a wonderful external way to bring Kidneys back to life! put cold water and some baking soda on the back to neutralize reaction, if you don't, there could be welts. Next day, will see outline of kidneys. Looks blackish. May only need to do a few times at all-- Pot needs to have a diameter to cover someone's back and ginger--simmers for 1 hour and sliced perpendicular to fibre (good chunk).</p>
<p><b>IMMUNOMODULATORS:</b></p>
<p><b><i>Astragalus membranaceus</i></b> (Milk Vetch, <i>Fabaceae</i>, Pea Family) Normalizes reactivity/reponses of immunological tissues/glands in gut, nourishing.</p>
<p><b><i>Glycyrrhiza glabra</i></b> (Licorice, <i>Fabaceae</i>, Pea Family) Adaptogen, anti inflammatory, and adrenocortical stimulant.</p>
<p><b><i>Glycyrrhiza uralensis</i></b> (Chinese Licorice, <i>Fabaceae</i>, Pea Family) Weaker adrenal stimulant.</p>
<p><b><i>Panax quinquefolius</i></b> (North American Ginseng, <i>Araliaceae</i>, Ginseng Family) Cooling</p>
<p><b><i>Withania somnifera</i></b> (Ashwagandha, <i>Solanaceae</i>, Nightshade Family) Mild relaxant.</p>
<p><b>DEEP IMMUNE ACTIVATION</b> <i>Mushrooms tincture at Viriditas --polypores --woodland, water soluble polysaccharides</i></p>

## SUMMARY OF ACTIONS

### ALTERATIVES

*Arctium lappa, Berberis vulgaris, Equisetum arvense, Iris versicolor, Mahonia aquifolium, Menyanthes trifoliata, Phytolacca decandra, Rumex crispus, Smilax spp., Urtica dioica fol.*

### ANALGESIC

*Arnica montana, Corydalis ambigua, Eschscholzia californica, Gelsemium sempervirens, Lactuca virosa, Myristica fragrans, Piper methysticum, Piscidia erythrina, Syzygium aromaticum, Valeriana off., Viola tricolour*

### ANTI-INFLAMMATORIES

*Angelica archangelica, Apium graveolens, Betula spp., Boswellia thurifera, Capsicum spp.,*

*Curcuma longa, Dioscorea villosa, Filipendula ulmaria, Glycyrrhiza glabra, Menyanthes trifoliata, Populus candicans, Salix alba, Scutellaria baicalensis, Viburnum prunifolium, Viola tricolour, Zingiber off.*

#### **ANTISPASMODICS**

*Cimicifuga racemosa, Eschscholzia californica, Lactuca virosa, Lobelia in ata, Paeonia lacti ora, Valeriana off., Viburnum opulus*

#### **DIURETICS**

*Achillea millefolium, Apium graveolens, Betula spp., Viola tricolour Eupatorium perfoliatum, Eupatorium purpureum, Filipendula ulmaria,*

#### **CIRCULATORY STIMULANTS**

*Capsicum spp., Myrica cerifera, Rosmarinus off., Zanthoxylum clava herculis, Zingiber off.*

#### **IMMUNOMODULATORS**

*Glycyrrhiza glabra, Glycyrrhiza uralensis, Panax quinquefolius, Withania somnifera,*

DEEP IMMUNE ACTIVATION