

CLINICAL HERBAL MEDICINE: A SPECIAL FOCUS ON CHRONIC DISEASES

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Introduction

- Herbal medicine (herbalism) - study and use of medicinal properties of plants
- Plants synthesize wide variety of chemicals used to perform important biological functions
- At least 12,000 compounds have been isolated (less than 10% of the total)
- Chemical compounds in plants mediate their effects on human body through processes identical to those already well known for drugs
 - thus herbal medicines do not differ greatly from conventional drugs in terms of how they work

- This enables herbal medicines to be as effective as conventional medicines
 - but also gives them the same potential to cause harmful side effects
- Many currently available pharmaceuticals have long history of use as herbal remedies (e.g. aspirin, digitalis, quinine, opium etc)
- Use of herbs to treat disease is almost universal especially among non-industrialized societies
- In Europe and America, evidence is emerging of increasing usage as effectiveness is established

- Majority of humans either rely on such products (often due to lack of other alternatives) or that herbal medicines are chosen consciously as an alternative to mainstream medicine
- In some cases, this knowledge is documented in an extensive historical written body of scholarly and applied writings

Chronic Diseases

- diseases that are constant, habitual or inveterate
- diseases that are continuing for a long time or reoccurring frequently
- Examples: diabetes, hypertension, asthma, AIDS, cancer and kidney disease, epilepsy, bipolar mood disease, arthritis, and liver disease

Plants used in management of chronic diseases

- **Beetroot Juice:**

- Drinking a cup of fresh beetroot juice daily can have amazing effect on health.
- Mechanism: Nitrate content causes vasodilatation (useful in treatment of hypertension)
- It contains vitamin C – antioxidant.

- **Cayenne Pepper**

- A natural vasodilator (used in management of cardiovascular disorders)

- **Cinnamon**

- Lowers blood sugar
- Has anti – inflammatory properties



- **Coconut Water**

- Maintains good cardiovascular health
- Contains high K⁺ that helps in managing blood pressure.

- **Almond**

- Contains flavonoids: lowers BP, antioxidant
- Potassium: Lowers BP
- Omega – 3 fatty acids: (lower cholesterol) level
- Regulate blood pressure

- **Garlic**

- contains allicin which gives it its antibacterial, antiviral and antioxidant properties.
- Allicin has anti-hypertensive qualities which lowers cholesterol & BP levels.
- Controls diabetes
- Treats morning sickness
- Contains vitamins (antioxidants)
- Promotes healthy heart
- treats migraine
- prevents cold and flu
- suppresses cough
- prevents various types of cancer
- reduces arthritis pairs
- reduces menstrual pain.



- **Tumeric** (*Curcuma Longa*)
 - Also known as *curcumin*
 - It reduces inflammation and improves cardiovascular health.
 - Is an anti-inflammatory herb
 - is an effective pain reliever
 - often recommended for the treatment of cancer cataracts and Alzheimer's disease.
 - When cooking, black pepper or dried ginger are often added to help activate turmeric



- **Hawthorne**

- Also called *Crataegus* is a popular herb used in the treatment of cardiovascular conditions such as angina, congestive heart failure, coronary artery disease, circulatory problems and blood pressure abnormalities.
- Their flowers, leaves and berries are used.



- **Lindin**

- Belong to *Tilia* family
- Its active constituents include:
 - Flavonoids, which are antioxidants
 - Volatile oil and mucilage, which are anti-inflammatory
- Good for hypertension associated with atherosclerosis and stress-induced hypertension.

- **Dandelion (*Taraxacum officinale*)**

- Also known as Pesky weed
- The leaves are useful in hypertension- function as diuretics that bring BP down



- **Ginger**

- detoxification of lungs
- has properties similar to garlic



- **Caffeine**

- inhibition of phosphodiesterase, thereby enhancing accumulation of cAMP.
- used in the management of asthma.

- **Eucalyptus oil**

- relieves symptoms of asthma



- **Honey**
 - Has mucolytic effect.
 - Effective in cough
- **Mustard oil**
 - Massaging with mustard oil will relief various symptoms of asthma.
- **Lemon**
 - Has antioxidant properties and relieves asthma
 - Squeeze the juice with half glass of water and drink.
- **Onions**
 - It has anti-inflammatory properties that helps in relieving the constriction of bronchi smooth muscle in asthmatic conditions.

- **Burdock root** (*Articum lappa* or *Acticum minus*)
 - Contains fatty oils (along with its sterols and tannins) contribute to burdock's reputation as an anti-inflammatory (2 teaspoons full of dried root relieves pain).
- **Flax** (*Linum usitatissimum*)
 - Flax seed is one of the best vegan sources of omega – 3 which is important for a strong immune system and for fighting inflammation in arthritis.



- **Nettles** (*Urtica dioica*)
 - contains vitamins A, C, D, and B complex, protein, calcium, phosphorus, Iron and magnesium
 - has strong anti-inflammatory properties.
- **Licorice** (*Glycyrrhiza glabra*)
 - acts as a natural corticosteroids
 - decreases free radical at the site of inflammation & inhibits the enzyme production involved in the inflammatory process.
 - **Note:** It is not good for those who have BP issues. Large regular intake at 20g or more may cause headache, high BP and heart problems.



- **Salmon**

- Rich in Omega – 3 fatty acids, it can help a lot during asthmatic attacks.
- Omega – 3 fatty acids help the lungs to react in a better manner to irritants causing asthma.
- It reduces air way narrowing and inflammation.

- **Figs**

- The nutritional properties of Fig promotes respiratory health and helps to alleviate breathing difficulties

- **St. John's Wort**

- Improves depression and anxiety after 4-6 weeks
- Capsules containing 300mg (standardized to 0.3% hypericin) taken three times days is very beneficial.



- **Sun Flower Seeds**

- Rich in B₆ while *Asparagus, Parsnips, citrus* fruits, *beets, spinach* are rich in folate. These are food sources of neurotransmitters.

- **Pumpkin Seed**

- Provides high level of amino acid tryptophan which, in the brain, promotes synthesis of serotonin.
- Normal levels of serotonin provide a calm sense of well-being.
- Its leaves are good for management of hypertension.

- **Ginkgo biloba**

- Contains precursors for neurotransmitters which alleviate depression

- standardized extract is helpful for elderly, depressed persons who also had dementia.



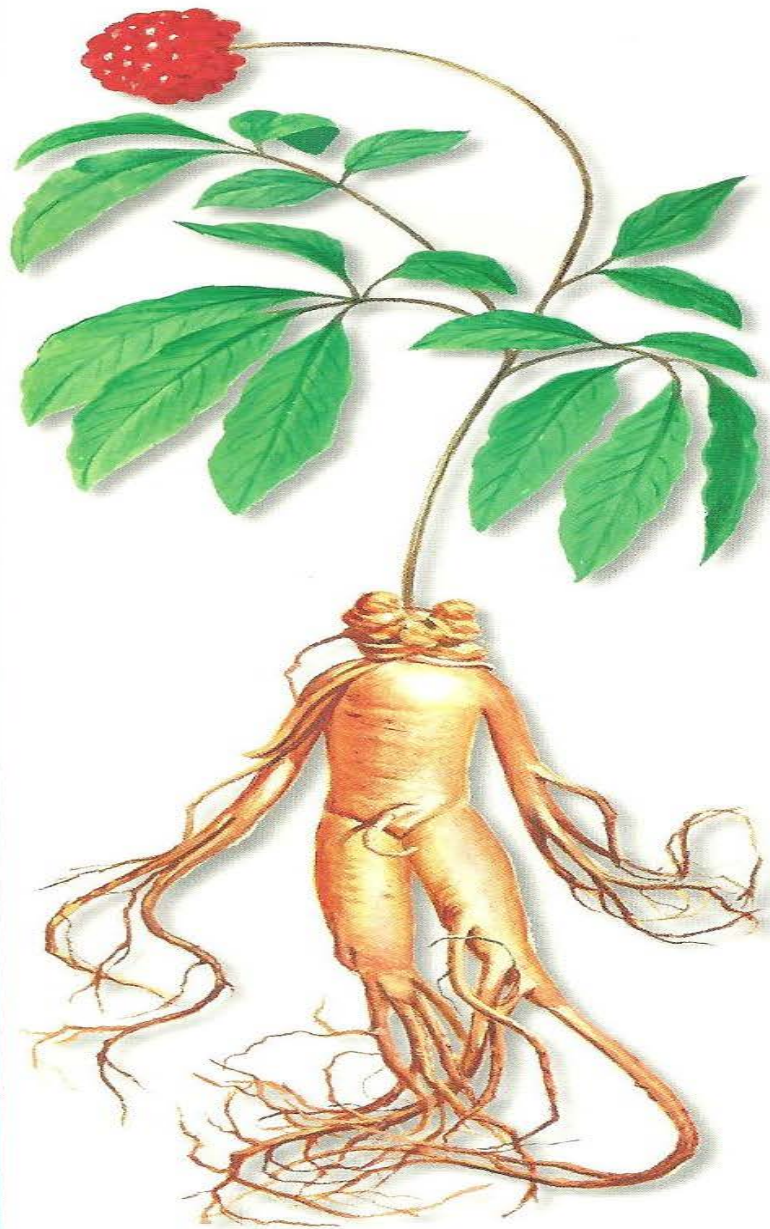
- **Chamomile**

- Relieves anxiety, cramping and muscle pain.



- **Ginseng**

- It enhances general metabolic status
- It enhances neuronal status
- can be used to improve the health of people recovering from illness.
- increases a sense of wellbeing and stamina & improves both mental and physical performance.
- can be used to help with erectile dysfunction, hepatitis C and symptoms relating to menopause
- can also be used for lowering blood glucose levels & controlling blood pressure.
- has been shown to reduce with levels of stress in both men and women. Those that take ginseng regularly are able to withstand higher amounts of physical and emotional stress.



INTERNAL USE

① Ginseng is usually presented as **pharmaceutical preparations** (extract, capsules, liquid, etc.). The usual dose is 0.5-1.5 g of root powder per day, in a single or several intakes.

Ginseng action is slow but accumulative. Ginseng effects will be noticeable after two or three weeks of treatment.

We recommend that you take ginseng continuously for a period of time (a maximum of two or three months), and stop for one or two months before starting a new treatment.

Scientific synonyms.

Panax schinsegn Nees.

French. Ginseng.

Spanish. Ginseng.

Habitat. Native to mountainous and cold areas of Korea, China, and Japan, where it is widely cultivated.

Description. Plant of the Araliaceae family, growing from 20 to 50 cm high. Its flowers grow in groups of five. It has purple flowers, which give birth to small fruits (berries). The root is fleshy, greyish or white in color, from 10 to 15 cm large, and an average of 200 g weight.

Parts used. The root after five years of age.

- **30. SAME** (*S – adenosylmethionine*)
 - is a synthetic form of a compound formed naturally in the body from essential amino acid methionine and adenosine triphosphate (ATP), the energy producing compound found in all cells in the body.
 - is believed to work by being a methyl group donor in many reactions in the body, and is converted to a compound called S-adenosyl-homocysteine.
 - is effective in the treatment of osteoarthritis. It diminishes osteoarthritis pain as effectively as NSAIDs medication.
 - is used in the treatment of depression.
 - increases the availability of neurotransmitter serotonin and dopamine.
 - DOSE: 200mg/day.

Natural Treatment of Depression

1. **Move your body**

- Exercise releases happy-making endorphins which act like natural anti-depressants.

2. **Never Skip a meal**

- Keeping your blood sugar stable reduces mood swings

3. **Eat a serotonin – enhancing diet**

- Foods high in Omega 3 fatty acids (such as wild salmon, sardines, herring, mackerel, and anchovies, which are even higher in Omega 3 fatty acid than other fish.
- Healthy fats like coconut oil.
- Eat a high protein diet, especially proteins high in tryptophan, like free range turkey.

4. **Avoid caffeine**, which reduces 5 – hydroxytryptophan (serotonin) level

- If you need energy boost, supplement with L-tyrosine (500-1000mg)

5. **Expose yourself to sunlight**, which can boost mood and increase vitamin D levels.
6. **Try mood enhancing supplements**
 - 5HTP (5 hydroxytryptophan) 50-300mg up to 3 times a day.
 - St. John's Wort: 300mg three times /day
 - L – threanine: 100-600mg daily: This is found in green tea. Reduce the dose if your feel sleepy.
7. **Meditate or try guided imagery**: Meditation's effect on mood are well documented.
8. **Get your hormones balanced**: If your thyroid, adrenal or sex hormones are out of whack, your mood can get all wonky.

PACLITAXEL (TAXOL[®])

- is a natural product with antitumor activity, obtained via a semi-synthetic process from *Taxus baccata*.
- is a novel antimicrotubule agent that promotes the assembly of microtubules from tubulin dimers and stabilizes microtubules by preventing depolymerization.
- This results in inhibition of the normal dynamic reorganization of the microtubule network essential for vital interphase and mitotic cellular functions.
- Also induces abnormal “bundles” of microtubules throughout the cell cycle and multiple asters of microtubules during mitosis.
- Not recommended for patients with liver disease, heart disease or a severely weak immune system.

CONCLUSION

- There is clear evidence of efficacy of herbal medicines in the management of chronic diseases eg. mental illness, endocrine or hormonal disorders-diabetes, Inflammatory disorders- arthritis & CVS disorders.
- There is need for thorough clinical evaluation studies as long term management is usually required eg. studies on Taxol.

THANK YOU!