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## NATURAL REMEDIES AND DRUGS DERIVED FROM HERBAL SOURCES

### SUNALI MEHTA

Drugs to know:

St. John worts - antidepressant

Ginkgo – brain disorders such as dementia and improve memory

Ginseng – adaptogen – stamina and well being

Echinacea – skin disorders, cold, influenza, fungal infection, venereal diseases, psoriasis, septicemia and gangrene

Aloe vera:

Member of the lily family. The extract of the leaf has been used as a purgative. Used for skin applications.

When used as an oral purgative it causes nephritis. It can also turn alkali urine red in color. It should be avoided in pregnant women, breast feeding women and clients with renal problems. When applied on the skin topically it is well tolerated and there are no adverse reactions reported.

Cranberry or Glueder rose

Has red berries which are ground and the juice is extracted. Used to treat Urinary tract infection. Initially the mechanism of action was thought to be due to making the urine acidic but now it has been shown that it does not allow the bacteria to adhere to the walls of urinary bladder and the urethra wall.

Can be used in pregnant and breast feeding women. Should be avoided in Renal calculi.

More than 3 – 4 liters per day can lead to diarrhea and GI tract problem.

### Chamomile:

The dried flower parts which are normally used in herbalism. The oil is used in aromatherapy to treat bronchitis and asthma but there is no evidence for the same. Anaphylactic shocks have been reported and hence care should be taken in the use of this oil. Composition varies depending on the source. Can be added in shampoo but again there is no evidence. The dried flowers can be consumed in the form of tea and it is known to induce a deep sleep. When taken in large quantities it causes GI colic and sometimes severe allergic reactions. Coumarin is an anticoagulant found in the chamomile and itself has an antispasmodic property hence GI colic in some comes as a surprise. It also has Apigenin which binds to the Benzodiazepine receptor in the gamma – amino butyric acid receptor in the brain explaining its sedative effect. This compound also has antioxidant properties. Chamomile has some antiseptic property and also can be used as antidiarrhoeal with apple pectin to treat diarrhea in children. It is contraindicated with the used of warfarin. Care should also be taken when being used with other sedatives and hypnotic drugs.

### Echinacea: common name is coneflower

It has been used for skin disorders, cold, influenza, fungal infection, venereal diseases, psoriasis, septicaemia and gangrene. Evidence suggests it is of little use in the treatment of the disease of common cold but it may help in shortening the length of the infection. It helps in suppressing an itch and any other inflammatory reaction of the skin. Acts as an immunostimulant on many parts of the immune system. Also has some antibacterial and antiviral properties. Shown to have an adverse reaction on spermatozoa and hence maybe used as a contraceptive in future. It should be avoided by persons with systemic disorders like human immunodeficiency syndrome, tuberculosis or multiple sclerosis. Persons allergic to daisy family and pregnant women. Tolerance can develop to the use of Echinacea.

## Evening primrose oil

Is an oil which is rich in both linoleic and gamma linolenic acid which are both essential fatty acids. It has been advised to be used for a diverse problem such as psoriasis, mastalgia ( breast pain) and parkinson's disease. Role is unproven. Should be avoided with people with epilepsy and schizophrenia.

These essential fatty acids are needed for the synthesis of prostaglandins and people using this oil have increase in their blood for the precursors of prostaglandins and arachidonic acid. Well tolerated but sometimes mild gastrointestinal disorders. Headaches due to effect on the cerebral blood vessels. High intake can lead to haemorrhages.

## Feverfew:

Belong to the daisy family known as tansy.

Was used to treat fever but now is being tested for its use in the treatment of migraine and as an antiarthritis. It also has an antiplatelet activity. Mainly the side effects are of GI tract and include aphthous ulcers. Long term use and sudden discontinuation causes rebound headaches. Active ingredient is parthenolides and the concentration can vary depending on the source. It is contraindicated in patients on anticoagulant therapy, pregnancy, hypersensitivity to daisy.

## Garlic

Member of the onion family. It has a horrible odour and is identifiable by its odor. These odiferous compounds can be given out in the sweat and it is believed that if the the complaiant ingests garlic then the continual stimulation of the smell receptors confers adaptation leaving the smell unnoticed.

It mainly contains sulfur containing compounds which may be related in having a therapeutic effect. It suggests that it may contain Alliin which is a prodrug activated in the ileum only by an enzyme present in the garlic.

It is used in the treatment of arteriosclerosis and is believed to lower the level of LDL in the blood plasma and thus protect the arteries from artheroma formation. There is evidence that this is a very small percentage of the effect. It is also said to protect against viral infection and some forms of cancer but there is no evidence. May increase

the activity of warfarin. Should be avoided in patients who are hypoglycaemic and with anti – inflammatory agents such as aspirin.

#### Ginger:

Renal interest. Antiemetic and anti nauseant. Mainly helps in travel sickness and nausea caused during pregnancy. Does not help in post operative nausea and chemotherapy. No teratogenic effect. Adverse reaction is hyperacidity. Lowers thromboxane levels and hence care to be taken when used with warfarin. The active ingredient is not known. May be an aromatic alcohol like gingerol or shogaol.

#### Ginkgo:

Used in the treatment of disorders of the brain traditionally is now used to improve memory function in the elderly and also to treat dementia. It has an antioxidant property which can be used to scavenge the free radical in the body. It also has several bioflavinoids which are well known antioxidants. Helps prevent tissue damage and can also be used to heal during skin grafting. It is used in many circulation problems. Mainly has no adverse reactions but may cause some GI upsets and headache. Seeds are quite toxic.

#### Ginseng

Highly used herbal medicine. Obtained from two species of which the Korean one is better. Mainly used as an adaptogen means a substance used in increasing stamina and well being of the person. The active ingredients are the ginsenosides which are a group of some steroid substances. The active ingredient is said to have a slow onset of action. Its use as an adaptogen remains unproved. Should not be taken at night and with heavy doses of caffeine as can lead to insomnia. Individuals who are on antipsychotic drugs, receiving stimulant or MAOI should be avoid ginseng.

#### Red Clover:

Used for treating skin disease , cancer and cough. Rich in isoflavones, potential antioxidants and free – radical scavengers. All isoflavones have weak oestrogenic activity which may contribute to their therapeutic effect. Helps in increasing bone density

in postmenopausal women but is of no use in HRT and feminization of men. Persons with bleeding problem need to be cautious and who are receiving anticoagulants.

St. John Worts or hypericum:

Is a weed. Main action is as an antidepressant. Should not be used in chronic depression. Adverse reaction is photosensitivity. Delayed onset of action and may act on the dopaminergic, serotonergic and noradrenergic centers of the brain. Should not be used in combination with other antidepressants. Should be avoided in pregnancy as it has teratogenic properties. May have some depressing properties on the GABA receptor complex and hence should be avoided with the use of sedatives and other medicines.

Saw palmetto:

Used in urinogenital conditions and specially in the treatment of benign prostrate hypotrophy which cause urine retention due to an increased pressure on the urethral exit point from the bladder in the elderly men. It is equivalent to finasteride but without the side effects. It is believed to decrease the size of the prostrate. It is lipophilic extract from the berries which inhibits the conversion of testosterone into its active form and hence prevents the disease. Adverse reaction mild gi upset and headaches.

Valerian:

It helps in insomnia. Helps in decreasing the time to get sleep, improves the quality of sleep and has no hangover. Active compounds are valepotriates which bear resemblance to serotonin and hence associated with sleep. GABA receptor complex. Prolongs the action of barbiturates. Headaches, restlessness and occasional palpations are the adverse effects. Can cause hepatotoxicity in patients having a poor hepatic function.