

*From folk medicine to the scientific  
knowledge and back to folk in the  
form of Nutrition*

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One of the directions of scientific research is a study of folk herbal medicine heritage. Over 85 years, dozens herbs which are well known in folk medicine, have been investigated in the National Scientific Center of Medicinal Substances (Kharkov, Ukraine). Properties of only few of them are reviewed in this talk. In particular, St. John's wort, Horstail, Knotweed, Visnaga, Senna, Plum, and Fig. All these plants have shown high pharmacological activity that has been proved by Ukrainian scientists who performed chemical and pharmacological research of these plants. For chronic patients herbal nutritions are very essential. Since chronic patients need medicines that have less active substances and could be used during a long while, nutrition based on herbs are a very optimal choice.

# St. John's wort

*(Hypericum perforatum L.)*



St. John's wort contains many biologically active compounds including rutin, pectin, choline, sitosterol, hypericin and pseudohypericin. The flowers and leaves are analgesic, antiseptic, antispasmodic, aromatic, astringent, cholagogue, digestive, diuretic, expectorant, nervine, resolvent, sedative, stimulant, vermifuge, and vulnerary. In folk medicine this herb is used for treating a wide range of disorders, including pulmonary complaints, bladder problems, diarrhoea, and nervous depression. Externally St. John's wort is used for treatment of ulcers, burns, wounds, sores, bruises, and cramps. An infusion of the flowers in olive oil is applied externally on wounds, sores, ulcers, swellings, rheumatism, sunburns it can also be used as healling skin cosmetic.

*Horsetail*

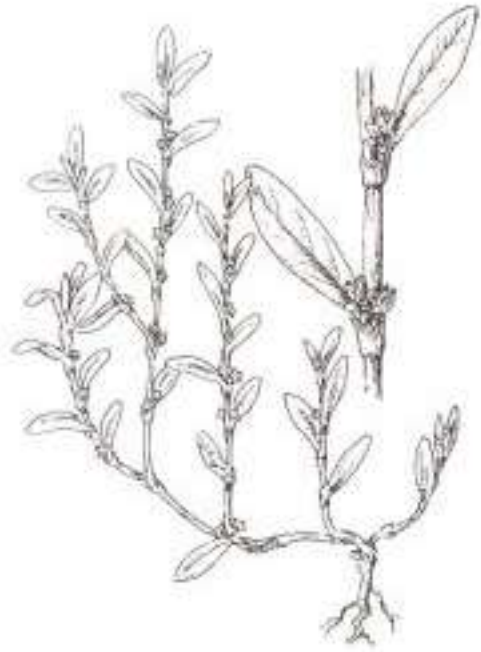
*(Equisetum arvense L.)*



*Horsetail* has an unusual chemistry compared to most other plants. Horsetail is rich in silica. It also contains several alkaloids (including nicotine) and various minerals. In folk medicine Horsetail is used as a good astringent. It is an excellent clotting agent staunching wounds, stopping nosebleeds and reducing the coughing up of blood. It helps to speed up the repair of damaged connective tissue, improving its strength and elasticity. The plant is anodyne, antihaemorrhagic, antiseptic, astringent, carminative, diaphoretic, diuretic, galactogogue, haemostatic and vulnerary. As a diuretic, Hosetail is used in the treatment of kidney and bladder problems, cystitis, urethritis, prostate disease and internal bleeding, proving especially useful when there is bleeding in the urinary tract.

# *Knotweed*

*(Polygonum aviculare)*



*Knotweed* contains many biologically active compounds including tannins, flavonoids, polyphenols, silicic acid, mucilage, etc. It has astringent and diuretic properties. Knotweed is used in European herbal medicine to treat diarrhea and hemorrhoids and stop different type of bleeding. It is also taken for pulmonary complaints since its silicic acid content helps strengthen connective tissue within the lungs. In the Slovenian tradition medicine, Knotweed is given for intestinal worms, to treat diarrhea and dysentery and as a diuretic, particularly in cases of painful urination.

*Visnaga*  
(*Ammi visnaga* L.)



*Visnaga* is native to North Africa; however, it is also widely known in European official and alternative medicine. *Visnaga* is used to treat a multitude of ailments, including the stabbing pain of angina pectoris, caused by a reduction in the flow of blood to the heart. The plant contains many biologically active compounds including khellin, visnagin, khellol glycoside, volatile oil, flavonoids, sterols, etc. Khellin and visnagin have a powerful antispasmodic action on the smaller bronchial muscles, on the coronary arteries that supply blood to the heart, and on the urinary tubules. Extracts of the fruits is strong antispasmodic. It acts as a diuretic as well, increasing the flow of urine and hence getting rid of excess body fluids.

After chemical and pharmacological studies based on extracts of *St. John's wort*, *Knotweed*, *Horsetail*, and *Visnaga*, a new herbal remedy for treatment kidney diseases, Fitolit, was invented. Fitolit has pharmacological effects such as spasmolytic, analgesic, and anti-inflammatory actions. It also has antimicrobial and antiseptic properties and ability to regulate mineral turnover. The medicine reduces periodicity and intensity of renal colic and normalizes physical-chemical ranges of urina.

The second example is Cafiolum. This remedy was designed for complex treatment of constipation which is one of the most common gastrointestinal complaints.

Constipation can be defined as infrequent or hard pellet stools, or difficulty in evacuating stool. Different types of constipations require different types of treatment.

Folk medicine has widely used several remedies such as Liquid Paraffin, Plum and Fig fruits, Senna, and etc.

However, all of them could treat just one particular type of the constipation problem.

*Senna*

*(Cassia angustifolia or Cassia Acutifolia).*



The purgative activities of the plant being largely due to anthraquinone derivatives and their glucosides. It contains rhein, aloe-emodin, kaempferol, isorhamnetin, both free and as glucosides together with lyxigenin alcohol, syringic acid, sennalbin and sennalbin's, and cathartomannite or cennit, etc. The active purgative principle is cathartolonic acid. Purgative action being chiefly on the lower bowel, it is especially suitable in habitual constiveness.

It increases the peristaltic movements of the colon by its local action upon the intestinal wall. Senna pods are milder in their effects than the leaflets, as the griping is largely due to the resin, and the pods contain none, but have about 25 per cent more cathartic acid and emodin than the leaves, without volatile oil. Senna anthraquinones act chiefly on the lower bowel by increasing the peristaltic movements of the colon by its local action upon the intestinal wall.

Plum (*Prunus domestica* L.)



*Fig (*Ficus carice* L.)*



Dried plums contain water, albumen, crude fiber, grape sugar, cane sugar, starch, free acid (in particular, malic acid), pectin matter, vitamins (A, B-1, B-2, C, PP), and micro elements (Fe, K, Ca, Mg, Na, P). The crushed seeds yield upon maceration and subsequent distillation with water, an essential oil containing hydrocyanic acid; this is due to the presence of amygdalin and the ferment, emulsin, in the seeds. They also contain a brown-yellow, non-drying, fixed oil. Gum sometimes exudes from the ripe fruits. Dried prunes are mildly laxative.

Fig contains sugar, fatty matter, woody fiber, seeds, water, starch (in the unripe fig), vitamins (A, B-1, B-2, C, PP), and micro elements (Fe, K, Ca, Mg, Na, P). Figs are nutritive, emollient, demulcent, and aperient, and are used in costive habits.

Both Plum and Fig fruits content fibers. That fibers mixes with the stool. Each particle soaks up available liquid, and enlarges into a minute gel bead. These particles give the stool size shape and moisture, making it easy for the colon to move along easily.

**Liquid Paraffin** acts by softening and lubricating the feces. The feces can then move more easily through the bowel. By doing this it relieves constipation and reduces the pain of some conditions such as piles (hemorrhoids).



All of above mentioned effects of Senna, Plum and Fig fruits, Liquid Paraffin have been investigated. As a result there has been created the complex medicine, Cafiolum, which contains Senna (leaves and pods), Plum fruit pulp, Fig fruit pulp, and Liquid Paraffin. Cafiolum gives laxative action because of chemical irritation (Senna anthraquinones), mechanical irritation (Plums and Figs pectins) of bowel, and also easily moving feces through the bowel (Liquid Paraffin). This remedy could be used for treatment of all type of constipation.

Summary. At present, herbal natural remedies are widely used for treatment of acute sickness and they are sold in drugstores concurrently with synthetic medicines.

For chronic patients herbal products are essential. Since chronic patients need medicines that have less active substances due to being used during a long while, nutrition based on herbs are a very optimal choice. Now during acute process we can take either synthetic or purified natural substances or we can just drink herbal tea as a supporting or prophylaxis source. Scientific studies of the folk herbal medicine heritage give as two advantages. First advantage is herbal remedy. Second is understanding nature of active substances.