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GOTU KOLA Irene Yaychuk

Gotu Kola (*Centella asiatica*, *Hydrocotyle asiatica*) is an herb
often confused with another plant, the dried cotyledon (seed
leaf) of *Cola nitida*, commonly known as kola nuts, a well-known
ingredient of Coca-Cola containing 3.5% caffeine.[1] Gotu Kola
is not a stimulant, but rather a very nutritious herb indigenous
to hot, humid climates.

Dr. John Heinerman, Medical Anthropologist, presented an address
on Gotu Kola to the Second International Congress for the Study
of Traditional Asian Medicine, held at Airlangga University in
Surabaya, Indonesia, September 2-7, 1984. He stated that Gotu
Kola is used as a nourishing food and a valuable medicine in many
cultures. The Hosa and the Mfengu tribes in East Africa have used
it for both purposes. In the Philippines, the leaves are either
consumed raw in salads or as a tea for tonic and stimulant
benefits to the body. The leaves have been employed medicinally
in the French West Indies, and Brazil to cure uterine cancer,
leprosy and elephantiasis. In the People's Republic of China,
gotu kola is used for fevers, common cold influenza, sore throat
and liver ailments such as cirrhosis and jaundice.[2]

Folk and traditional medicine have deemed this plant to be a brain food, beneficial for memory and senility. Pharmacist Varro E. Tryler states that there is currently no evidence to support the use of Gotu Kola as a longevity promoter or to substantiate the extravagant claims made for it as a revitalizing and healing herb. Substantial data on its safety and efficacy are, in his opinion, simply non-existent.[3]

However, separate clinical studies to substantiate folk claims for its alleged memory enhancing properties have been done in the United States and India.[4]

In India, Gotu Kola, an Ayurvedic herb, is called Mandookaparni. There, an impressive study dealt with the effect of gotu kola on general mental ability of mentally retarded children. Whole plants were dried in the shade, powdered, and made into 1/2 gram tablets. Half of the thirty children studied were given one gotu kola tablet and half a placebo tablet daily. Apart from nutritional deficiencies, the children had no major illnesses. A Binet-Kamat test was administered and the children's Intelligence Quotients were recorded. Separate tests were also administered to record any changes in the children's co-operation, memory, concentration, attention, vocabulary and overall adjustment. After three months, the tests were repeated.

The findings showed there was a very significant increase in both general ability and behavioral pattern, even in the short period of twelve weeks of administration of the herb. The difference in IQ increase between the two groups was 4.6%. [The most interesting observation was the overall general adjustment of certain children: those very shy and withdrawn, and who were very restless and fidgety became expressive, communicative and co-operative. It was also noted that youngsters taking gotu kola had increased their powers of concentration and attention.[5]]

Another Indian study showed that gotu kola extracts administered over a period of 42 months to normal healthy adults in the 45-50 age group had several benefits: haemoglobin increased by a significant percent, and the mean levels of blood urea and serum acid phosphatase were decreased. Subsequent examinations have revealed that this herb has brought about a steady increase in blood sugar level (statistically significant).[6] A relationship between hypoglycemia, or low blood sugar levels, and mood swings, mental illness, fatigue, depression, confusion and schizophrenic tendencies is well documented. Dr. Heinerman feels that perhaps the 'memory enhancing' attributes of gotu kola may be attributed to the herb's ability to elevate blood sugar levels markedly.

Gotu kola is higher in the B-complex vitamin group than any other plant previously examined. This again may account for its effects on the brain.[7] It is especially high in thiamine (B1), riboflavin (B2), and pyridoxin (B6). B complex is necessary in providing energy for the body, by converting carbohydrates into glucose, a usable form of sugar for the body to burn. The B complex is responsible for the normal functioning of the nervous system as well.[8] A healthy nervous system allows for a better functioning and organized brain.

(Other nutrients include numerous free amino acids, especially aspartate, glutamate, serine, threonine, alanine, lysine, histidine, and aminobutyrate found in greater quantities in the roots, but also present in leaves.[9] The leaves also contain measurable amounts of provitamin A or carotene.)

Isolated constituents of gotu kola were applied locally on wounds in laboratory rats. This resulted in healthy new connective skin tissue and increased the tensile strength of the flesh, as well as decreased the size of the wound area.[10] Asaticoside, a

constituent of gotu kola was injected intra-muscularly or implanted directly into mice, rats, guinea pigs, and rabbits. It produced a rapid thickening of the skin, an increased production of white blood cells, increased growth of new blood vessels of the connective tissue, and an increased growth of hair and nails.[11] Lupus erythematosus was helped by extracts of gotu kola.

Other studies have indicated gotu kola to be effective for gastric ulcers, phlebitis and varicose veins. It has been used for leprosy and related skin disorders, eye lesions, and muscular atrophy.

One investigation of gotu kola was conducted in Provo Utah at Brigham Young University by a research psychologist who wanted to demonstrate gotu kola's amazing ability to overcome the negative effects of fatigue and stress when used in conjunction with cayenne pepper (*Capsicum frutescens*) and Siberian ginseng (*Eleutherococcus*).

Rodents were fed the three herbs by means of a surgical technique in which tubing was inserted under the skin, a couple of centimeters below the junction of the esophagus and stomach. Fatigue and stress situations were set up. One involved swimming in a bucket of cold water, and another was to jump a barrier in order to avoid a mild foot shock. Within 24 hours of administration of the three herbs, the animals could successfully clear the barrier after being dried off from the cold water treatment. Without the herbs, they required up to 72 hours to recuperate in order to jump the barrier. Dr. Mowrey concluded that a combination of capsicum, ginseng and gotu kola did have a beneficial effect on behaviour of stressed or fatigued animals whose metabolism are similar in many respects to that of man.[12]

From this research carried out in 1975, several large American herbal companies developed an "energy and stamina" formula utilizing gotu kola. Some of these can be obtained at your local health food store.

1. Varro E. Tyler, op.cit., p. 113
2. John Heinerman, An Herb for Our Time: The Scientific Rediscovery of Gotu Kola, unpublished paper, (Sept., 1984)
3. Varro E. Tyler, op.cit., p.113
4. John Heinerman, An Herb for Our Time", op.cit.
5. M.V.R. Appa Rao, et. al, The Effect of Mandookaparni (Centella Asiatica) on the General Mental Ability (Medhya) of Mentally Retarded Children, Journal of Indian Medicine (August 25, 1973), p.9-12.
6. M.V.R. Appa Rao, et.al, The Study of Mandookaparni and Punarnava for their Pasayan effect on Normal Healthy Adults", Nagarjun, (JULY, 1969) p.41
7. John Heinerman, An Herb for Our Time, op.cit.
8. John Heinerman, Natural Nutrition, (Provo Utah: Woodland Books, 1984).p.85.
9. John Heinerman, ed. Gotu Kola, The Herb Report, (March 1984),

p.2

10. Ibid., p.2
11. Ibid., p.2
12. John Heinerman, An Herb for Our Time, op.cit.