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Traditional Indian memory enhancer herbs and their medicinal importance

Debjit Bhowmik¹, Chiranjib¹, Pankaj Tiwari¹, K. K. Tripathi¹ and K. P. Sampath Kumar²

¹Rajeev Gandhi College of Pharmacy, Nautanwa, Maharajganj, Uttar Pradesh

²Dept. of Pharmaceutical Sciences, Coimbatore Medical College, Coimbatore

Abstract

Memory is the ability of an individual to record sensory stimuli, events, information, etc., retain them over short or long periods of time and recall the same at a later date when needed. Poor Memory, lower retention and slow recall and are common problems in today's stressful and competitive world. Age, stress, emotions are conditions that may led to memory loss, amnesia, anxiety, high blood pressure, dementia, to more ominous threat like schizophrenia and Alzheimer's diseases. After many centuries of use in Eastern medicine, doctors agree that some herbs do effectively enhance memory. You can use herbs one at a time or in a blend to enhance your memory. Ayurveda, the ancient science of life has more than one reference of the plant for the enhancement of memory and mental agility of mankind. The famous Charaka Samhita written in the 1st century refers Brahmi (nerve tonic), a perennial creeping plant (*Bacopa monnieri*) for curing mental retardation leading to psychosis. Pharmacological properties of this plant have been clearly mentioned as having properties of cognitive enhancement and anxiolytic effect. The other treatise Sushruta Samhita makes this more explicit and describes Brahmi to be effective in memory loss. This herb is also helps you to cure the unrelieved disorders, nervous breakdown, insomnia and pin. This herb is also effective in controlling the cholesterol level in the body. This herb is also deals with the urinary problems as well. Bacopa is very profitable to sharpen your memory, intelligence longevity, anti-aging and also helps you to reduce stress. This herb is also very beneficial to boost the coordination between the neurons and brain.

Keywords: Memory enhancers, Medicinal plants, Herbs.

Introduction

Memory is the ability of the brain to encode, store, and retrieve information. Encoding refers to the initial perception and registration of information. Storage is the retention of encoded information over time. Retrieval refers to the processes involved in using stored information.

Whenever people successfully recall a prior experience, they must have encoded, stored, and retrieved information about the experience. Conversely, memory failure for example, forgetting an important fact reflects a breakdown in one of these stages of memory. Cognition refers to the processes through which information coming from the senses is “transformed, reduced, elaborated, recovered, and used”. The term information, used here, refers simply to sensory input from the environment that informs us about something that is happening there. Cognitive processes are thus the mental processes involved in knowing about the world; as such, they are important in perception, attention, thinking, problem solving and memory. Memory and learning are closely related, and the terms often describe roughly the same processes. Nootropics, popularly referred to as “smart drugs”, “smart nutrients”, “cognitive enhancers”, “brain enhancers” and “memory enhancers”, are a class of drugs that improve impaired human cognitive abilities (the functions and capacities of the brain). The term covers a broad range of substances including drugs, nutrients and herbs that have purported cognitive enhancing effects. Smart drugs can basically do three different things to your brain: minimise the damage to the brain and the natural deterioration of one's brain functions, repair some of the damage already done or enhance brain functions above usual levels. Human nervous system deteriorates with age through natural ageing process and sometimes due to drinking or smoking. This deterioration is usually caused by an oxidation process, which destroys brain cells and form free radicals that cause further havoc in one's brain. Even though brain cells likely cannot regenerate, it is possible to deactivate free radicals and repair some of the other damage (such as low levels of electric current transmitting chemicals in the brain). And this is can be achieved with smart drugs and some nutrients, such as vitamins, antioxidants, amino acids, choline and lecithin. Since time immemorial, plants have played an integral part in the development of human civilization. Today, interest in the plant products has increased around the globe for health as well as beauty-care. Many plant-based medicines are known to be economic and are found to be free from side effects. In India, plant based indigenous knowledge and traditional medicines are being used in various cultures and tribes. The tribal healers inhabiting different remote pockets of India are the real powerhouse of such knowledge. They perform several healing practices in order to cure various health disorders. Brahmi, an Ayurvedic herb is known for its effectiveness in enhancing the memory and promoting the alertness. Brahmi's latin name is *Bacopa monnieri* and it is known as Indian Pennywort. The herb has been prescribed widely where there is a need of antioxidant agent. Brahmi, also known as Bramhi, improves the brain cell functions and hence used in various mental conditions. *Bacopa* is also helps you to increase the long and short term memory. This herb has also deals with other health disorders such as brain, memory, mental deficiency, learning capacity, depression and stress. This herb is also very effective for heart diseases and restlessness and also helps to reduce the hair fall problem.

Memory Supplement for Brain

Ginkgo biloba extract is an approved treatment for dementia in Germany, and it is the only nonprescription substance considered a treatment for dementia in Canada. Ginkgo biloba is one extract readily available. It enhances mental efficiency in elderly patients with mild to moderate memory impairment. It is also shown to improve cognitive function in patients with dementia, to enhance blood flow to the brain, enhances cognitive performance in patients with Alzheimer's disease. Further it is said to enhance memory in young individuals. Phosphatidylserine (PS) helps your brain cells do their jobs properly. The shrub is native to Europe, where it has been under

examination since the 1950s for combating stroke and age-related decline in brain function. Only recently has Vinpocetine become available in the United States, and not as a prescription drug like in Europe, but as an over-the-counter dietary supplement. Curcumin which is a spice known for its anti-inflammatory effects helps a lot in preventing memory loss. Curcumin is basically that spice which gives yellow curry its bright color and is frequently used as natural food dye. Brahmi is an ayurvedic herb that is also known as *Bacopa monniera* in biological terminology. Since ages it has been extensively used to improve memory skills and mental performance. Since centuries *Bacopa* has been herb of choice for enhancing brain functioning. In order to keep your mind buzzing, you need to increase your intake of B vitamins. Experts believe that deficiency in vitamins B₆ and B₁₂, niacin, and thiamin can contribute to future cognitive problems. You can get these B vitamins in enriched grains, meat, potatoes, bananas and shellfish. You can also take some supplements that have all the B vitamins that you need. N-acetyl-L-carnitine- This neuroprotective compound is known as a "short-term memory enhancer" and is vital for production of the neurotransmitter acetylcholine, required for mental function. It may help protect neurons from oxidative damage and prevent age-related decline in memory and mental function. In studies, it has been shown to slow the progression of neurodegenerative disorders such as dementia and Alzheimer's disease. Long-Term memory improvement has been the most noticeable and immediate effect of Brahmi. After about a week of the recommended dosage, memory recall is usually vividly improved, even when recalling memories from years ago. If you want a better memory you almost have to try Brahmi. As well, dream recall has been an interesting and tested affect of Brahmi. Taken twice daily has resulted in extremely vivid recall of nightly dreams for many users.

Natural memory enhancers

These natural memory enhancers come in three main forms:

Herbs and nutrients: Ginkgo Biloba; phosphatidylserine, a nutrient from soybeans; and pregnenolone, a naturally-occurring hormone; are just a few of the natural supplements that some suggest can boost your memory. Together they are believed to increase oxygen circulation to the brain, block against free radicals and promote neural growth.

Foods: Eating the right diet may also increase and help retain your memory's capacity. Leafy greens and cruciferous vegetables like broccoli, cabbage, spinach and Swiss chard are recommended by some researchers, as are berries, plums, and cherry tomatoes. The Omega-3 fatty acids found in fish like salmon, herring, and anchovies are also thought to help memory retention.

Physical acts: challenging your brain with simple exercise can also help your memory according to some scientists. Try showering and dressing with your eyes closed, play crosswords or Sudoku in the morning paper, or take a class on an activity or topic you are unfamiliar with, Alone or in combination, these natural memory enhancers may stem the tide of memory loss and maybe even bring a little back.

Herbal formulations for enhancing memory power

❖ Mix *Bacopa monnieri* (Brahmi) powder with *Saraca indica* (Ashoka) bark powder in equal amounts. Administer 5g of this formulation to the patient everyday. This formulation is said to be effective for improving mental clarity, confidence, intelligence and memory recall.

- ❖ Eating half cooked *Trigonella foenum-graecum* (Methi) curry is known to be beneficial for increasing memory power.
- ❖ One teaspoon of *Asparagus recemosus* (Satavari) root powder taken with milk everyday works as an effective memory enhancer.
- ❖ To enhance memory power, *Kantilla asiatica* (Mandukparni) leaves powder (5g), *Evolvulus alsinoides* (Shankhpushpi) powder (5g), *Prunus amygdalus* (Badam) seeds (2 nos.) and *Elettaria cardamomum* (Elaichi) fruit (1 no.) are crushed in water. It should be boiled in milk and taken for 6 months.
- ❖ *Nardostachys jatamansi* (Jatamansi) whole plant powder, *Acorus calamus* (Ghodavach) rhizomes powder and *Centella asiatica* (Mandukparni) leaves are taken in equal amount and administered to the patient with honey. This formulation also helps strengthen memory.
- ❖ Powder *Glycyrrhiza glabra* (Mulaithi) roots, *Asparagus recemosus* (Satavari) roots, *Centella asiatica* (Mandukparni) and *Evolvulus alsinoides* (Shankhpushpi) in equal amounts. One teaspoon powder with milk works as memory enhancer.
- ❖ Seeds of *Saraca indica* (Ashoka) should be chewed with *Piper betel* (Paan-patta) leaf for three weeks for improving intelligence.

Natural memory enhancer herbs

Memory is the ability of an individual to record sensory stimuli, events, information, etc., retain them over short or long periods of time and recall the same at a later date when needed. Poor Memory, lower retention and slow recall and are common problems in today's stressful and competitive world. Age, stress, emotions are conditions that may led to memory loss, amnesia, anxiety, high blood pressure, dementia, to more ominous threat like schizophrenia and Alzheimer's diseases. The nature provides a new opportunity to regain one's full mental capacity. A number of herbs traditionally employed in the Indian System of Medicine "Ayurveda", have yielded positive results.

Brahmi (*Bacopa monnieri*)

Brahmi is perhaps the most investigated of all herbs for its memory enhancement properties. Now it is certified that brahmi has several chemicals that promote the protein synthesis process in the nerve and the brain cells, which is directly responsible for developing the mental capacity of the brain. Brahmi can make a person think clearer, and hence the memory becomes more vivid. In India, brahmi is used in countless forms to improve mental capacity for school-going children. Brahmi also increases the grasping power of the brain, due to which people can understand and assimilate information easily.

In adults, brahmi helps in relaxing and soothing the cells of the brain, and brings it to a normal state of functioning. Thus, brahmi is a valuable anti-anxiety agent and an antidepressant. Brahmi oil is quite often used to massage the head. This sort of massage immediately puts the mind at rest and the mental abilities rise drastically after its use.

Ginkgo (*Ginkgo biloba*)

Ginkgo works by improving the blood circulation to the central nervous system. This is the primary requisite for a healthy and capable brain. Apart from this, ginkgo corrects any damage done to the cells of different parts of the body, including the brain. It also minimizes the effects

of the blood clotting. All these properties of the ginkgo have been studied in detail by western experts and they have obtained very encouraging results.

Ginkgo has got a place of respect in Ayurveda. The extract of the ginkgo is prescribed to people who have amnesia and Alzheimer's disease. Several herbal brain tonics have ginkgo as one of the chief ingredients.

Gotu Kola (*Centella asiatica*)

The gotu kola is very effective in increasing the circulation of blood to different parts of the body, including the brain. It protects the brain from damage due to the wear and tear of its cells. Gotu kola can regenerate lost energy from the human system, and make the person feel more zestful. Gotu kola is generally used in tonics intended to re-vitalize the brain. It improves concentration, makes the brain more receptive to information and also brings about an enhancement in the memory.

Ashwagandha (*Withania somnifera*)

Ashwagandha is one of the most essential components used in enhancing memory and overall brain functioning. Ashwagandha is an adaptogen, stress-buster and a re-vitalizer. Ashwagandha has a cooling and calming effect on the brain. After a hard day's work, ashwagandha can bring the brain back to its normal state of functioning. Ayurveda regards ashwagandha as a medha rasayana, i.e. a brain tonic. It has direct results in improving the memory capacity of the brain. Ashwagandha is very powerful in making new concepts seem clearer and easy to understand. It is a vital component of almost all herbal brain tonics available in the market.

Mulethi (*Glycyrrhiza glabra*)

Mulethi is none other than licorice, the herb already known worldwide for its various curative properties. Mulethi is an efficient brain tonic and a re-vitalizer for the brain. Like most of the other herbs mentioned here, mulethi also rejuvenates the brain. In times of stress, mulethi can stimulate mental functions so as to feel a calming and relaxing effect. Mulethi increases the circulation into the central nervous system and balances the sugar levels in the blood. Mulethi is frequently provided to students who are preparing for important examinations, as it helps to remember small facts and bits of information.

Vacha (*Acorus calamus*)

Vacha is a very vigorous brain tonic, because it shows results in a very short time. It increases the overall memory of the person and strengthens the nervous system. Vacha is prescribed to people who have amnesia. Improving the memory is a quest on which human beings have embarked centuries ago. In almost all civilizations, there have been attempts to discover the best herbs for brain enhancement with minimum side-effects. Perhaps, Ayurveda wins the race in this. All the herbs Ayurveda uses for its brain tonics have minimum side-effects and are quite safe for the human beings. Western science is now warming up to these herbs and is looking upon them as effective supplements for the human brain.

Conclusion

The human brain is one of the most sophisticated organs nature has ever made. One of the most interesting aspects of the brain is its power to retain information, which we call as memory.

Memory is perhaps the most vital of the aspects that differentiates human beings from other animals. However, memory can become faulty due to several reasons, and in that case the person is not able to make full use of his or her potentials. Since ages, drugs and natural remedies have been prescribed to enhance memories in people. Ginkgo biloba is a powerful memory-enhancing herb which acts on the body in many ways to increase general health and bolster brain function. Ginseng is a good memory enhancer because it boosts blood flow to the brain. Bacopa monnieri a well known memory booster is a Indian herb commonly given to infants where it is observed to boost memory power intelligence, and mental health. Celastrus paniculata belonging to the genus of woody, climbing shrubs is distributed almost all over the India. In folk medicine the seeds are boiled and taken for blood purification. The seeds constitute the drug; they are bitter, and have an unpleasant odour and are traditionally used for sharpening the memory. Centella asiatica, commonly known as Mandookaparni is a widely available Indian herb has been used for centuries in Indian systems of medicine. In India for the last 3,000 years of Ayurvedic medicine, it has been used for the purposes like boosting memory. A semi-aquatic, medicinal herb, Acorus calamus (also called Sweet Flag) is a valuable medicinal plant found almost through out India. It is traditionally employed in nervous disorders. The rhizomes of Acorus calamus are used in loss of memory given in combination with other drugs like Centella asiatica, Bacopa moneira and Rauwolfia serpentina as a memory booster.

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