

# Energy Medicine & Herbal Brain–Top Five Brain Inducing Herbs of India its Impact on Health and Economy

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## Abstract

Brain functions through its chemical secretions and electrical signals it generates, if there is excess or shortage of these signals or secretions it leads to various mental disorders. It has been observed that for treatment of Brain disorders any invasive procedure creates long term complications and unwanted side effects in majority of the cases, hence there is a clear need to look at some of the traditional and ancient healing method. This is a review article with a primary objective to trace five of the top beneficial brain strengthening herbs along with their medical and scientific properties which are currently in various stages of research both in conventional and traditional medical practices. There is an economic angle for their cultivation or wild foraging of these herbs and it plays an important role in its authenticity and efficacy of the finished herbal drug. If these herbs Vallarai, Neer Brahmi, Amukkara, Nithyakalyani and Vishnukranthi herbs are consumed as prescribed by a qualified medical doctor it produces anti-stress nervine tonic, anti demential brain tonic which helps in strengthening of the brain and prevents the brain from auto neuro degeneration. It also enhances the overall learning and memory abilities.

**Keywords:** Herbal Brain, memory, Health Care Economy, Indian Herbal Medicine.

## Introduction

What drives humans? is it the healthy strong body or the agile brain, if you look around world leaders or top scientists, or leading academicians you will find them doing extraordinary things which for majority of the population is impossible to think and execute and this is possible only through the agile brain which is driving their bodies to do super human things. We have so many examples where particular race or sects of people have demonstrated significant learning or business skills compared with other parts of the population. We could

trace their behavior, attitude towards the specific diet regimen they follow as one of the leading examples.

In a society every human being participates using his physical and mental abilities, based on his contribution through his faculties he gets compensated for his efforts in cash or in kind or both cash and in kind. This is the basis of economic development and defines individual, family, community, regional, national prosperity index. Each human being differs at physical and mental ability levels even though skill sets of homogenous nature is administered through education and training. Given this paradox how does one human being who has similar physical make up and similar educational background and skills training fares better or different than the other human being–this question is being taken up to find the answer as part of this research article. Healthy body and an even more optimally functioning brain become a huge asset for the possessor, for the society and the country at large for wealth and health creation thereby increasing quality of life.

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**Statement of the problem:** This brings us back to the question if Brain leads the body to achieve

extraordinary results can the brain be kept healthy like the body through herbal diet systematically?

## Materials and Method

This is a review article to analyze and examine the impact of agile Brain and its role in human health and societal economics and to understand if five of the identified medicinal herbs have direct influence on making a not so normal brain an agile and healthy one from various sources including Materia medica books, journals, old tamil Siddhars texts and from the world wide web.

**Brain:** The Brain is a mass of soft, spongy, pinkish gray tissue that weighs about 1200 gms in a human, it is contained in the head within the cranium comprising of Forebrain, Midbrain and Hindbrain. The human brain consumes the major portion of the entire energy that is generated in the human body. To be exact, the brain consumes 20% of that energy despite the fact that it only represents 2% of the total body weight. The brain is made up of 100 billion of nerve cells or neurons that are in constant communication with each other through electric signals, intricately connected with each other.<sup>1</sup> It contains nerve centers which control many involuntary functions, such as circulation, thermostat regulation, respiration, to interpret sensory impressions received from the eyes, ears, nose, skin and tongue. Consciousness, emotion, thought, and reasoning are functions of the brain. It also contains centers or areas for memory which allows for recording, recalling, and playing back past experiences.

The neurons transmit messages with the help of electrochemical processes. This electrochemical process can be understood as the movement of sodium, potassium, and chloride ions in and out of the cells with the help of flowing regulated electric current through neurotransmitters. The brain contains several hundred different types of chemical messengers or neurotransmitters. They in turn are categorized as either excitatory or inhibitory. An excitatory messenger like Serotonin, Norepinephrine, dopaminestimulates the electrical activity of the brain cell, whereas an inhibitory messenger like Gamma aminobutyric acid (GABA) calms this activity. The activity of a brain cell is largely determined by the balance of these excitatory and inhibitory process.

**Brain Disease:** Brain diseases are broadly classified under infections, trauma, stroke, seizures, tumors,

vascular conditions, auto immune conditions and neuro degenerative conditions.

**Mental Disorder:** A mental disorder, also called a mental illness or psychiatric disorder, is a diagnosis by a mental health professional of a behavioral or mental pattern that may cause suffering or a poor ability to function in life. Such features may be persistent, relapsing and remitting, or occur as a single episode.

**Herbal Medicine:** Food as medicine and medicine as food has been the lifestyle for many cultures around the world especially the Tamil civilization which originated from the South of India has embraced this and have furthered this concept by creating its own system of medicine called Siddha which is entirely based on using different parts of Plants, Animal, metals and minerals. This system of medicine also specializes in anti-ageing by using specific herbs to increase longevity. Siddhars who were the earliest proponents of the system also have understood the chemical compounds secretion by the brain and have mapped it back to certain herbs which induces brain functions like controlling neuro degenerative diseases and mental disorder management.

**Herbal Medicine and its action:** Medicine entry into the body happens through Oral or mouth passage, nasal, eyes, skin, rectum and ears. The most common method of administering medicines are always oral because of its convenient quotient. The other important aspect of medicines is how well and with what its packaged and administered with ensures the delivery of the medicine for better absorption in the blood stream.

The Chemical compounds in the herbal medicine mediate their effects on the human body through processes identical to those already well understood for the chemical compounds in conventional 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<sup>2</sup>.

**Top Five Herbs of India Inducing Brain Power:** For centuries mankind has been using herbs to improve the function and memory of the brain but it was always shrouded with mystery and secrecy for various reasons. There have been enough references in our ancient scriptures and texts about the use of specific herbs which was used by the likes of King Solomon and was called as the secret of Solomon for his mental prowess. In the Dravidian history there were three kingdoms which shaped up its culture, arts, religion and medicinal

practices they were the Cholas, Cheras and the Pandyas between them there are numerous instances where they have used specific herbs to increase their brain power, valour, longevity etc.

From actually increasing intelligence to improving memory, tissue oxygenation, balancing chemical secretions and even regenerating neuronal connections, these five superstar herbs are in a class of their own when it comes to improving brain function and creating long lasting neurological health.

1. Neer Brahmi, Water Hyssop, bacopa monnieri
2. Amukkara, Ashwagandha, Indian Ginseng, Winter Cherry, Withania Somnifera
3. Vallarai, Gotu Kola, Brahmi, Asiatic Pennywort Centella asiatica
4. Nithya Kalyani, Periwinkle, Catharanthus roseus
5. Vishnukranthi, Sankhapuspi, Speed Wheel, Convolvulus pluricaulis

**1. Neer Brahmi (bacopa monnieri):** Neer Brahmi is a Siddha herb utilized by Indians for thousands of years. Neer Brahmi is said to work by supporting our nervous system and brain. Neer Brahmi acts as a micro-nutrient in the Siddha therapy known as Karpa Marunthu or Rasayanam was shown to retard brain ageing and help in regeneration of neural tissues. Neer Brahmi, is also believed to provide adrenal support, and helps with emotional resilience<sup>3</sup>.

**2. Amukkara (withania somnifera):** Siddha herb, Amukkara or ashwagandha has been found to inhibit the formation of beta-amyloid plaques in preliminary research. It's also indicated that ashwagandha may benefit the brain by reducing oxidative stress (a factor that may contribute to the development and progression of Alzheimer's disease).

The herb also reduces tumor GSH levels which may contribute to the enhancement of radiation response. Amukkara can reverse paclitaxel (cancer chemotherapy drug that works by slowing or stopping cancer cell growth) induced neutropenia<sup>4</sup> (Neutropenia is an abnormally low concentration of neutrophils in the blood. Neutrophils make up the majority of circulating white blood cells and serve as the primary defense against infections by destroying bacteria, bacterial fragments and immunoglobulin-bound viruses in the blood. Patients with neutropenia are more susceptible to bacterial infections and, without prompt medical attention, the condition may become life-threatening).

**3. Vallarai (centella asiatica):** Vallarai or Brahmi herb is a tonic for brain. Traditionally it is used for treating brain disorders, skin diseases, neural disorders and insomnia due to its adaptogen, central nervous system relaxant, sedative, antibiotic, detoxifier, blood-purifier, laxative, diuretic, emmenagogue properties. It reduces tension, stress, anxiety and sleeplessness due to its sedative, tranquilizing and relaxant activities. Vallarai is used in Siddha, for improving memory, intelligence and speech. The intake of herb overcomes mental confusion and supports better thinking.

The intake of Vallarai herb overcomes mental confusion and supports better thinking. It has cooling, sedative and relaxing effect. The tea prepared from Vallarai induces sleep and gives relief in insomnia. Centella can elevate the level of cerebral glutamic acid and temporarily increase the gamma-aminobutyric acid (GABA) level in the brain. It is believed that the endogenous increase in brain glutamine may be helpful in the learning process.

**4. Nithyakalyani (catharanthus roseus):** Nithyakalyani or Periwinkle is used by herbalists to treat nervous disorders, epilepsy, hysteria, and nightmares. Exciting new research into this delicately beautiful plant shows that vinpocetine, a derivative of vincamine, a natural compound in periwinkle, helps transport oxygen and glucose to the brain. Since the brain needs both to function optimally, Nithyakalyani or periwinkle may be beneficial for assisting to ease brain disease.

Vinpocetine is a powerful free radical scavenger. Used regularly, periwinkle, or its active ingredient, vinpocetine, may help to prevent senility and dementia, by preventing damage to the blood vessels in the brain caused by free radicals. With around one hundred studies conducted on vinpocetine's effects on humans, mostly in Hungary, it is not surprising that it has been used by doctor's world over to treat senility and blood vessel disorders in the brain for twenty-five years. In these studies, it appears to boost memory and cognition in healthy people and in those with mild to moderate forms of dementia.

**5. Vishnukranthi (convolvulus pluricaulis):** Vishnukranthi herb works on nerves, plasma, and reproductive system. It helps in mental, nervous, excretory and reproductive disorders. It promotes intelligence, enhance memory and retention, reduces

stress, anxiety, depression, confusion and induces peaceful sleep. It is psychotropic and nootropic agent drug that cures nervous debility and dementia, it also acts as a brain tonic, alterative, febrifuge, vermifuge and anti-inflammatory. It is beneficial in rejuvenating the brain and hence works as a Psycho-stimulant and tranquilizer. It is also a known herb to induce production of Dopamine which calms the brain.

**Economic burden of Brain Disease:** The Economic burden of mental disorder is not very easy to ascertain due to various reporting issues, but NIMH (National Institute of Mental Health) puts the mental health care figures equal to cancer health care<sup>5</sup>. But unlike cancer, much of the economic burden of mental illness is not the cost of care, but the loss of income due to unemployment, expenses for social supports, and a range of indirect costs due to a chronic disability that begins early in life which can be measured through DALYs (Disability adjusted life years).<sup>6</sup> It is estimated that 1.46 trillion US dollar is being spent annually on global mental disorder medicine and care.

### Conclusion

It is clearly understood that the identified five Indian herbs contain the saponins called bacosides and adaptogens, which appear to affect certain neurotransmitters in the brain. Brahmi seems to increase the effects of serotonin, gamma aminobutyric acid or GABA and acetylcholine. Vallarai effects on these neurotransmitters, along with its antioxidant and neuroprotective actions in the brain, they include enhancing mental function and easing anxiety and depression. Nithyakalyani or Periwinkle active ingredient, vinpocetine, may help to prevent senility and dementia, Vinpocetine is also a powerful free radical scavenger. Vishnukranthi produces psychotropic and nootropic agent drug that cures nervous debility and dementia. Overall these five drugs<sup>7</sup> are shown to reduce oxidative stress and GSH levels which may contribute to the and strengthening of learning and memory abilities. As conclusion we can significantly increase the capacity to deal with stress and improve mental and physical performance with the use of these five Indian adaptogen herbs. The economic costs of these five Indian herbs are relatively much lower than conventional medical treatments for mind disorder which might include invasive and non-surgical procedures. The other significant benefit of these five Indian herbs is that it

could be taken along with conventional medicines which also could lower the health care costs.

### Discussion

As per the law of mentalism everything is mind and mind is in everything. All scientific advancements and developments, inventions, innovations, discoveries are the outcome of human mind and it is the replica of human brain which is the part and parcel of the human body. Body and mind are inter-related and reinforce each other but mind is more subtle and powerful than the physical body. Purity in mind will indicate healthy mind which in turn will provide healthy physical body. Unfortunately, mind is polluted by various factors in the modern life that leads to all sorts of human ailments. Hence, it is indispensable to keep our mind healthy through herbals such as Neer Brahmi, Amukkara, Vallarai, Brahmi, Nithya Kalyani and Vishnukranthi. If these herbs are consumed as prescribed by a qualified medical doctor it produces anti-stress nerve tonic, anti demential brain tonic which helps in strengthening of the brain and prevents the brain from auto neuro degeneration. It also enhances the overall learning, memory abilities and longevity.

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