

## CONCEPTUAL STUDY OF PRANAYAMA AS ALTERATION PROCESS OF MARMA

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### ABSTRACT

The human is the expression of the interaction between the cosmic energy and the negative or positive energy produced by stress or happiness and this energy is stored within the *Marma*(vital) points of body which form a Subtle Energy system. *Marma* is related to nervous system through this energy system because this energy is expressed by the nervous system. The parasympathetic and sympathetic divisions maintain body's equilibrium which known as homeostasis. Emotions are reflect by the nervous system of the body and the nervous system has a connection to the Marma points so the energy of the emotions has a connection to the Marma Points. Psychological stress activate Sympathetic nervous system(SNS) and shuts off function of all the major organs: immune, endocrine, digestive and reproductive systems. Thus the energy produced by SNS is one kind of negative energy which is stored in the marma points and produce diseases related to Marma. The ways of physical body for releasing negative energy produced by stress out of body which build up the psychic immunity and physical immunity of the body is obstructed in today's way of life. The Entire psycho-physical system can be brought into balance and harmony by *Pranayama*. It can activate the parasympathetic nervous system and control the negative energy accumulation in the *Marma* and can also decrease the level of accumulated negative energy in the *Marma* points and refine them. Thus by the practice of *Pranayama* one can not only prevent but can treat the disease related to the *Marma* points.

**Key words:** Energy, Stress, *Marma*, *Pranayama*, Psycho-physical system.

### INTRODUCTION

The *Vedic* theory of India has concluded that the psychic being and the physical being are no longer separate and without connected with each other they can't work, thus the psychic being (the mind) and the physical being (the body) have a very close relationship. The emotions are the vocabulary of that psychic being and it is expressed by the physical being, the body. The total entity of the human is the expression of the interaction between the cosmic energy and the nega-

tive or positive energy produced by any stress or happiness within the body. This energy is revealed from the body by the Emotions. It is common observation that in stress, the anger or irritability is increasing and parallel to that there are also so many psycho-physiological changes in our body. As, when one get angry his heart rate increase; in tension he get headache; in exam-fear, frequency of urination increases. These all are ways of physical body for releasing negative energy out of body, and this one is a quite natural

phenomenon of the body. This progression builds up the psychic immunity and physical immunity of the body.

The previous life style of the human generation was believed in group rituals and they had so many ways to express their emotions and get reveal stress and that's why those people were physically and mentally immune, healthy and happy. But today, there is a generation of small families, busy schedules, burden of societal status, so off of humbleness and introverted personalities. People have no time to listen or express their emotion and on the other hand the stress level is increased extremely. So by this way persons are suppressing the negative energy in themselves and this accumulated negative energy then produce diseases.

It has been found that 50-80% of all illnesses are stress-related and estimated that 75 to 90% of all primary care visits are for problems affiliated with stress<sup>1</sup>. So it is necessary to understand where this energy get accumulate in the body and how this energy creates a disease.

**Marma:** The scientific thinkers of *Ayurveda* have a observation about the energy (the *Prana*) and its interdisciplinary system in the body, about its actions, accumulation and its importance in the body. By this observation they found that the spirit and the inner energy or reflection of the two powers within us is part of a larger package known as the Subtle Energy system. When the child is in the mother's womb, the cosmic power enters in the child's brain. The development of the nervous system provides the pathway to the cosmic energy to unwavering as a subtle energy. The human brain develops into the shape of a prism with three sides and a base. Energy enters through brain and medulla oblongata and form subtle energy channels and our nervous system at the

gross level — starting with the central nervous system and falling down to the autonomic nervous system, including the parasympathetic and sympathetic nervous systems on both sides of the body<sup>2</sup>. Through this *Pranic* energy the total system of human body is governors. In the body there is some special points at where the energy of the body or *Prana* is get accumulated and that's why these points are the vital points of the body. These energy points are called the *Marma* points of the body. There are 107 vital points in the body. These points are not only related with the positive energy but also deal with the negative energy of the body.

The *Marma* points by this *Pranic* energy is related to the nervous system."Prana are intimately connected to thoughts, perceptions and emotions as well as to the entire fabric of the physical body"<sup>3</sup> this statement of *Swami Vivekananda* is also indicated to that fact that the *Pranic* energy is related to the nervous system of the body and so that the *Marma* points are also connected to the Nervous system and emotions of the body. Actually according to *Aacharya Sushruta* the *Marma* points are that where *Mamsa*(muscle), *Sira*(vein), *Snayu*(tendon), *Asthi*(bone), *Sandhi* (joint) are interconnected.

**Bio-Neurological Mechanism of the Emotions<sup>4</sup>:** Emotions can be explained in biological and neurological terms. The limbic system and autonomic nervous system interact to assist the body in experiencing and processing emotions. The limbic system include the hypothalamus, thalamus, amygdale, and hippocampus. The hypothalamus plays a role in the launching of the sympathetic nervous system, which is a part of any emotional reaction. The limbic system control our physical and emotional re-

sponses to environmental stimuli. This system categorizes the experience of an emotion as a pleasant or unpleasant mental state. Based on this categorization, neurochemicals such as dopamine, noradrenalin, and serotonin increase or decrease, causing the brain's activity level to fluctuate and resulting in changes in body movement, gestures, and poses.

#### Autonomic nervous system (ANS)

The autonomic nervous system (ANS) is regulated by the hypothalamus and controls our internal organs and glands, including such processes as pulse, blood pressure, breathing, and arousal in response to emotional circumstances. The sympathetic nervous system (SNS) controls the endocrine glands to prepare the body for emergency action. When SNS is activated, hypothalamus pituitary adrenal axis (HPA Axis) is activate and the adrenal glands is stimulated to produce epinephrine (also known as adrenaline) , which results in the "fight-or-flight" response. The fight-or-flight response involves increased blood flow to the muscles, increased heart rate, and other physiological responses that enable the body to move more quickly and feel less pain in situations perceived to be dangerous.

Conversely, the parasympathetic nervous system (PNS) functions when the body is relaxed or at rest; it helps the body store energy for future use. Effects of PNS activation include increased stomach activity and decreased blood flow to the muscles. The parasympathetic and sympathetic divisions of the ANS have complementary functions, and they operate in tandem to maintain the body's equilibrium which known as homeostasis.

#### **Emotion -Nervous system and Marma:**

Emotions are reflect by the nervous system of the body and the nervous system has a connection to the *Marma* points so the en-

ergy of the emotions has a connection to the *Marma* Points. So when this emotions get obstruct, this negative energy is stored in the vital points. When the accumulation of such negative energy increases at vital points, they start paining. We all have such experience that sometimes we feel involuntary movements in our body without any reason, sometimes our body parts realize panic without any injury, sometimes we like to laugh or cry, sometimes we like to massage at a particular point of body. All these feelings are the reflection of accumulated negative energy in the vital points. This process is not stopped until trivia of negative energy decreases the *Pranic* energy of body and take form of a disease. Cardiovascular diseases, Joints Pain, Stroke, Chronic Obstructive Pulmonary Disease(COPD) all these diseases are the most common in today's era and somehow they all are connected to one or another *Marma* points. Diseases related to heart, brain, bladder, joints are increasing widely as these all are involving vital points.

***Pranayama:*** *Pranayama* could be loosely translated as breathing control or just as normal physical breathing but it is not sufficient to explain its deeper sense. The Entire psycho-physical system, including the activities of the energy, can be brought into balance and harmony by consciously directed way of breathing. *Prana* means life force or vital energy or simply the breath; *Yama* means control, thus *Pranayama* means control of the life force. *Paramahansa Yogananda* said, "*Yoga* works primarily with the energy in the body through the science of *Pranayama*"<sup>5</sup>.

Breathing has direct relation to our emotion, as we get angry we breath faster, we are calm or in meditative state we breath slowly, when anxious or excited we can

feel changes in the breath. We can also control our emotion by breath, as when we get nervous we take a long breath and get calm. We have observe all these in some way. The negative energy produced due to obstruction of emotions and the diseases related to that can be cured from the breathing because it has a direct relation with emotions.

### **Mechanism of Pranayama in regulating nervous system and emotions**

Our autonomic nervous system regulates all bodily functions, typically without our conscious awareness. The breath is the most consciously accessible autonomic function. Just as the nervous system dictate the breath, when we dictate the breath, we dictate the nervous system. Everything is a two-way street. We need our sympathetic nervous system: to stay alive in the face of danger or perceived fear. Psychological stress is process in the exact same way by the nervous system as the physical stress. It shuts off function of all the major organs: immune, endocrine, digestive and reproductive systems. Therefore, living in the sympathetic nervous system is not only unsustainable but harmful to health in the long run. Thus the energy produced by the activation of the Sympathetic nervous system is one kind of negative energy which is stored in the marma points and produce diseases related to Marma. The parasympathetic nervous system is responsible for growth, development, and general functioning as an organism. Thus, it is imperative to live in parasympathetic dominance more frequently than sympathetic.

Yoga is a practice of establishing and maintaining parasympathetic dominance, and it all comes down to the breath. The vagus nerve is a parasympathetic nerve and the tone of the nerve is directly associated with parasympathetic dominance and

controls the parasympathetic activity of the heart, lungs, diaphragm, and digestive organs. Thus, interfacing with breath means interfacing with the vagus nerve and therefore the parasympathetic nervous system. *Ujjayi* breathing is the most understood pranayama in the neuro-scientific literature. *Ujjayi* breathing is created by a slight constriction of laryngeal muscles with partial closure of the glottis, creating an oceanic-like sound. This creates airway resistance during the intake and expiration of breath. The inspiratory loading task activates the somato-sensory vagal afferents in the glottis, pharynx, abdominal viscera, and baroreceptors, or the stretch receptors of the lungs and chest wall. This resistive loading task results in strong vagal tone and reduces heart rate. Studies have also found that regulating the rate of inhale and exhale was equally as effective as *Ujjayi* exhales<sup>6</sup>.

Thus *Pranayama* can activate the parasympathetic nervous system and control the negative energy accumulation in the *Marma* and can also decrease the level of accumulated negative energy in the *Marma* points and refine them. Thus by the practice of *Pranayama* one can not only prevent but can treat the disease related to the *Marma* points.

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### **CONCLUSION**

The negative energy of the body accumulates at the *Marma* points and produce diseases. Energy and the breath has direct relation so we can deal with negative energy of the body by breathing technique. Thus Pranayama like *Ujjai*, *Bhastrika*, *Sitali*, *Kapalabhati*, *Anulom-vilom* can treat disease related to *Marma* if they are performed in proper guidance and observation.

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