



THE LIFE FORCE (PRANA)¹ **A MODERN VIEW**

Yoga scriptures, specially the '*Patanjali Yog Darshan*' gives specific status to '*Prana*' – Srimad Bhagwad Geeta and specially Ayurveda carries special reference about '*Prana*'. Srimad Bhagwad Geet says:- '*By controlling the Prana*²', which moves through the nose and '*Apana*³', the thought flow (mind) and intellect can be easily controlled.....(5/27).

Some people recognize '*Prana*' as soul, whereas others take it as the activity of breathing. The entire creation including human beings is the composition of inert mass, the '*Prana*' and the conscious principle – the *spirit*. In case of human beings, the prana (electro magnetic energy) contributes in the formation of physical body, the vital energy, thinking mind, intellect, sub-conscious mind and the EGO. All these entities are inert, yet they behave as live. This happens due to the presence of the conscious principle – the *spirit*.

Example:- When a cylindrical armature wrapped with wires is moved between two magnet poles, then an electric current is produced in the wires. This electricity amazes us by moving giant machines. It appears to be working like a living being even though the armature, the wires and the magnet poles all are inert. Similarly, due to the existence of the *spirit*, the *prana* works like a lively entity. People take prana equivalent to spirit. That is why when a man dies, it is said, that '*prana*' of the dead have abandoned the body instead of saying that the *spirit* has gone out of the human shell. This means that the '*prana*' is the symbol of *spirit*. In fact as stated in Kathopnishad⁴ – Prana is the chariot and *spirit* is the lord. The

¹ In the larger context '*Prana*' means electromagnetic energy, which sustains the universe and all living beings.

² In this context '*Prana*' means breath (Inhaling and exhaling activity).

³ '*Apana*' is a term used in yoga scriptures, whose meaning has been given in this essay in the later paragraphs.

⁴ Human shell is the chariot and spirit is the lord – (Kathopnishad –1/3/3).

spirit proceeds on journey of life, riding on the chariot of '*prana*'. When this chariot is broken, the journey is stopped for some time until another chariot is ready i.e. the spirit restarts its journey after another physical body is formed on the basis of its past *karmas*.

The spirit is made of the same element as the God. Therefore according to Srimad Bhagwad Geeta¹, it neither takes birth nor dies. It is omnipresent. Omniscient and exists in all three periods of time etc.

Example:- In case of an element of a heater, if it is broken in between and the current is still flowing from behind, then it does not get heated. Similarly in the human shell also, if any of the five circuits supplying energy (*prana*) is obstructed, then the flow of *prana* from rest of chakras is also stopped and the people say, that the '*prana*' has deserted the human shell.

Ayurveda opines, that the food we eat, first gets converted into Blood muscles, fibrous tissues, bone marrow, bones and seminal fluid. It finally changes into ojas (magnetic energy) and tejas (light energy). The composite name of these two energies is '*prana*' and it expresses itself in the form of these two energies in the human shell.

According to anatomy, the human shell contains nervous system, whose network of neurons is spread from cortex via the spinal cord in the whole body. This network receives all kinds of stimuli from the external world and sends instructions also to the functional organs for performing activity. There is another system working under the nervous system known as Autonomic nervous system, which controls and regulates the functions of delicate organs of the body e.g. heart, kidney, lungs, intestines, liver etc. This very system controls and regulates the hormonal secretions as well. There is a canal inside the spinal cord, which is filled with a liquid mixed with glucose, proteins and minerals. This liquid is known as cerebro spinal fluid (C.S.F.) and serves as the food for the entire nervous system. It keeps it active by proper nourishment. Outside this pipe, there is series of network of neurons, which are spread right from the coccyx upto the cortex. (fig. 1 at P 30A) From here several nerves extend to the whole body after coming out from the vertebrae.

¹ Srimad Bhagwad Geeta – 2/20.

These nerves contain neurons, which carry electric charge. When the body performs some activity, then the action potential expressed is of the order of 1.2 milli electron volts (Mev.) Thousands of neurons together perform the total activity of human life. The human being performs every kind of physical and mental activity e.g. noble and wicked with an electric voltage of 1.2 Mev. These electric vibrations produce every kind of desires e.g. anger, greed, love, sympathy, compassion etc. obviously where there is electricity, there has to be magnetic field as well. When electricity converts totally into light, it starts emitting photons. At such point the Sadhaka is encircled by a glowing light known as Aura or Tejas.

Let us understand this from broader angle. Science tells us, that every moment, the energy changes into matter and the matter breaks and changes into energy. This is how the *prana* manifests itself in many forms in the universe viz sound waves, photons, electricity, magnetic, heat, nuclear, potential and kinetic energies etc.. These energies also keep on converting into each other.

According to Rishis, the '*Prana*' moves in five circuits in human shell and thus the journey of life goes on. These five circuits of '*Prana*' can be understood in modern terms in the following way:-

(a) **Prana (Respiratory System):-** The fresh air from the atmosphere is inhaled and sent to the lungs, where oxygen is absorbed by the blood and the rest is exhaled. This cycle is moving continuously day and night and clearly indicates, that the being is alive. This prana circuit is visible, therefore counted first out of all other '*prana circuits*'. By practicing '*pranayaam*' (practice of breath control) the flickering mind can be stilled. This is what Patanjali Yog philosophy advocates. This constant moving circuit when chocked due to some lung disease e.g. T.B., Phenumonia, Asthama etc. then the individual dies.

(b) **Vyana (Circulatory System):-** It denotes the distribution and circulation of blood by the heart to the whole body. In case of obstruction in the arteries, veins or heart itself, the circuit can be disrupted and the person dies.

(c) **Samaana (Digestive System):-** In case of obstruction caused

in intestines, stomach, pancreas or liver etc. due to some ailment of digestion e.g. inflammation, diabetes, ulcer etc. then the individual dies.

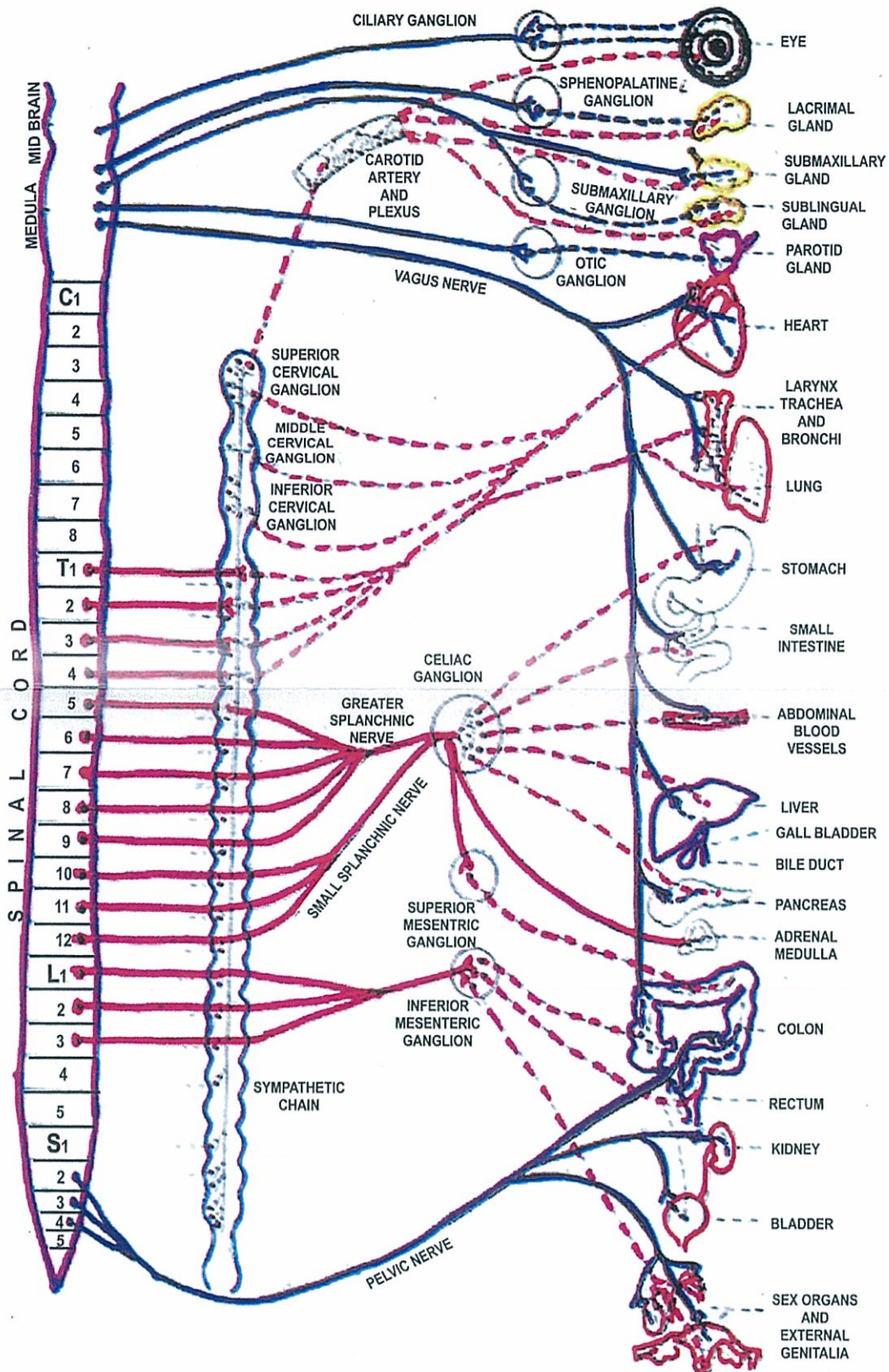
(d) **Apaana (Excretory & Reproductive System)**:- It denotes the excretion of stool, urine, sputum, sweat and gas etc. It also denotes the regulation of the reproductive fluids. Due to some ailment of kidney, intestines or sweat glands the excretion of urine, stool or sweat is choked and the person dies.

(e) **Udaan (Thought System)**:- It denotes the flow of thoughts. There is a constant electric sparkles taking place inside the cerebral cortex due to which thoughts are generated. This thought flow is known as '*Thinking Mind*'. In fact mind is not a segregated system. This is simply the electric vibration of specific frequency. It is similar to the radio waves sending message to far off distances. Suppose the vibrational frequency of the '*prana*' is of 30 kilo hertz , then, it is expressed through speech to the outer world. We can compare this with the medium wave of radio broadcasting system. Every individual has different vibrational frequency, therefore his qualities, activities and habits are entirely varying. It appears, that the Rishis have observed the centre of production of thoughts at Manipur chakra (fig. No. 3) and also that the frequency of vibration rises gradually on upper chakras. Therefore at '*Ajyan chakra*', the vibration frequency increases as compared to Manipur chakra and so this centre acts as intellect (decision centre). This can be assumed as of 300 kilo hertz / second and on comparing it with radio broadcasting it may be termed as short wave-1, which transmits the message upto European countries. In the still higher frequency, say 3000 kilo hertz / second, message can be transmitted upto U. S.A., whereas in human shell it carries out the work of a computer and stores all kinds of memories of events happening in the individual's life time. This very record becomes the basis for next birth of the individual. This is why in the language of yoga this sheath is known as '*Jyanmaya Kosha*' (A sheath of perpetual knowledge) and in terms of Radio transmission, this can be said to be similar to the short wave – 2.

To understand '*prana*' in terms of modern science the study of following illustrations will be helpful.

1. Autonomic Nervous System (fig.1).
2. Rain of cosmic energy (fig. 2)

Sympathetic & Parasympathetic Nervous System



INDEX :-

- · · · (Firm & Dotted Blue Lines) = PARASYMPATHETIC
- · · · (Firm & Dotted Red Lines) = SYMPATHETIC

3. Location of chakras situated on spinal cord (fig.3)

(1) Autonomic Nervous System:- According to the anatomy, Autonomic nervous system keeps all organs of the body active, whereas five '*prana circuits*' keep the human shell functioning. This system is divided into two parts:-

(a) Sympathetic Nervous System:- (Exciting Nervous System) A hormone known as Adrenalin excites the various organs. Thus the required quantity of hormone is released from sympathetic nervous system and the body functions smoothly. In the figure this system has been shown in red lines.

(b) Para Sympathetic Nervous System:- (Relaxing Nervous System):- In this system the organ activity is depressed due to the flow of a hormone known as Acetylcholine (In the figure this system has been shown in blue lines).

(2) Location of Chakras Situated on Spinal Cord and Brain:-

(a) Sahasrasar Chakra (Cortex):- According to the Rishis, there are seven chakras situated on the passage of spinal cord and upto brain i.e. extending from Meru-Puchha (coccyx) to sahasrasar (cortex) (Fig.3). It seems, that the formation of these chakras is similar to an atom. From billions of galaxies, the energy particles (electron, proton neutrons) are raining. This energy enters through the '*sahasrasar*' (cortex) of the human being and activates all chakras. The way the hydroelectric power of 11,000 volts is transmitted from the dam site to the city and then converted to 220 volts and sent to the individual houses, similarly the cosmic energy received through cortex is sub-divided by the chakras and supplied to the various organs. This cosmic energy flows upto the coccyx, so that all chakras and all organs may function properly. In case there is an obstruction in any chakra, then the flow of energy in the following chakras is constricted. Therefore those

Rain of Cosmic Energy

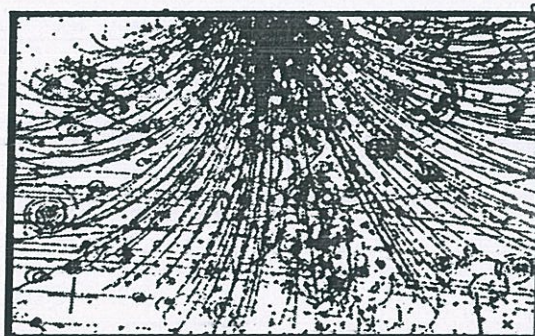


Fig. 2

chakras do not supply adequate energy to the organs connected with them and they remain sick. The cortex besides performing the function of thinking, pondering, deciding also keeps coordinated control on the smooth functioning of the whole body. In terms of yogic language, this is known as '*udaan system*'.

(b) Ajyan Chakra:- The nerves emitted from spinal cord and medulla oblongata carry instructions to the following organs:-

(i) Eyes (ii) lachrimal glands (iii) sub-maxillary gland (iv) sub lingual gland (v) parotid gland (vi) Heart (vii) Larynx, Trachea and Bronchi (viii) lungs (ix) stomach (x) small intestines (xi) abdominal blood vessels (xii) lever (xiii) Gall bladder (xiv) Bile duct (xv) Pancreas (xvi) Adrenal medulla (xvii) Colon (xviii) Rectum (xix) Kidney and urinary bladder (xx) Sex organs (xxi) External genitalia.

The sub-conscious mind thus keeps the total control on all the organs. Somehow the function of '*chitta*' (sub-conscious) keeps on changing because it is influenced by internal emotions e.g. Desires, Anger, greed, compassion, kindness, love etc. These emotions create balanced or imbalanced state of *chitta*. So long as the human '*chitta*' (sub-conscious) is healthy and happy, the hormonal secretion remains in balanced state. Consequently all organs of the body function smoothly and the individual remains healthy. Opposite to this, if the '*chitta*' is depressed, anxious or unhappy, the secretion of endocrine glands becomes imbalanced. Consequently the organs become diseased.

(c) Vishuddhi Chakra:- The energy generated through this chakra is supplied to the following organs:-

(i) Carotid Artery and plexus
 (ii) Eye (iii) lachrimal gland
 (iv) sub-maxillary gland
 (v) sub-lingual gland.

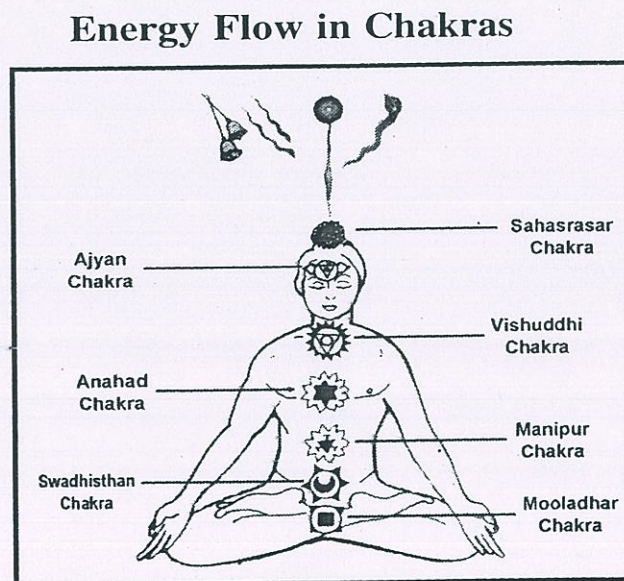


Fig. 3

(d) **Anahad Chakra**:- energy generated by this chakra is supplied to the following organs:-

(i) Heart (ii) Larynx, Trachea & Bronchi (iii) lungs under this chakra a composite influence of '*prana*' and '*vyana*' systems can be understood.

(e) **Manipur Chakra**:- The energy generated by this chakra is supplied to the following organs:-

(i) Stomach (ii) small intestines (iii) Abdominal blood vessel (iv) Liver (v) Gall bladder and bile duct (vi) pancreas (vii) Adrenal Medulla (viii) Colon.

The samana system can be considered as working under this chakra.

(f) & (g) **Swadhisthan Chakra and Mooladhar Chakra**:- Energy generated by these chakras is supplied to the following organs:-

(i) Colon (ii) Rectum (iii) Kidney (iv) Urinary bladder (v) Sex organs and external genitalia.

The energy supply to these organs is maintained by the nerves emanating from Mooladhar and Swadhisthan chakras. Kundalini keeps perfect record of the past life and Mooladhar chakra is influenced from the vibrations emanating from kundalini, whereas the '*chitta*' keeps perfect record of the present life and influences the secretions of hormones. Kundalini situated at Mooladhar chakra is connected with the excretory system, hence is important, because if this system does not function properly, then also the body often remains diseased. Practicing *Raichan-Pranayaam*¹ and meditation add strength to the functioning of these chakras.

After discussing the detailed function of the five *Prana-circuits* as above, it is important to note, that every function of Prana wholly depends upon the existence of the subtle force *Atma, the conscious principle*. Prana has been termed as deity and is revered with deep faith. All the subtle forces of nature have been given due respects. *This is the basic of Vedic culture*. Since '*prana*' is the basis

¹ For details of '*Raichan-Pranayaam*' please refer to books on Hath yoga and an expert on the subject.

for *Atma* to manifest, therefore, the poets have exaggerated and designated it as *Atma*. Consequently the masses are confused. However both of them are so much interdependent, that the human mind and intellect fail to differentiate between them.

Since the thinking mind, intellect and chitta are the different frequencies of '*prana*', therefore whenever there is the complete casation of vibration of '*prana*', then the sadhaka enters into *Samadhi*.

-Hari Om Tat Sat-