



ORIGINAL RESEARCH PAPER

Ayurveda

AN AYURVEDIC APPROACH TO BIOLOGICAL ADAPTATION

KEY WORDS: Swasthya Rakshanam, Biological day-night, Brahmamuhurt , Melatonin, RHP axis

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ABSTRACT

Ayurveda is the science of life. From past to present so many diseases have come with their variable features, new diseases have appeared and in future, so many diseases will appear but the Ayurvedic concepts for healthy body and mind remain the same from ancient to present era. Theory of "Swasthya Rakshanam" - maintenance of positive health is well declared in Charak Samhita. A way of immunity boosting will be included Triad of "Ahar+Vihar + Aushadha", which are described in our Samhitas as Dincharya, Ratricharya, Ritucharya and Ritusandhicharya. From doing these charyas we can maintain our endocrininal system to regulate our physical and mental health. When a balance between biological day and night to solar day and night, is maintained then we can gain our supreme health with a best immune power. It is well explained that "Sama Dosh-Dhatu-Mala" leads immunity

Ayurveda has two main purposes one is Swasthasya Swasthya Rakshanam (to save a healthy person's health) and the second one is AturVikar Prashaman (to treat the diseased person). It is the science of life. From past to present so many diseases have come with their variable features, new diseases have appeared and in future, so many diseases will appear but the Ayurvedic concepts for healthy body and mind remain the same from ancient to present era.

Theory of "Swasthya Rakshanam" - maintenance of positive health is well declared in Charak Samhita, at present it is mentioned under "Swathavrita".

Most people think that we can boost our immunity by immunity booster medicine (Aushadha) or by taking a balanced/nutritive diet (Ahar) or by doing some physical activity like Yoga-regular exercises (Vihar). But in the present era we have to change our thought. We have to change "or" from "and" about Ahar-Vihar - Aushadha. Therefore, a way of immunity boosting will be included Triad of "Ahar+Vihar + Aushadha".

A state of complete physical , mental, social and spiritual well being and not merely by the absence of disease is called "Positive health". It is maintained in different ways which are described in our Samhitas as Dincharya, Ratricharya, Ritucharya and Ritusandhicharya.

Dincharya means activities done by person from morning to evening which starts from Brahmamuhurta Jagaran and followed by Malatyag (defecation), Dantadhawan (toothbrushing), Gandush-dharan (Keeping liquid in mouth for sometimes), Anjan (use cleansers for the eyes), Nasya (nasal insufflations of medicine), Dhuppan (medicated smoking), Vyayam (exercises), Kshaurkarma (cutting of hair, beard and nails), Abhyanga (oil massage), Shan (bathing).

Ratricharya deals with the regimen that has to be followed from dusk through the night up to dawn, i.e Ahar (food), Nidra (sleep), Brancharya (prohibition of sexual intercourse).

Ritucharya which deals some foods and exercises for each Ritu. In every Ritu these are some special changes in environment and our body. So, Ritucharya will help in promotion of our health and protect us from diseases. It is well explained in our Samhitas. 1

Ritusandhi is the seasonal junction of two Ritus. A time period of 14 days. The final 7 days of pervious season and the beginning 7 days of upcoming season. According to Ritusadlicharya one should gradually start rejecting the practices (dietetic lifestyle, behaviour) of the previous Ritu

and gradually start practices of the upcoming Ritu at the same time. 2 The reason is that sudden discontinuance or sudden adoption gives rise to disease. 3

In Kaushitaki Brahman and Gopath Brahman a special Ritucharya is described as "Chaturmansa". This is a period of four months from Ashadh Skula Ekadashi (11th day of the bright fortnight of Ashadh) to Kartik Shukla Ekadashi (11th day of the bright fortnight of Kartik). Another Ritusandhicharya is described in Ayurveda .According to Acharya Sharangdhara , the junction period of Kartika month(3rd week of November) and Margashirsa month(4th week of November) or Sharad and Hemant Ritu was designed as "Yamadamstrakala". It is a period of 16 days, the last 8 days of Kartika month and 8 days of Magashirsa month. During this period it is indicated that one can be healthy if he /she is swalpabukta4. In Chaturmansa, a greater proportion of Tama-predominant frequencies reach the earth. It is also the period of Dakshinayan which is unfavourable for Satvik guna. Lesser availability of sunlight increases the Tama component or negative energies ,which is harmful to our body and mind. Therefore a large number of festivals and "Vrat "(fast) is celebrated to increase our Sativa component. By celebrating festivals we consume a lot of Satvika food which increases the Satvika guna of our body and mind and therefore which helps us to boost our immunity.

In present era so many studies have been done to prove the effect of diurnal and nocturnal periods on our body and mind. The concept of Circadian Pacemaker is like Dincharya and Ratricharya, where the do's are clearly said by our Acharyas. Circadian Pacemaker is stimulated by light. It maintains the timing of biological day and night which is perfectly matched with the timing of solar day and night. 5

Melatonin-Pineal hormone plays a unique role in human or animal physiology. It is "Hormone of darkness" and also known as "Endogenous synchronizer" that maintains circadian rhythms in the body. Similarly it is affected by seasonal changes, where the duration of sunlight shorter in winter and longer in summer. So that the duration of melatonin secretion is longer in winter and smaller in summer. It peaks in night time hours and includes physiological changes which promote sleep, decreased body temperature and respiratory rate. 6

RHP (Retino- Hypothalamic-Pineal) axis is very much important for melatonin secretion which is sensitive to light. 7 When the artificial light will be introduced the RHP axis responds and it disturbs natural melatonin secretion. Here, the biological day and night are not quite similar to solar day and night. As a result the internal environment will be disturbed and many diseases will occur.

Another hormones' Pituitary hormone' controls major biological functions like growth, reproduction, stress adaptation, metabolism etc. Hypothalamus is activated by any trigger response like stress which is responsible for the secretion of ACTH from the pituitary which instructs the adrenal cortex to secrete cortisol. Sometime external oscillator or external trigger factor (Bhaya/ Agantuja karna) is absent and the physiological or psychological changes occur due to an internal oscillator or internal trigger factor (Abhyantar/Nija karana) . Some researches have shown that melatonin is the internal oscillator that is induced by darkness or absence of light and is secreted by pars tuberculis of the pituitary.⁸

Conclusion ---Ayurveda is the only science which guides about healthy diet(Ahar) and lifestyle (Vihar), necessary for living healthy and happy life. Dincharya and Ratricharya helps us to maintain a balance between solar day and night to biological day and night. It starts with 'Brahmamuhurt (at least 1 hr 36 mins before sunrise and ends 48 mins before sunrise) jagran' when the solar day starts. Melatonin secretion is induced by darkness. Other hormones like prolactin and cortisol are induced by darkness . These act as circadian pacemaker. So from Brahmamuhurt jagran we can maintain our endocrinal system . If we follow Dincharya, Ratricharya, Ritucharya and Ritusandhicharya , as described in our Ayurvedic text ,then we can balance our internal environment (Dosh-Dhatu-Mala) with the external environment (Soma-Surya-Anil and other Brahmandik tatva) .When a balance between biological day and night to solar day and night, is maintained then we can gain our supreme health with a best immune power . It is well explained that "Sama Dosh-Dhatu-Mala" leads immunity.⁹

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