

**KALA AND AYURVEDA: A REVIEW ON AYURVEDIC CHRONOBIOLOGY AND TREATMENT PLANNING**Dr. Rakesh Kapoor^{*1}, Dr Amardeep Singh²¹Lecturer, Dept. of Samhita Siddhant, Govt. Ayurvedic College, Patiala, Punjab, India.²Lecturer, Dept. of Rachana Shaareera, Govt. Ayurvedic College, Patiala, Punjab, India.

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ABSTRACT

According to Ayurveda, "Kala" (time) is one of the fundamental *Karana Dravyas* in determining the maintenance, transformation and continuity of life. The application of the concept of *Kala* will therefore be discussed in relation to its significance in the context of health, the development of disease and therapeutic management. Classical and authentic Ayurvedic texts consider *Kala* to be an eternal and dynamic principle that governs the creation, maintenance and destruction of the universe, and therefore also regulates the *Vata*, *Pitta* and *Kapha* systems of body. *Auhsdh sevana kala* and therapeutic procedure administration have a major impact on the effectiveness of a given treatment and this concept is termed as "chronopharmacology". Ayurvedic preventive principles of *Dinacharya* and *Ritucharya* promote the adaptation of an individual to the natural rhythms of time as a means of maintaining optimal health. Additionally, the Ayurvedic concept of *Shatkriyakala* further emphasizes the need for timely diagnosis and treatment for optimal outcomes. The Ayurvedic understanding of *Kala* therefore represents an approach to biological rhythms which is an important aspect of personalized medicine and healthcare system. When a person's lifestyle, diet and treatment regimens are in harmony with the principles of *Kala*, this contributes to disease prevention and health promotion through effective therapeutic outcomes.

KEYWORDS: *Ayurveda, Kala, Chronotherapy, Chronobiology, Auhsdh sevana kala.***INTRODUCTION**

In Ayurveda, the concept of time is crucial when it comes to medicine and its effect. As a way of classifying time, there are two distinct categories: first, *Kshanadi Kala* which refers to the method of determining a time period based on units of time such as *Kshana* and *Kashta*, and second, *Vyadhi Avastha Kala* which breaks down diseases into many separate stages throughout the progression of a disease, including *Ama*, *Pachyamana* and *Pakvavastha*. Ayurvedic *Acharyas* describe *Aushadha Sevana Kala*, or specific times to take medications; this is quite similar to the modern scientific area of chronopharmacology.^[1-3] According to Ayurveda's philosophy, the attainment of optimal health is based upon the establishment of a balanced physiological rhythm throughout the body. This is accomplished by implementing the practices such as *Dinacharya*, *Ritucharya*, *Aharavidhi Vidhana*, *Sadvritta Palana*, *Achara Rasayana* and *Ritushodhana*, etc. These

principles promote synchronization between bodily functions and the natural cycles of the environment, while also enhancing the physical and mental well-being of the individual.

According to modern science time is a universal dimension that governs all natural processes in the universe. Examples of these natural processes include the movements of the planets and the rhythms of living organisms. Modern disciplines such as chronobiology and chronopharmacology utilize the science of rhythm to study physiological functions based upon rhythms that are regulated by internal biological clocks that have been synchronized with the environmental cycle.^[4-6]

Concept of Kala

Kala is one of nine fundamental elements described by *Charaka Samhita* that are also known as *Karana dravya*. In Ayurveda, *Kala* is viewed not only as a passive

measurement of duration, but rather an active force responsible for creating, preserving and transforming all life. *Kala* itself exist specific *Gunas* and *Karmas* which play an important role in influencing all the dynamic changes that occur within the human body and throughout creation. In addition, *Kala* regulates the cycles of creation and destruction and determines how we are connected to the past, present, and future.^[5-7]

Clinical Significance of *Kala*

Kala is an integral aspect of evaluating the evolution and outcome of any identified illness, as well as providing insights into when to place the patient into a therapeutic schedule. Historically, Ayurveda texts state that the physiological functions of the body, as well as the balance of *Tridosha* will change over the course of a day, night, season or person’s age. People who properly adapt to the physiology of food and activity in accordance with

these cycles of time experience improved physical strength.

Within Ayurveda, illnesses are classified into two categories: *Kalaja* and *Akalaja*. *Aushadha Sevana Kala* is another aspect of health where *Kala* relates to the effectiveness of a given therapeutic method. The time at which a therapeutic agent is administered can affect its effects and the outcome of administration due to potential variations in pharmacokinetics and pharmacodynamics. This concept is parallel to the scientific field of chronopharmacology which investigates the effect of biological rhythms on the safety and efficacy of drugs.^[2-4] Ayurvedic practitioners have consistently stated that the effectiveness of a medication will change based on the timing of administration, the person’s *Dosha* at the time, and the person’s biological rhythm as depicted in **Table 1**.

Table 1: Clinical Significance of *Kala* (Chronopharmacology).

Aspect	Clinical Significance
<i>Roga Nidana</i>	<i>Kala</i> helps in understanding progression and prognosis of disease according to time & season.
<i>Dosha</i> Assessment	<i>Dosha</i> are predominates at different times and different seasons.
Disease Prognosis	The duration of disease help to determine whether a condition is curable or incurable.
<i>Aushadha Sevana Kala</i>	Appropriate timing of drug administration improves absorption and therapeutic efficacy.
Healing and Recovery	Proper timing supports tissue repair and restoration of balance.
Preventive Medicine	Understanding <i>Kala</i> helps to prevent disease by adapting lifestyle according to season and age.

***Kala* and Physiology**

Ayurveda's interpretation of physiological functions includes *Avasthapaka*, *Vipaka* and *Dhatupaka*, which are governed by *Agni*, and these physiological activities occur sequentially to their internal timing mechanisms. When digestion takes place, *Kapha* predominates during the pre-digestive state, then *Pitta* during the active-digestive state, and finally *Vata* during the post-digestive state. Similarly, the process of nourishment through *Dhatvagni* operates in a sequential manner, which indicates the cyclical/rhythmic nature of metabolism in a person's body. The Ayurvedic understanding of this

physiological nature of metabolism emphasizes that these transformations of physiology occur at specific times in order to maintain the internal states of balance and health.^[3-5]

Ayurvedic Chronotherapy

Kala is immeasurable in size, single in nature (*Eka*) and constantly active through combination and separation processes. *Kala* can be broadly divided into two categories based on its functions as mentioned in **Figure 1**.

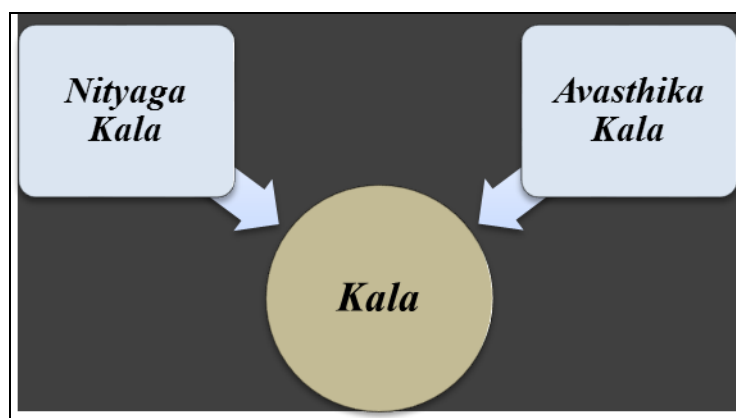


Figure 1: *Kala* classification based on its functions.

As mentioned above *Nityaga Kala* and *Avasthika Kala*. The term "*Nityaga Kala*" describes cosmic or eternal time, which is symbolized by regular cycles like day and night, seasons, months, and years. *Avasthika Kala* is situational or conditional time related to aging, physiological fluctuations, disease progression, and physical changes. This categorization shows how Ayurveda links biological and pathological processes to universal time cycles. According to Ayurveda the physical processes such as digestion, metabolism, nourishment, development and aging are all controlled by time (*Kala*).^[4-6]

The *Tridosha* vary in their proportions over different times of day, different seasons and different ages. *Kapha* is predominant in the morning, *Pitta* at midday and *Vata* at night. Similarly, throughout the year, the seasonal weather pattern influences the balance of the *Doshas*. *Kapha* accumulates in the winter, *Pitta* accumulates during the monsoon season and *Vata* is predominant in the summer. The disease prevention and treatment plan can be scheduled accordingly depending upon physiological predominance of *Kala*. The function and dominance of each physiological body process also follow rhythms: *Kapha* predominates in early childhood, *Pitta* predominates during adulthood, and *Vata* predominates in old age. Therefore respiratory ailments tend to be diagnosed more frequently in children, metabolic problems tend to be diagnosed more frequently in adults, and degenerative diseases are more common in elder individuals.^[5-7]

Role in Disease Diagnosis and Treatment

The effectiveness and safety of medicines are dependent upon when they are taken, which mirrors chronopharmacology in western medicine. Ayurvedic texts suggest the optimal time to take a medicine based on which *Dosha* is dominant and the current physiological state of the patient to ensure maximum effectiveness and the least amount of side effects. Similarly, Ayurvedic therapies are given with regard to the seasonal cycles. *Vamana* is suggested for *Kapha* disorders during spring, *Virechana* is suggested for *Pitta* disorders during fall, and *Basti* is suggested for *Vata* disorders during the end of summer. Timing is critical for *Snehana*, *Nasya*, *Raktamokshana* to work properly and optimally. This reinforces that Ayurveda recognizes biological rhythms as well as maximizes the benefits of therapy. The concept of *Shatkriyakala*, which outlines six stages of illness progression, further emphasizes the preventive value of *Kala*. Disease progression and complications can be avoided with early detection and treatment during phases like *Sanchaya* and *Prakopa*.^[6-8]

Modern Chronobiology

Chronobiology and chronopharmacology confirms many Ayurvedic principles of time as an important component of physiology and therapeutics. Scientific evidence currently accepts that hormones, metabolism, circadian rhythms, and responses to drugs are regulated by internal

biological clocks. Ayurvedic principles describing the same variations include the *Doshas*, *Agni*, *Dinacharya*, *Ritucharya* and *Aushadha sevana kala*. Ayurvedic definition of *Kala* demonstrates a complete and holistic view of biological timing. Combining ancient and modern scientific methods can have a significant impact on personalized medicine, preventative health care, and improved therapeutic outcomes. Modern research has shown that metabolism, hormones, immunity, and drug response all experience seasonal and circadian variations. When diet, lifestyle, and treatment methods are performed in accordance with natural time flow, it provides both prevention and cure.^[8-10]

CONCLUSION

Kala is a broadly defined concept in Ayurveda that encompasses more than just measuring time. It governs health, how disease manifests, how the body physiology is regulated and how treatment is given. When a person's actions are aligned with a natural time cycle, then that person will experience physiological harmony. Therefore, by aligning the body's natural time function with natural time cycles, one will experience optimal therapeutic effect for both prevention and treatment and an increased longevity. The scientific field of chronobiology, which investigates biological time cycles and rhythms in people and other living things, validates many of the Ayurvedic principles generated by the ancient *Acharyas* long before chronobiology was a recognized science. Concepts like *Dinacharya*, *Ritucharya*, *Aushadha Sevana Kala*, *Dosha* cycles and *Shatkriyakala* reflect these all aspects of chronobiology. The Ayurvedic interpretation of *Kala* connects conventional wisdom with contemporary scientific understanding. This concept emphasizes the significance of treating illnesses in accordance with biological and environmental rhythms.

REFERENCES

1. Acharya YT, editor. Charaka Samhita of Agnivesha, Vimana Sthana. Ch. 8, Ver. 68. Reprint edition. Varanasi: Choukhambha Surbharati Prakashan, 2005; p. 272.
2. Devi D, Srivastava R, Dwivedi BK. A critical review of concept of aging in Ayurveda. *Ayu*, 2010; 31(4): 516-519.
3. Sharma V, Chaudhary AK. Concepts of Dhatu Siddhanta (theory of tissues formation and differentiation) and Rasayana; probable predecessor of stem cell therapy. *Ayu*, 2014; 35(3): 231-236.
4. Sushruta. Sushruta Samhita. Edited by Jadavaji Trikamji Acharya. 8th ed. Varanasi: Chaukhambha Orientalia; 2005.
5. Trikamji Jadavaji, ed. Caraka Samhita of Agnivesa Sarirasthana (Ayurveda dipika, Chakrapanidatta, Comm. Sanskrit) Varanasi: Chaukhambha Prakashan, 2011; p. 325 5/3.
6. Paradkar Harishastri, ed. Ashtangahrdaya of Vagbhata Sutrasthana (Sarvangasundara of Arunadatta and Ayurveda rasayana of Hemadri,

- Comm. Sanskrit) Varanasi: Chowkhamba Krishnadas Academy, 2018; p.7.1/8.
7. Vridha Vagbhata, Ashtanga Sangraha. Edited by Shivaprasad Sharma. 3rd ed. Varanasi: Chaukhamba Sanskrit Series office, 2012.
 8. Malik S, Stokes Iii J, Manne U, Singh R, Mishra MK. Understanding the significance of biological clock and its impact on cancer incidence. *Cancer Lett*, 2022; 527: 80-94.
 9. Misra N, editor, (1st ed.). Commentary Prakasika of Dhundhiraja Sastri on Vaishesika Darshan, Chapter 10, Kalaparakaranam. Varanasi: Chaukhamba Sanskrit Sansthan, 2011; 41. 4.
 10. Kaşkal M, Sevim M, Ülker G, Keleş C, Bebitoğlu BT. The clinical impact of chronopharmacology on current medicine. *Naunyn Schmiedebergs Arch Pharmacol*, 2025; 398(6): 6179-6191.