



**PREVENTION OF INFECTIOUS DISEASES THROUGH AYURVEDA**

<sup>1</sup>Sreelekshmi V.S\*

<sup>1</sup>Assistant Professor, Atreya Ayurveda Medical College, Doddaballapura, Karnataka

**ABSTRACT**

**Introduction:** The ancient science of life, *Ayurveda*, has a comprehensive approach in the prevention and management of diseases. Based on the mode of transmission, the diseases are broadly classified as communicable and non communicable. In *Ayurveda* various terms like *Janapadodhwamsa*, *Maraka*, *Aupasargika Roga* were used to describe epidemics and communicable diseases. The association of the three important factors viz agent, host and environment are responsible for emergence of infectious diseases. In order to break the chain of transmission of infective agents, *Ayurveda* advocates various preventive measures like avoiding *Prasanga* (Mutual contact), *Gatrasamsparsha* (Skin to skin touch) etc and for promoting the health, *Rasayana* (Rejuvenation therapy) and *Panchakarma* are advised. Several non-pharmacological measures that are interpretative to overall health including diet, sleep, mental factors, and environmental hygiene are also recommended in *Ayurveda*.

**Methods:** *Janapadodhwamsa* is described in length in the *Charaka Samhita Vimanasthana*. In *Susrutha Samhita Sutrasthana*, *Acharya Susrutha* provides information about *Aupasargika rogas*. Diseases brought on by extreme seasonal changes, according to the *Bhela Samhita*, can result in mass mortality. The information is compiled from a variety of *Ayurvedic* texts. **Result:** An infection manifests only whenever under favourable conditions the host immunity is overpowered by an agent. **Conclusion:** There is a need to decode some of the non pharmacological, prophylactic measures which are mentioned in our classics. Many obsolete practices widely followed by our forefathers to prevent infectious diseases like *Dinacharya* (Daily regimen), *Ritucharya* (Seasonal regimen), *Aachara Rasayana*, *Sadvritta paalana* (Codes of conduct), *Pathya Apathya* (Wholesome and unwholesome diet), *Rasayana* (Rejuvenation therapy) are relevant even today.

**Key Words:** *Aachara rasayana*, *Aupasargika Roga*, *Dinacharya*, *Gatrasamsparsha*, *Janapadodhwamsa*, *Maraka*, *Prasanga*, *Ritucharya*, *Sadvritta paalana*, *Pathya apathya*

**INTRODUCTION:** A communicable disease is an ailment caused by an infectious agent or its toxins that spreads to a vulnerable animal or human host through direct or indirect transmission of the infectious agent or its products from an infected individual, an animal, a vector, or the inanimate environment. <sup>(1)</sup>. Understanding the nature of these organisms it is easier to know the route of spread and the control measures can be made smoothly. *Ayurveda* describes these agents<sup>(2,3)</sup>, mode of transmission, methods of controlling and the treatment measures

for such kind of diseases. The agents that cause these diseases can be categorised as *Krimis* because the term *Krimi* has such a broad connotation. All organisms that rely on the human body for nutrition and shelter are referred to as *Krimi*. According to our *Acharyas*, all germs, bacteria, viruses, protozoa, and helminths that are completely reliant on the human body are categorised as *Krimi*. Even the concept of *Visha* (Poison) can be thought of as an agent. *Acharyas* have cited *Jangama visha* (Poison of mobile origin) and *Sthavara visha* (Poison of immobile origin) in this

connection. *Jangama visha* explains the diseases caused by insect bites or interaction with animals, among other things. *Sthavara visha* describes diseases of stationary origin that can be attributed to the vitiation of the *Desha* from whence they emerge. As a result, these can be called communicable disease agents.

Based on the mode of transmission, the diseases are broadly classified as communicable and non communicable diseases. Stopping the progression of the disease at the earliest is the ideal way to control such diseases. Also boosting up of the immunity against these diseases by various means is also important. In order to break the chain of transmission of infective agents, *Ayurveda* advocates various preventive measures like avoiding *Prasanga* (Mutual contact), *Gatrasamsparsha* (Skin to skin touch) etc and for promoting the health, *Rasayana* and *Panchakarma*<sup>(4)</sup> are advised. Several non-pharmacological measures that are interpretative to overall health including *Dinacharya*, *Ritucharya*, *Aachara Rasayana*, *Sadvritta paalana*, *Pathya Apathya* are also mentioned.

### AIMS AND OBJECTIVES

This paper is to highlight the prophylaxis aspects practiced in *Ayurveda* and rationale behind these.

### Communicable Disease in Ayurveda

*Ayurvedic* medicine is one of the world's oldest holistic healing systems. It's built on the principle that good health and well-being are dependent on a delicate balance of mind, body, and spirit. Any disturbances in these leads to the vitiation of *Doshas* which will ultimately ends up in diseases.

*Acharya Susruta* describes various diseases like *Kushta* (Dermatological conditions), *Jwara* (Fever), *Shosha* (Types

of infectious diseases causing emaciation), *Netrabhishyanda* (Conjunctivitis) etc under the heading of *Aupasargika rogas*. Here the mode of transmission has mentioned as through contact ie; *Prasanga* (mutual contact), *Gatrasamsparsha* (skin to skin touch), *Nishwasa* (exhaled air), *Sahabhajana* (sharing food), *Sahashayya* and *Aasana* (sleeping and sitting closely), sharing and using *Vastra* (cloths), *Maalya* (garlands) and *Anulepana* (paste of chandana etc.on the body after bath)<sup>(5)</sup>. On the other hand, *Acharya Charaka* describes the role of *Vaayu* (Air), *Jala* (Water), *Desha* (Land) and *Kaala* (Season) in the manifestation of diseases under the heading of *Janapadodhwamsa*<sup>(6)</sup>. Diseases manifest quite widely due to a lack of environmental hygiene. According to *Bhela Samhita*, *Janamara* (mass death) can be caused by diseases that arise as a result of excessive seasonal fluctuations<sup>(7)</sup>.

### Prevention and Control

*Panchakarma* can be used to prevent and control *Janapadodhwamsa*. Adopting *Rasayana* and adhering to *Sadvritta* are also significant.

**Primordial preventive measures** in *Ayurveda* include healthy lifestyles such as: *Dinacharya*, *Ratricharya*, *Ritucharya*, *Sadvritta* and *Aachara Rasayana* which help in promotion of host defense. One should take food after washing hands, feet and mouth with water. It has been mentioned not to wear wet clothes<sup>(8)</sup>. There are daily regimens mentioned like *Nasya*, *Kavala* and *Gandusha*<sup>(9)</sup> effective in maintaining nasal and oral hygiene. Gargle warm water added with a pinch of turmeric and salt. Water boiled with *Triphala* (*Emblica officinalis*, *Terminalia bellerica*, *Terminalia chebula*) or *Yashtimadhu* (*Glycyrrhiza glabra*) also can be used for gargling. Nasal

instillation/application of medicated oil or plain oil or nasal application of cow's ghee once or twice in a day<sup>(10,11)</sup>, especially before going out and after coming back to home. Steam inhalation once a day. A solid night's sleep of 6–8 hours is recommended. Moderate physical activity is recommended.

Administration of *Haritaki* (*Terminalia chebula*) with suitable *Anupana* as per season (*Rituharitaki*)<sup>(12)</sup> is a simple, cost-effective preventive measure.

**Primary preventive measures** are proper dietary habits such as *Ashta Vidha Ahara-visheshayatana*<sup>(13)</sup>, *Naimittika rasayana* and age specific *Rasayana*. *Ayurveda* considers *Aahara* as *Mahabheshaja*<sup>(14)</sup>. There are many drugs mentioned in *Ayurveda* which are used for daily consumption (*Nitya Sevaniya Dravyas*)<sup>(15,16)</sup> like *Shashtika Shali* (rice), *Mudga* (Green gram), *Saindhava lavana* ((rock salt), *Amalaki* (*Embllica officinalis*), *Yava* (barley), *Antariksha jala* (rain water), *Ksheera* (milk), *Sarpi* (ghee), *Jangala mamsa* (meat of animals from arid land), *Madhu* (honey), *Dugdha* (milk), *Godhuma* (wheat), *Sunishannaka*, *Jivanthi*, *Balamulaka*, *Pathya* (*Terminalia chebula*), *Mrudwika* (*Vitis vinifera*), *Patola* (*Trichosanthus doica*), *Dadima* (pomegranate), *Sharkara* (sugar). These things which are always conducive for health & should be consumed regularly for the maintenance of health. The daily administration of *Nitya Sevaniya Dravyas* improves the health of healthy people and helps to prevent disease. *Ayurveda* recommends storage of water in copper vessels, for its purification<sup>(17)</sup>. Even it emphasizes the medicinal properties of hot water as it promotes digestion, clears *Kapha*<sup>(18)</sup> and relieves throat pain and generally it is recommended for throat

infection. It is specially mentioned as *Kantya*<sup>(19)</sup>. Importance of Fresh, warm, balanced diet is highlighted. *Rasayana* like *Pippali rasayana* can be used as a measure of preventing infective diseases by strengthening the natural defence mechanism. *Rasayanas* that are specific to an illness and boost an individual's vigour towards that ailment are known as *Naimittika Rasayanas*. *Khadira* (*Acacia catechu*), *Bakuchi* (*Psoralea corylifolia*) in *Kushta* (skin diseases) is an example for *Naimittika rasayanas*. The successive loss of various values specific to respective decades of life has been discussed by *Acharya Vagbhata*<sup>(20)</sup> and *Acharya Sharngadhara*<sup>(21)</sup>. When examining the idea of ageing, it is necessary to pay attention to age specific *Rasayana* in order to prevent age-related loss. Based on the mechanism of action of the medications described in *Vayasthapana Maha Kashaya* in particular age groups, they can be used. For example, in the first decade of life, *Balyavastha* (childhood) will be lost, and we can supplement it with *Guduchi* (*Tinospora cordifolia*), *Mandukaparni* (*Centella asiatica*), *Ksheera* (Milk), *Ghrita* (Ghee), and so on. *Vridhhi* (growth) will be lost in the second decade, therefore *Shatavari* (*Asparagus racemosus*), *Sthira* (*Desmodium gangeticum*), *Ashwagandha* (*Withania somnifera*), *Mamsarasa*, and other herbs might be provided<sup>(22,23)</sup>. As a result, using these *Rasayanas* can assist to boost a person's immunity.

**Secondary prevention** is achieved through *Nidanaparivarjana* (avoiding the etiological factors like *Prasanga*, *Gaatra samsparsha* etc) and different types of therapies such as *Santarpana* (Nourishing) and *Apatarpana* (Depleting), avoiding different modes of transmission of *Aupasargika roga*. *Dhupana*<sup>(24)</sup>

(fumigation) is one of the unique methods mentioned for the removal of *Krimi* with various *Krimighna dravyas* like *Guggulu* (Commiphora wightii), *Nimba* (*Azadirachta indica*), *Vacha* (*Acorus calamus*), *Haridra* (*Curcuma longa*) etc.

## DISCUSSION

*Sushruta Samhita* explains the notion of infectious sickness as well as the route of transmission. The microorganism is given room to proliferate due to the vitiation of the four components. Maintaining one's own personal and environmental hygiene are the most important precautionary methods. Also, purification of air by *Dhoopana* with *Rakshoghna Dravyas* (antimicrobials) is also essential in these conditions. Communicable Diseases can be prevented by three measures; Controlling the reservoir or source of infection, Interruption in the routes of transmission, Immunizing the susceptible host. The measures which have mentioned by ancient *Acharyas* under the heading of *Sadvritta* can be correlated to this preventive aspect in modern. According to *Acharya Charaka's Charaka Sutrasthana Indriyopakramaniya adhyaya*, one should bath twice a day, clean the anal area and feet, shave, and always wear clean clothes. This is due to the possibility of communicable skin illnesses developing in an unsanitary environment. In the same context, *Acharya* elucidates alternative *Sadvritta* for preventing illness. According to *Acharya*, urinating on the road, in busy settings, or while eating might result in worm infestation, mycosis, and other diseases. When cleansing one's face or taking a bath, one should let mucus nasal excreta out. Also, to avoid inhaling expired air from other people, one should remain a safe distance away from them. One should not eat with unclean utensils, nor should

one eat a dirty meal served by unclean opponents, nor should one eat in an improper location where garbage has accumulated on streets, places of worship, near water sources, public places such as hospitals, parks, and schools, and in crowded areas, nor should one eat stale foods. All of this is a source of infection and should be avoided. *Acharya* also discusses *Sadvritta*, which is the cause of transmission route disruption. One should not sleep or sit together, and should not have sexual intercourse with a woman who is having menses or has some other disease, impure, inauspicious, and other women, or in female organs of other than human beings or other than female vagina, as it increases the risk of genital contagious diseases. It is improper to yawn, sneeze, or laugh without covering one's mouth. Also, people should stay a safe distance from one other to avoid inhaling expired air from them. This helps to reduce the spread of respiratory illnesses. Scraping the dirt, plucking grass or weeds, and coming into contact with mud or grinding the mud lump are all prohibited. Many infectious diseases are transmitted through the dirt and might enter our bodies via a filthy hand. Snakes and animals with lethal teeth and horns should not be approached. It is not advisable to use garlands and unguents that have already been used by another person. This approach could be used to disseminate contagious skin disease. Without cleaning hands, feet, and face, with an unclean mouth, and with unclean companions, one should not eat. When compared to immunisation, *Sadvritta* is less expensive and easier to implement, and it is more effective at preventing communicable diseases. *Ayurvedic* medical system adheres to practises that

promote a healthy pregnancy, puerperium, and offspring. These processes begin before conception and continue until the progeny's puberty. Some of them are medically significant socio-cultural practises. *Shodasha Samskaras* are performed in India to serve the purpose of immunisation. Several formulations have been considered as potential immunomodulators in the juvenile population. When combined with honey and ghee as adjuvants, *Rajanyadi churna* boosts the child's strength and lustre. The components of this formulation have an immunomodulating effect<sup>(25)</sup>. A set of formulations are listed in the text *Arogyakalpadruma*. These are recommended at various phases of development and growth. They are termed '*Prakara yoga*' because they act as a barrier against diseases, protecting the child's body. It is recommended from the first month of life till the age of twelve. *Swarnaprasha*, *Oushadhaprashas* like *Uramarunnu*, *Prakaarayoga* and other immune modulatory medications have a long history in *Ayurvedic* medicine for strengthening innate immunity in infants<sup>(26)</sup>. The concept underlying these drugs is similar to that of *Ayurvedic* vaccination.

### CONCLUSION

The ancient science- *Ayurveda* provides a detailed description regarding the infectious diseases, its causative factors and the outbreak of epidemics. The concept of a healthy body in *Ayurveda* is likened to a barren plain. A barren field cannot produce fruits or flowers, and a healthy body cannot support infectious diseases. Flowering is dependent on a number of elements, including the appropriate season, fertile terrain, and high-quality seed. Infections can also arise

when the body's immunity is poor, the infectious agent is powerful, and time refers to the depleting *Bala*. As a result, a healthy lifestyle is recommended for boosting immunity to infectious pathogens. *Ayurveda* explains various drugs like *Ashwagandha* (*Withania somnifera*), *Guduchi* (*Tinospora cordifolia*) etc which has the property of enhancing body's immunity. It is the need of the hour to get back to the principles of ancient science and have a healthy way of living life.

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**Corresponding Author:** Dr.Sreelekshmi V.S Assistant Professor, Atreya Ayurveda Medical College, Doddaballapura, Karnataka  
Email:sreelashmivs87@gmail.com

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