

## PREVENTIVE MEASURES EXPLAINED IN AYURVEDA W.S.R. TO INFECTIOUS DISEASE

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### ABSTRACT

World community is facing an unprecedented pandemic of novel corona virus disease (COVID19) caused by severe acute respiratory syndrome corona virus 2 / SARS-CoV-2 virus. Various terms like *Janpadodhwansha* (charak), *Marak* (sushruta) and *janmar* (bhela) have been used to describe the epidemic in Ayurveda, communicable diseases have been separately described as *Aupsargika roga* in Sushruta samhita while as *sanchari roga* in ashtanga hriday and infectious diseases have been described as *aagantuja vyadhi* in ayurvedic classics. In this crucial time of covid pandemic when there is

no specific treatment is available till today the whole world is looking for the preventive strategies. Similarly, people came to know about immunity during the covid 19 pandemic which is the ability to resist a specific infectious disease. As acharya charaka said that all persons are not equally capable to resist the disease (have no equal immunity). In ayurveda, immunity is explained as a term '*bala*'. Ayurveda, an ancient science of life has holistic approach in prevention and management of diseases. Ayurveda contains a lot of pharmacological as well as non pharmacological prophylactic measures which were widely followed by our ancestors. This paper will try to elaborate and highlight the preventive measures explained in ayurveda like *Dincharya* (daily regimen), *ritucharya* (seasonal regimen), *sadvritta* (the code of good conduct), *rasayana* etc. for the vast group of people

who don't have sufficient immunity to fight against various infections. These measures are relevant even today to prevent from various infectious diseases.

**KEYWORDS:** Ayurveda, preventive, COVID-19, pandemic, infectious, *janpadodhwansha*, *aupsargika*, immunity, *bala*, *rasayana*.

## INTRODUCTION

Although there is tremendous development in the field of medical science in the recent past, the importance of ancient methods of preventing diseases could not be ignored even in 21<sup>st</sup> century. Ayurveda “the Indian system of medicine” is the most ancient medical science which aspires two major aspects of health first is to protect health of healthy and second is to alleviate disorders in the diseased.<sup>[1]</sup>

At the end of the Charak Samhita Acharya Charak clearly states that this Chikitsa Shastra by Agnivesha is beneficial for both healthy and diseased mankind<sup>[2]</sup>, which means all the important information related to health or disease condition of mankind is definitely available in Ayurvedic classics. Ayurvedic classics have detailed description about pandemics, their causes and their managements, as *janpadodhwansha* as well as about communicable diseases as *aupsargika* roga.

### Infectious diseases as per ayurveda

Infectious diseases as per Ayurvedic perspective can be reviewed and discussed under following concepts-

#### Concept of *aagantuja* *vyaadhi*

As per Ayurveda there are three types of diseases – *nija* (innate), *aagantuja* (exogenous) and *manas* (psychic). *Nija* is that which arises due to bodily doshas, *aagantuja* is that which is caused by *bhuta* (spirits and organisms), poisoned air, fire, trauma etc. *Manas* is that which is caused by non-fulfilment of desires and facing of the undesired.<sup>[3]</sup>

Hence, infectious diseases come under *aagantuja* category. For better understanding lifestyle disorders like diabetes mellitus, hypertension etc are *nija* rogas, chickenpox, bird flu, covid - 19 etc like infectious diseases come under *aagantuja* *vyadhi* and anxiety, depression etc come under *manas* *vyadhi*.

The *aagantuja* and *manas* vyadhi are said to be caused by prajnapradha (intellectual error).<sup>[4]</sup> The threefold action (application of speech, mind and body) each having three subdivisions (excessive, negative and perverted uses) is taken as prajnapradha (intellectual error).<sup>[5]</sup>

Thus, asatmyendriyarth sanyoga (unwholesome conjunction of sense organs and objects), prajnapradha (intellectual error) and parinam (consequence) these three with three subdivisions (atiyoga, ayoga and mithyayoga) each are causes of disorders while conjoined in balanced combination are cause of normalcy.<sup>[6]</sup>

### **Concept of *janpadodhwansa***

'*Janpad*' means group of people or community and '*Dhwansa*' means demolition. Therefore *Janpadodhwansa* literally means demolition or destruction of people or community. There are four factors which are common and essential for every living being i.e. Vayu (air), Jala (water), Desha (land) and Kaala (season). Vitiating of these four common factors is the cause for *Janpadodhwansa* and those having features otherwise are said to be wholesome.<sup>[7]</sup> Foremost reason for *Janpadodhwansa* has been described as *Adharma* and the root cause of *Adharma* is said to be *Prajnaparadha*. The code of good conducts are said to be dharma. *Adharma* is an antonym to Dharma which denotes lack of morality, or unrighteousness in the people. Unethical and non-harmonious or discordant practices among communities and people come under *Adharma*. Similarly acharya sushruta explained epidemics as *marak* while discussing ritucharya (seasonal regimen). It can be understood in present context that wrong deeds performed by human beings from generation to generation like polluting air, water and soil may be the cause of spread of air, water or soil pollution related diseases and also for diseases caused by extreme weather changes due to global warming.

### **Concept of *aupasargika roga* or *sanchari roga***

Sushruta has used the term *aupasargika roga* for the diseases communicating from one man to another. For example *kushtha* (skin diseases), *jwara* (fever), *shosha* (Emaciation), and *netrabhishyanda* (conjunctivitis). Different modes of transmission from one to another include *prasanga* (mutual contact), *gatransparsha* (skin to skin touch), *nihashwasa* (exhaled air), *sahabhajana* (sharing food), *sahashaiya* (sleeping closely), *asana* (sitting close to each other), by using (another's) *vastra* (cloths), *malya* (using garlands) and *anulepana* (using paste of chandana etc. on the body after bath).<sup>[8]</sup>

In Ashtanga Hridaya, the term *sanchari roga* has been used for the diseases that communicate from person to person. For example diseases of eye and skin spread from touch, eating at common place or from a common source and sharing the sleeping place.<sup>[9]</sup>

These modes of transmission are still relevant from current epidemiological perspectives.

### **Infectious diseases as per modern science**

Infectious diseases are caused by pathogenic micro organisms i.e. bacteria, viruses, parasites or fungi; the diseases can be spread directly or indirectly from one person to another.<sup>[10]</sup>

Infectious diseases that spread from one person to another are said to be contagious.

Under normal circumstances, when the immune system of the host is fully functional, disease symptoms may not be developed. If the host immune system is compromised or the infectious agent overwhelms the immune system, an infectious disease ensues.<sup>[11]</sup>

### **Preventive measures explained in Ayurveda to combat infectious diseases**

Ayurveda has various rules and regimens by which one can prevent himself from various infectious diseases like *dincharya* (daily regimen), *ritucharya* (seasonal regimen), *sadvrutta* (the code of good conduct), *rasayana* (immune boosters) etc. the main objective of ayurveda is *swasthya swasthya rakshnam* which means maintenance of health rather than *aturasya vikar prashmanam* (alleviate disorders from diseased). Stopping the disease progression in case of communicable disease is the most ideal stage of controlling the disease, moreover increasing immunity by various means against these ailments are also required. Acharya sushruta said *sthanparityaga* in order to deal with *maraka*. This is exactly the whole world is doing in the context of Covid 19.

#### ***Dincharya* (daily regimen)**

*Dinacharya* is known as the ideal life style which explains various duties one has to follow in a day to maintain a healthy life.

Daily regimens help to establish the balance of body humors. *Dincharya* or daily regimens includes following –

**Waking up in *Brahm muhurta* (before sun rise)** *brahma muhurta* is very crucial time which switches biological clock every day and reboot regulate the rhythm and pattern of biological clock. This a period one and half hour before the sunrises or more precisely 1 hour 36 minutes before sun rises i.e. 96 minutes = 2 *muhurta* and *muhurta* lasting for 48

minutes.<sup>[12]</sup> One very significant benefit of waking up early is reduction in stress level<sup>[13]</sup> not only in the present pandemic situation of covid 19 but also among the youngest stress has become a leading problem in the society. Research has found that getting plenty of sleep strengthens your immune system -- which is an excellent preventive against whatever nasty bugs are going around.<sup>[14]</sup>

**Ushapan**<sup>[15]</sup> acharya bhavprakash described the importance of *ushapan*.

*Ushapan* consists of two words – *Usha* and *Pana*. *Usha* means dawn and *Pana* means taking or drinking. It occurs just a few minutes before sunrise when light becomes visible all around, but the sun does not appear in the sky yet. This is the perfect time to take water. The amount of water is also described in ayurveda which varies person-to-person. It depends on how much water one can hold in 8 Anjali. *Ushapan* prevents mainly from gastrointestinal disorders and urinary tract infections. Vessels used for keeping water are also described in ayurveda i.e. gold, silver, copper etc.<sup>[16]</sup> Copper is known to have antimicrobial, anti-inflammatory, anti-carcinogenic and antioxidant properties.<sup>[17]</sup>

**Dantdhavana, kavala, gandusha and dhoompana**<sup>[18]</sup> are also explained under daily regimen which are important to maintain oral hygiene. Medicated gargling and inhalation are being used in covid 19 by the whole world.

**Pratimarsha Nasya** with *Anutaila* explained in Dincharya. Most of ingredients of *Anutaila* possess Anti-inflammatory, Anti-pyretic, Anti-viral properties ultimately these functions of *Anutaila* will lead to enhancement of respiratory immunity and will help in prevention of covid-19 a respiratory disease and other infectious diseases of respiratory system.<sup>[19]</sup>

Nasal instillation/application of medicated oil (Anu taila or Shadbindu Taila) or plain oil (Sesame or Coconut) or nasal application of cow's ghee (Goghrita) once or twice in a day, especially before going out and after coming back to home has been advised in covid 19.<sup>[20]</sup>

### **Ritucharya (seasonal regimen)**

In *Ritucharya*, there is a protocol given by the respective Acharyas for each Ritu (Season). Ayurveda divides the whole year into two kaalas on the basis of position of the sun: *Aadaan Kaala (Uttarayan)* & *Viserga Kaala (Dakshinayaan)*.

During *Uttarayan*, sun & wind are powerful which takes away the people strength & cooling qualities of earth. During *Dakshinayaan*, sun releases the strength, moon is more powerful &

earth regains its coolness through clouds, rain & cold winds. The six weathers are also the part of these kaals as *Shishira* (winter), *Vasanta* (spring), *Grishma* (summer) forms the Uttrayan Kaal & *Varsha* (monsoon), *Sharada* (autumn) and *Hemanta*. (pre-winter) forms the Dakshinayaan Kaal.<sup>[21]</sup> *Bala*(immunity) is maximum in *shishira* and *hemanta ritu*.<sup>[22]</sup> The prime principle of Ayurvedic system of medicine is preventive aspect, can be achieved by the change in diet and practices in response to change in climatic condition. As human being is also part of the same ecology, the body is greatly influenced by external environment. If body is unable to adopt itself to stressors due to changes in specific traits of seasons, it may lead to seasonal viral infections.

Ayurveda mentions systematic specific regimens to be followed in each season. But while making a sudden change to the prescribed regimens in consecutive seasons, the person may prone to get diseased. Here comes the importance of understanding *Ritusandhi*. *Ritusandhi* is the junction of two seasons. During this period, it is advised to reduce the regimen of current season and gradually adopt the new regimen.<sup>[23]</sup> Sharangadhara gives special reference about *Ritusandhi* (inter seasonal period) as *Yamdanshtra Kala* (Period between Nov-Dec) i.e. the (last) eight days of Kartika month and the (first) eight days of Agahana (Margashirsha) are known as *Yamdanshtra Kala*.<sup>[24]</sup>

If a person follows the suitable diet & regimen for every season & practise accordingly his strength will be maintained.

Hence, lifestyle adaptation with proper *dincharya* and *ritucharya* is quite effective to ensure healthy living and protect ourselves by building our immunity.

### ***Sadvritta* (the code of good conduct)**

It comprises of two words, *Sad* means good and *Vritta* means behavior/habits/regimen. So *Sadvritta* means good behavior or habits which help in maintenance of health. It includes various codes of conducts which are relate to social, emotional, personal, psychological, spiritual and ethical aspect of life.<sup>[25]</sup> Some of them which are relevant to combat infectious diseases are given below.

➤ One should not yawn, sneeze or laugh with uncovered mouth.<sup>[26]</sup>

Respiratory infections are mainly transmitted through droplets. Droplet transmission occurs from a person in close contact (within 1m) and has respiratory symptoms (e.g. coughing or

sneezing). Covid 19 is a respiratory disease and wearing a mask is the most important preventive measure which is already given in ayurveda.<sup>[27]</sup>

➤ The shadow of the patient should not be crossed.<sup>[28]</sup>

Transmission of covid 19 virus can also occur by direct contact with infected people and indirect contact with surfaces in the immediate environment or with objects used by the infected person.

➤ One should neither touch the head with bathing cloth nor put on the same cloths after bath.<sup>[29]</sup>

➤ One should not eat without washing hands, feet and face.<sup>[30]</sup>

Washing hands regularly is important preventive measure during covid pandemic.

➤ One should not eat in unclean plates, in improper place, untimely and in crowded surroundings.<sup>[31]</sup>

➤ One should not urinate on road, in crowded place and while taking food.<sup>[32]</sup>

These are the measures to stop spreading infections.

➤ Cutting of hair, shaving and nail cutting should be done thrice in 15 days.<sup>[33]</sup>

➤ Do not enter finger into the nose.<sup>[34]</sup>

➤ One should not perform sexual intercourse with a women having menses or some disease<sup>[35]</sup>, by this one can prevent himself from infectious diseases like STDs.

➤ Walk by 4 hands looking forward on the road.<sup>[36]</sup>

Hence, Social distancing is already mentioned in ayurveda.

➤ Stay away from the smoke of pyre in the crematorium<sup>[37]</sup> which is to prevent from various infections and the whole world is following this during COVID 19 pandemic.

By Appropriate utilization of Sadvritta, we can prevent various types of physical and psychological disorders and can achieve long and healthy life. In the end we can conclude that Sadvritta is essential tool in modern era to prevent and eradicate the root cause of various infectious diseases.

### **Bala and rasayana**

The concept of bala described in Ayurveda is equivalent to immunity. *Bala* is of three types – *sahaj* (congenital), *kaalaj*(time affected) and *yuktikrit*(acquired). *Sahaj bala* is that which is

natural to the body and mind; *kalaj bala* is due to seasonal variations and age factor; *yuktikrit bala* is produced by proper application of diet, exercise and rasayana.<sup>[38]</sup>

### **Rasayana**

*Rasayana* is a potential branch of Ayurveda in which various herbal and herbomineral and metallic preparations are used.

### **There are types of Rasayana**

- 1. Naimittika Rasayana** - It is utilized for specific curative purpose. It speedups the faster recovery from the disease example are Dhatri Rasayana, Brahmi rasayana, Triphala Rasayana.
- 2. Ajastrik Rasayana** - It is used to improve health. Maintaining good health, lifestyle and diet or exercise. It involves consumption of milk, honey, ghrita and maintaining discipline of the life style.
- 3. Kamyā Rasayana** - It is used to improve functions like desire and intellect. Examples are Shankhapushpi, Ayush kamyā for increasing longevity.<sup>[39]</sup>

Rasayana i.e. ashwagandha, chyavanprasha, giloy, haridra, pippali etc are being used in covid 19 pandemic in order to enhance immunity power.

### **Vyayama or physical exercise**

The bodily movement which is meant for producing firmness and strength is known as vyayama or physical exercise. By physical exercise one gets capacity to work, firmness, tolerance of difficulties, diminution of impurities and stimulation of agni.<sup>[40]</sup>

### **CONCLUSION**

Although various infectious diseases are easy to manage with the help of modern medical science but with the emergence of new infectious diseases like COVID 19, SARS etc. while different treatments are being tried to manage COVID 19 but new theories arises every day. Due to lack of effective therapeutics for the most of viral diseases prevention is the best measure to stop the spread of disease. Overall, this review provides a glimpse of the preventive measures explained in ayurveda which are relevant to present scenario. Hence, taking clues from above instances, it would be wise to adopt prophylactic and therapeutic strategies on the basis of Ayurveda.

### **Conflict of interest**

None.

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