

# Ayurveda's Role in Strengthening Immunity Against Communicable Diseases

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## **Abstract:**

**Background:** As a result of its power to overwhelm the capacity of communities, communicable diseases have always been a significant global public health hazard globally. This is because communicable diseases have the potential to have catastrophic effects for both health and the economy. There is a widespread belief that contemporary medications are essential for the treatment of communicable diseases. On the other hand, despite the wonderful progress that contemporary medical research has made, mankind is now going through a terrifying period of fear about drugs and diseases. Some of the medications have the opposite impact on the body, causing it to respond negatively rather than positively. Additionally, as of this moment, there is no treatment available for some viral infections such as COVID-19. As a result, it will be beneficial to adopt preventative steps that strengthen our immune system. Ayurveda, which is an old medical system, offers a significant amount of promise in the prevention of problems of this kind. Ayurveda is a body of knowledge that includes a large number of writings that explain several basic concepts with the purpose of promoting health and longevity as well as preventing ailments. Ayurveda has a wealth of references that may be used to tackle these illnesses on several levels, including halting the growth of the disease, developing immunity against the disease via a variety of methods, and treating the disease itself.

**Aims and objectives:** The purpose of this study is to investigate the idea of communicable or infectious illness, as well as the preventative and therapeutic procedures that are detailed in ayurveda standard texts.

**Material and methods:** An examination was conducted on both traditional Ayurvedic treatises and contemporary textbooks that are considered to be standard in the field of communicable diseases.

**Conclusion:** Samhitas include references that provide a comprehensive account of communicable illnesses, including their causes, modes of transmission, prevention, and treatments. This is because ancient ayurveda acharyas were aware of these diseases. The most significant contribution to the prevention of communicable diseases and the spread of illnesses is made by Sadvritta, in conjunction with other regimens to boost immune capacity that have been outlined by acharyas.

**Keywords:** Ayurveda, Communicable disease, *Aaupasargikroga*, *Janapadodhwansa*, *Sadvritta*

## Introduction

Because they account for a sizeable share of the overall burden of morbidity and death on a global scale, communicable illnesses continue to pose a significant level of danger to public health all over the globe. The term "communicable diseases" refers to illnesses that are caused by a particular infectious agent or its toxic products and have the potential to be transferred either directly or indirectly from one person to another, from one animal to another, or from the environment (by air, dust, soil, water, food, and so on) to another individual or animal<sup>1</sup>. At the same time as these illnesses have the potential to generate epidemics and pandemics, they also have the capability of overwhelming the capacity of the community with major health and economical implications. Nowadays people are growing more prone to this form of ailment since the general health condition of individuals is bad due of inappropriate nutrition, lack of exercise, stress, low quality of food grains, pollutions, industrialization & global warming. Since the beginning of human history, infectious illnesses have always been a component of the human population. The intrusion of humans into natural areas has either consciously or unwittingly allowed the environment to be formed that has both brought out the pathogen and, in some cases, enhanced the habitat to allow it to thrive. However, the pathogens themselves are not generated by humans. The world is now confronted with the risk of pandemics spreading over the globe in a matter of days, when in the past, it would have taken months or even years for such a pandemic to develop. In light of the current epidemic of COVID-19, which occurred on December 31, 2019, and its confirmed cases of over 5 million (to date), as well as the SARS outbreak that occurred in 2002 and its ongoing instances from time to time, it is evident that the widespread movement of humans throughout the globe makes it possible for hazardous illnesses to spread more rapidly. Currently, the whole human race, all over the world, is experiencing fear due to the spread of the COVID-19 virus. Even climate change is having an effect on the number of people who get infectious illnesses. In light of this, it is imperative that efforts to limit communicable diseases be given top attention.

In spite of the fact that it is an old medical discipline, Ayurveda has provided a comprehensive description of communicable illnesses under a variety of names and categories. Additionally, Ayurveda provides an explanation of their origin, way of transmission, prevention, and treatment. Ayurveda has the potential to be a viable solution to the ever-increasing problem of communicable diseases. Rather than focusing on the symptoms themselves, the ayurvedic therapy approach focuses on the underlying cause of the condition. In the framework of the etiological variables, each illness is understood, and the treatment package takes into account these elements. In the context of infectious diseases, specifics of the disease's *nidana*, *chikitsa*, and other aspects, as well as preventative measures, are presented. Acharyacharaka has provided a description of the *janapadodhwansa*<sup>2</sup>, which is a phenomenon that leads to the annihilation of

a large number of people. He has provided a comprehensive explanation of its treatment and causes. There is a possibility that janapadodwansa is connected to epidemics or pandemics at the current moment. Additionally, acharya Sushruta has discussed aupsargikarogas<sup>3</sup>, which are communicable illnesses, such as kushtha (Fever), jwara (Skin illnesses), and others, as well as the route of transmission for these diseases.

## **Ayurvedic Principles of Immunity**

### **Concept of Vyadhikshamatva**

Vyadhikshamatva, or immunity, in Ayurveda is the body's natural ability to combat diseases and maintain health. It involves both inherent (Sahaja) and acquired (Kalaja) immunity. Sahaja immunity is the natural resistance one is born with, while Kalaja immunity develops over time through lifestyle, diet, and environmental interactions.

### **Doshas and Immunity**

According to Ayurveda, the body is governed by three doshas: Vata, Pitta, and Kapha. These doshas represent different physiological functions and their balance is crucial for health. Kapha dosha is particularly associated with immunity, providing strength, stability, and resistance to disease. Imbalances in the doshas can weaken the immune system and make the body more susceptible to infections.

## **Ayurvedic Practices for Enhancing Immunity**

### **Herbal Remedies**

Ayurveda utilizes a vast array of herbs known for their immunomodulatory properties. Some key herbs include:

**Ashwagandha (Withaniasomnifera):** Known for its adaptogenic properties, Ashwagandha enhances the body's resilience to stress and improves overall immune function.

**Guduchi (Tinospora cordifolia):** This herb is celebrated for its ability to boost immunity and combat infections. It is often used in fever management and as a general health tonic.

**Tulsi (Ocimum sanctum):** Also known as holy basil, Tulsi is revered for its antimicrobial, anti-inflammatory, and immune-boosting properties.

**Amla (Emblica officinalis):** Rich in vitamin C and antioxidants, Amla strengthens the immune system and protects against oxidative stress.

### **Dietary Practices**

Ayurveda emphasizes the importance of a balanced diet tailored to individual constitution (Prakriti) and seasonal variations (Ritu). Key dietary recommendations for enhancing immunity include:

- **Rasayana Foods:** These rejuvenating foods, such as milk, ghee, and honey, are believed to enhance longevity, vitality, and immunity.

- **Spices:** Common kitchen spices like turmeric, ginger, and black pepper have antimicrobial properties and support digestive health, which is closely linked to immunity.
- **Seasonal Eating:** Consuming seasonal fruits and vegetables ensures the intake of fresh, nutrient-dense foods that support overall health and immune function.

### Lifestyle Modifications

Ayurveda advocates for daily and seasonal routines (Dinacharya and Ritucharya) to maintain health and prevent diseases. Key lifestyle practices include:

- **Abhyanga (Oil Massage):** Regular oil massage improves circulation, detoxifies the body, and enhances immunity.
- **Yoga and Pranayama:** Yoga postures and breathing exercises strengthen the body, reduce stress, and improve respiratory health.
- **Adequate Sleep:** Proper rest and sleep are vital for immune function and overall well-being.

### Panchakarma Treatments

Panchakarma is a set of five detoxification therapies designed to cleanse the body of toxins and restore balance. These treatments include Vamana (therapeutic vomiting), Virechana (purgation), Basti (enema), Nasya (nasal administration), and Raktamokshana (bloodletting). By eliminating toxins and rejuvenating the body, Panchakarma enhances immunity and supports disease prevention.

### Concept of causation of disease

The Ayurvedic classics provide a comprehensive explanation of the factors that contribute to the genesis of the same illness in a large number of persons who vary in physical constitution, eating habits, appropriateness, strength, immunity, age, and other factors.<sup>4</sup> It has been said by Acharya Charaka and his commentator Chakrapani that the reason for this is that it is an illness that is caused by the vitiation of certain components that are shared by all of the people who live in that society. “The simultaneous manifestation of illness with the same set of symptoms among all of the residents of the community is the result of these circumstances, which leads to the broad manifestation of the same disease across the community. Janapadodhwansa, also known as mass devastation, has been cited by Acharya Charaka, along with its four associated reasons: asdushitavayu (air), jala (water), kala (time), and desh<sup>5</sup> (region/land). All members of a community share these elements: air, water, land, and season. These elements are all similar to one another. In addition to this, Acharya Charaka has separated the etiological variables into two distinct groups, which are referred to as Nityahetu and Anityahetu.

Floods, cyclones, landslides, earthquakes, and tsunamis are all examples of nityahetu, which refers to the inevitability of certain events. Nityahetu describes the negative impacts of the sun, moon, stars, and planets.

It includes prajnaparadha (terrorism, accidents, etc.), Shastraprabhavaja (wars, nuclear weapons, missiles, etc.), Abhisyangaja (effects of pathogens, evil energies, and unsanitary circumstances), and Abhishapaja (curse). Anityahetu is a term that refers to things that are unavoidable. According to the janapadodhwansaroga theory, these elements not only have an effect on the person but also on the whole society, which leads to the widespread sickness that is caused by them.

Aside from this, the Ayurvedic text also makes reference to twenty other kinds of krimi, which are germs. Raktaja, purishaj, and kaphaja are the three categories that make up thiskrimi together. In the current context, it has a striking resemblance to the microorganisms, sometimes known as bacteria. In addition, the acharyas have described the bhutas as agantujakarana, which is similar to illnesses that are caused by viruses.

### **Modes of transmission**

A number of different ways in which infectious diseases might be transmitted have been discussed by Acharya Sushruta. According to him, infectious illnesses are transmitted from one person to another by the following means: physical contact (Gatrasansarpaarsat), expired air (Niswasat), dining with others on the same plate (Sahabhojanata), sharing a bed (sahasayyanaccapi), and the use of garments, garlands, and paste (vastamalyanulepanat). In addition, he has also provided instances of several illnesses that spread by all three modes such as different forms of skin diseases (kustha), pyrexia (jwara), pulmonary TB (sosha), and conjunctivitis (Netrabhisyananda) etc<sup>7</sup>.

These ideas are still very much applicable in the modern world. In this context, the majority of the notions that Sushruta depicts, including Gatrasansarsat, Sahabhojanata, Sahasayyanaccapi, Niswasat, and Vastamalyanulepnat, may be likened to direct ways of infectious disease transmission. In the same vein, vastamalyanulepnat and Sahasayyanaccapi are able to ascribe to some kinds of vector-borne illness transmission by means of both the biological and mechanical modes of transmission. The following are the categories that contemporary science has identified as the modes of transmission of infectious diseases:

#### **1) Direct transmission**

- Direct contact may occur via sexual interaction (Gonorrhea, HIV), as well as through physical contact (Staphylococcus).
- Droplet infections (including tuberculosis and influenza)
- Engaging with the ground
- Injection into the skin or mucosa (bites from animals or insects, such as those that cause rabies, yellow fever, fleas, plaque, and malaria, among others)

## 2) Indirect transmission

- Diseases that are transmitted by vehicles include the Norwalk virus, Salmonella, E. coli, Cholera, and hepatitis A. Foodborne diseases include Salmonella and E. coli.
- borne by vectors
- Measles and TB are examples of airborne diseases.

## 3) Trans placental (vertical)

- Hepatitis B, AIDS, Syphilis, TORCH agent

Infectious illnesses and contagious diseases are both common types of communicable diseases. One that is often passed on by direct contact is infectious, such as scabies, trachoma, sexually transmitted diseases, leprosy, and so on. Infectious diseases are those that may be transmitted by a variety of channels, including physical, chemical, and biological pathways, as well as through vectors, and do not need the direct contact of a healthy individual with a sick one.

## Ayurvedic Approach in the Management of communicable disease

The preventative, curative, and rehabilitative components of health are all included in Ayurveda, which is that which is known as the science of life. The protection of the health of those who are healthy and the alleviation of ailments and diseases are its primary goals. The primary aim of this holistic approach is prevention, which may be accomplished by the adjustment of lifestyle, the management of nutrition, preventative interventions for the purpose of enhancing immunity, and the use of straightforward therapies depending on the manifestations of symptoms. Dincharaya, Ritucharya, and Sadvritta are the three terms that are mentioned in this ancient health science. By adhering to these principles and practices, one may ensure that their bodily and mental health are protected. Ayurveda places a strong emphasis on avoiding the causes that cause illness and strengthening the immune system to fight off the host factor. Through the use of Panchakarma, also known as cleaning treatment, Aushadha, and Rasayana, it is possible to enhance the immune system, hence preventing the occurrence of communicable illnesses. In order to keep one's health in the best possible condition, it is essential to strengthen the immune system, which is the body's natural defense mechanism. Ayurveda is a medical practice that focuses on both preventative and curative methods for the treatment of illness and disease.

Within the realm of Ayurveda, Shatkriyakala stands out as a singular idea that has immense significance when seen from the viewpoint of public health intervention, and more specifically, when viewed from the standpoint of disease management strategy<sup>8</sup>. It is essential that preventative measures be put into place as soon as possible in order to curb the spread of infectious diseases throughout the process of eliminating them. It is possible to consider the first two phases of shatkriyakala to be the stage of susceptibility. There are six stages in all. At this point, it is possible to engage in both primary and primordial prevention.



Traditional Ayurvedic texts include a description of specific intervention strategies that may be used in a similar fashion at this level. The practice of *dincharya*<sup>9</sup>, which refers to actions that promote health on a daily basis, *ritucharya*<sup>10</sup>, which refers to activities that promote health during a particular dietary regimen, *vyayama* (exercise), and other similar practices, helps to avoid illness and sustain health. It is possible to use the strategy that is outlined in *Shatkriyakala* for the prevention and treatment of clinical entities at both the individual and community level, which is of significant relevance to the field of public health. In order to stop the spread of diseases, Acharyas pointed out a number of different *karmas*, or procedures, such as *rakshoghna karma* and *dhupana karma*, which include fumigation. Additionally, *Acharyacharaka* has recommended the following courses of action for the therapy.

### 1) **Karma panchavidham (appropriate use of panchakarma)**

*Doshabala* and *vyadhibala* are the two factors that should be considered while selecting and implementing a suitable treatment, according to Ayurveda, which places an emphasis on customized therapeutic procedures. To prevent *chayaprakopai*, also known as the seasonal buildup of dosha, and the ailments that result from it, it is necessary to undergo detoxification treatment that is based on the seasons. *Vamana karma* in *vashantaritu*, for example, is an example.

### 2) **Rasayanamviddhivatupayoga (use of rasayana)**

*Rasayana*, also known as rejuvenators, and *vajikarana*, also known as aphrodisiacs, are medications that, when used correctly, contribute to the promotion of health, boost immunity, and assure the avoidance of illness.

### 3) **Acharrasayana and sadvrittapala:**

*Sadvritta* is a combination of the terms "*sad*," which means "good," and "*vritta*," which means "behavior" or "administering." The term "*Sadvritta*" refers to a rule of behavior that aims to maintain a healthy or balanced state of mind and body. The benefits of *sadvritta* are not confined to mental hygiene; rather, it encompasses a much wider range of advantages, one of which is the avoidance of communicable illnesses. In it, several guidelines for sustaining a healthy condition of mind and body are explained, including those pertaining to ethical, social, mental, moral, and physical conduct behavior. A person may avoid contracting a communicable illness by adhering to these rules, which include good cleanliness, the care of their sense organs, the consumption of appropriate food and clothes, and so on. As a result, *sadvritta* rules prevent the spread of infection from one individual to another.

Infection control, as defined by contemporary medical science, include preventive actions such as washing one's hands, cleaning, disinfecting, sterilizing, and vaccination oneself. Three primary methods that are implemented for the purpose of preventing or controlling infectious diseases are as follows:

1. The management of the reservoir or the source of infection

2. Routes of transmission that need interruption
3. Providing immunity to the vulnerable host

Sadvritta is one of the various codes of behavior that have been described by aacharyas. These codes may also be relevant in the ways that have been discussed above, as well as in many other ways that are similar to them. That is the charakasutrasthanaindriyopakramaniyaaadhy statement. Acharya Charakasays is the Two baths should be taken every day, the anal region and feet should be cleaned, hair should be clipped and shaved, and one should always wear clean clothing and not put on the same clothes after taking a bath. One possible explanation for this is because unclean conditions may lead to the development of infectious skin illnesses such as scabies, pediculosis, and others. Additionally, within the same context, the acharya expounds on additional Sadvritta for the purpose of regulating the cause of illness. An individual should not urinate on the road, in a busy location, or while eating since doing so might result in hookworm larvae infestation, mycosis, and other serious health problems, according to Acharya. An individual should not expel mucous nasal excreta at any time other than while they are washing their face or taking a bath. It is also important for individuals to maintain a safe distance from other people in order to avoid breathing in the stale air that they exhale. A person need to steer clear of things like bones, thorns, unclean piercing items, hairs, chaff, rubbish, and so on. Not only should one avoid eating with dirty utensils, but they should also avoid eating an unclean meal that was served by unclean opponents.” Additionally, one should avoid eating in inappropriate places, such as on streets, in places of worship, close to water sources, in public places like hospitals, parks, schools, and other public places, as well as in crowded environments, and they should avoid having stale things. All of these things provide a risk of infection and should be avoided at all costs.

In addition to this, the aacharya also discusses Sadvritta, which is the cause of the stoppage of the transmission path. The risk of contracting genital contagious diseases such as HIV, syphilis, chancroid, warts, and others is increased when one sleeps or sits together with a woman who is experiencing menstruation or another disease, another woman who is impure or unlucky, or in a female organ that is not a human being or in a female vagina. Additionally, one should avoid engaging in sexual activity with a woman who is impure, inauspicious, or in other women's female organs. Uncovering one's mouth while yawning, sneezing, or laughing is not acceptable behavior. It is also important for individuals to maintain a safe distance from other people in order to avoid breathing in the stale air that they exhale. In this way, respiratory issues may be prevented from being passed on to others. It is not appropriate for a person to scrape the ground, pick the grass or weeds, or come into touch with the mud or grind the mud lump. Numerous infectious illnesses are transmitted via the soil, and they may enter our bodies through contaminated hands. It is not a good idea to go too close to snakes or other creatures that have lethal fangs or horns. Consuming food with filthy utensils or eating a meal that was served by unclean opponents is



not something that should be done. There are diseases that originate from animals or that may be transmitted by their saliva, such as rabies infections. One should not own garlands and unguents that have been used by another individual in the past. Through this pathway, contagious skin diseases have the potential to spread. Eating should not be done without first washing one's hands, feet, and face, as well as with an unclean mouth and attendants who are not clean.

A public health policy that is both successful and cost-effective, immunization is responsible for saving the lives of millions of people every year. When it comes to the prevention of communicable illnesses, Sadvritta is more effective and successful than vaccination. This is due to the fact that Sadvritta is inexpensive and simple to implement. Additionally, the practice of Aachara rasayana<sup>15</sup> is an essential component of preventant medicine. It is a code of behavior that involves the upholding of a standard of life that is founded on honesty, trust, faith, love, and truth. It is via the appropriate functioning of these norms and regulations that a person's mental and spiritual well-being may be effectively maintained. The individual will get the same benefits from adhering to these guidelines as they would from taking rasayana if they obey them correctly. The name "achararasayana" comes from this idea.

### **Conclusion**

The concept of communicable sickness has been discussed in great depth in the context of janapadodhwamsa and samkramakaroga, which are two ancient medical practices. The advancement of kriyakala into subsequent phases, such as sthanasamshraya, vyakta, and bheda, may be avoided with timely intervention in the condition's early stages. Each person is considered to have a distinct mind-body constitution according to Ayurveda. Through the use of ayurveda principles, it is essential to correctly diagnose and comprehend the disease after the pathology has established itself. In order to help avoid the sickness, it is helpful to follow the Ritucharya, Dinacharya, and Sadvritta. All of the methods that have been described under sadvrittaacharyas have been aimed at controlling the source of infection, interrupting the channels of transmission, and immunizing the host in order to avoid communicable diseases. When it comes to battling the condition, Nidanaparivarjana, Shodhana, Shamana, and Rasayana are all helpful tactics. Therefore, communicable illnesses may be avoided by making adequate use of Ayurvedic preventative measures such as Dinacharya, Ritucharya, and AaharVidhi, as well as the related treatment measures for diseases such as Shamanachikitsa or Shodhana, which are jointly referred to as Panchakarmachikitsa.

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