

# Journal of **Ayurveda and Integrated Medical Sciences**

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An International Journal for Researches in Ayurveda and Allied Sciences



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# Ayurveda and Integrated Medical Sciences

REVIEW ARTICLE

December 2022

# A conceptual study of Immunomodulation through Ayurveda: A Review

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## ABSTRACT

According to Ayurveda immunity (Vyadhi Kshamatva) means the power of the body which decreases the damaging power of the disease and stops the genesis of the disease. Ayurveda a holistic approach of medical science is strongly emphasize on preventive and promotive aspects of health rather than curative. The main purpose of preventive attributes prescribed in Ayurveda is to improve immunity. If the power of the body to fight against the disease is less, various disease occurs and if the same is great, disease will not occurs or if occurs they were be of mild in nature. In present era due to modern dietary and life style factors there is rapid rise in immune disorders worldwide. The purpose of this review is to focus the light of Ayurvedic concepts in the modulation of immune system which is necessary to live a healthy life. The brief literary review of the Ayurvedic concept like Dinacharya, Ritucharya, Sadvrutta, Pathya Apathya, Rasayana, Ahara Vidhi Vidhana, Panchakarma etc. which are essential in modulating immune system are taken from Ayurvedic texts and relevant journals for this study.

Key words: Vyadhikshamatva, Immunomodulation, Dinacharya, Ritucharya, Sadvrutta, Pathya, Apathya, Ahara Vidhi Vidhana, Rasayana, Panchakarma

### INTRODUCTION

Ayurveda has mentioned the concept of immunity as Acharya Vyadhikshamatva. Chakrapani interpreted the term Vyadhikshamatva as Vyadhibala Virodhi Kshamatva means opposed to the strength & virulence of the disease and Vyadhyutpadaka Pratibandhakatwa means ability to restrain and blind the causes and factors of the disease.

The main purpose of *Ayurveda* is to protect the health

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Submission Date: 11/10/2022 Accepted Date: 25/11/2022

Access this article online **Quick Response Code** 

Website: www.jaims.in

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of the person before the occurrence of the disease, for the fulfillment of this principle Ayurveda advocates some concepts and guideline to enhancement of immunity.

Now a day's Immunomodulators are considered as one of the most potent tools in the maintenance of health as well as to combat a wide range of diseases by modern medicine. But still more understanding is needed about the role of Immunomodulators in Modern science. More recently they are now getting to know that the diet, exercise, environmental variations, various psychological states are having a great impact on our immune system and in turn the health status of the individual which are very similar to Ayurvedic concepts of Vyadhikshamatva, Ojas and Bala.[1]

In Ayurveda the concept of immunity starts from Garbhini Paricharya itself which is aiming at giving birth to excellent healthy child followed by Shishu Paricharya (new born care) to enhance the immunity of the child. Then the various regimens like Dinacharya, Ritucharya, Sadvritt, following dietic guidelines like ISSN: 2456-3110 REVIEW ARTICLE December 2022

Pathya Apathya, Rasayana and Panchakarma therapies etc. which play a vital role in immune modulation.

### Garbhini Paricharya

The care of the pregnant women during pregnancy reflects on the quality and health of the progency. Therefore, our Acharyas have given detailed systematic month wise regimen to be followed during the antenatal period.

Describing the benefits of this dietic regimen prescribed for the women having the normal development of fetus, Charaka says that by this the women remains healthy and delivers the child possessing good health, energy or strength, voice, compactness and much superior to other family members. Further he and Vagbhata say that by the use of this regimen from 1st to 9 month her Garbhadharini (fetal membrance or vaginal canal), Kukshi (abdomen), Kati (sacral region), Parshva (flanks), Prushta (back) become soft and Vayu moves into its right path or direction; feces, urine and placenta are excreted or expelled easily by their respective passages; skin and nail become soft, women gains strength and complexion and she delivers easily at proper time a desired, excellent healthy child possessing all the qualities and long life.

So it is clear that by following *Garbhini Paricharya* by a pregnant women will boost immunity and prevents infections in the mother. Immunity is also passively transferred to the fetus through placenta preventing infections in the fetus and building immunity right from the intrauterine period.<sup>[2]</sup>

### Swarna Prashan

Administration of processed gold is one of the 16 essential rituals (one among *Jatakarma Samskara*) described in Ayurveda for children. Acharya kashyapa mentioned benefits of *Swarnaprashana* as follows;

Swarnaprashanam Hyotanmedhada Agnibala Vardhanam | Ayushyam Mangalam Punyam Vrushyam Varnyam Grahapaham ||

Swarna Prashana develops Medha (mental ability), Agni (digestive power), Bala (strength) and Ayuvardhana (prolonged age span). It is also Mangalakara (auspicious), Punyam ( good fate), Vrushyam (auspicious nature and personality), Varnyam (enhance colour and complexion), Grahapaham ( protection from evil spirits and micro organisms).

Feeding of gold increases intellect, digestive and metabolic power, strength, gives long life. It is auspicious, aphrodisiac, increases complexion and eliminates the (evil effect of) *Grahas*. By feeding the gold for 1 month the child becomes extremely intelligent and is not attacked by the diseases and by using for six months is able to retain what-so-ever he hears. So *Suvarna Prashana* has immune modulating effect on children.<sup>[3]</sup>

### Ritucharya

Ritu means season and Charya means do's and don'ts (regimen) to be followed.

The changes in diet and practices in response to change in climatic conditions like heat, cold, rain etc. is *Ritucharya*.

With the change in season a change is very evident in the environment we live in. The body is greatly influenced by external environment. Many exogenous and endogenous rhythm have specific phase relationship in each other; which means that they interact and synchronize each other. If the body is unable to adopt itself to stressors due to changes in specific traits of season it may lead to *Dosha Vaishamya*, which in turn render the body highly susceptible to one or other kinds of disorders. <sup>[4]</sup>

Acharya Charaka said that,

Tasyaashitadhya Ahaaradbalam Varnascha Vardhate.

Tasyarthusatmyam Vaditam Chestaahara Vyapasrayam ||

Which means that strength and complexion of the person knowing the suitable diet and the regimen for every season and practicing accordingly are enhanced.<sup>[5]</sup>

As the adaptations according to the changes is the key for survival, the knowledge and practicing of the *Ritucharya* is thus important in modulating immune system.

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### **Dinacharya**

Dinacharya means appropriate daily regimens. Ayurvedic explanations of daily regimens begin with getting up from the bed till one goes to his bed in the night.

According to *Ayurveda* these daily regimens are indicated for the following reasons;

- Shuchita (maintainance of hygiene)
- Suprasannendriyata (brighten the Indriyas)
- Bala labha (strengthen the body)
- Ayusho labha (promote the health and longevity)
- Soumanasyata (keep the mind at peace and harmony)

Acharya Vagbata says,

Ityacharaha Samasena Yam Prapnoti Samacharan | Ayurarogyaishwarya Yasho Lokascha Shashwatan ||

Those who follow this will attain longevity, health, prosperity, fame and heavenly abode at the end. [6]

### Ahara Vidhi Vidhana (Dietetics and Food Habits)

Ayurvedic dietetics forms the important component of life as it is included in the *Tri - Upasthambha* (3 Pillars of life). Each food article has *Dosha* aggravating action or pacifying action or balancing action on human body to keep homeostasis of *Doshas* (health).

Beside prescribing the medicines, *Ayurveda* also recommends prophylactic and interventional diet which also plays a major role in the prevention and management of the disease.

Ayurveda has classified food articles into different groups and also described qualities and effects of different food on human body.

Ayurveda has described the various dietic principles like Ahara Vidivisheshayatanani (special rules and guidelines for intake of food), Satmya (conduciveness) Asatmya (non-conduciveness), Pathya (wholesome diet), Apathya (unwholesome diet) Viruddahara (in compatibility of diet), etc. which are very important in maintaining health and to promote immunity.

The body as well as diseases are formed by food, wholesome and unwholesome food responsible for happiness and misery respectively. No medicine is equivalent to food; it is possible to make a person disease free with just proper diet.

Acharya Sushuta says,

Aharaha Preenanaha Sadhyo Balakrud Dehadharakaha | Ayustejaha Samutsaha Smrutyojo Agni Vivardhanaha | |

The food enhances *Preenana* (vitality), *Sadhyobalakrut* (strength), *Deha dharaka* (makes the body study), *Utsaha* (enthusiasm), *Smruti* (memory), *Agni* (metabolism), *Ayu* (life span), *Teja* (luster) and *Ojas* (immunity).<sup>[7]</sup>

Thus, Ayurvedic diet plays a major role in modulating immunity.

### **Panchakarma**

Panchakarma therapy is one of the purification and detoxification treatment in Ayurveda. It also nourishes the body tissue, Rejuvenates all body Dhathus and prevent the process of premature aging.

Highlighting the effect of Samshodhana therapy Acharya Charaka has mentioned that

Evam Vishuddhakostasya Kayagnibhivardhate | Vyadhayasyopashamyanti Prakrutischanuvartate | | Indriyani Manobuddhirvarnaschamsya Praseedati | Balam Pushtirpattam Cha Vrushata Chasya Jayate | | Jaram Kruchrena Labhate Chiram Jeevatyanamayaha | Tasmatsamshodanam Kale Yuktiyuktam Pibennaraha |

The person who has undergone the purification regimen, the digestive power increases, his disorders disappears and his health returns to normal, senses, mind, understanding and complexion become clear and individual acquires strength, vigor and virility and also prevent the process of premature aging.<sup>[8]</sup>

Panchakarma therapy is effective against treatment of majority of diseases on the other hand this therapy improves the body resistance (immunity) and there by checks the pathogenesis of the disease confirming its preventive effect also.

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### Rasayana

Rasayana is one among the 8 branches of the Ayurveda that is concerned with the immunomodulation.

Rasayana is a treatment in which the body constituents are prepared to its optimum quality which is nothing but the enhancement of immune system with immunomodulating agents of plants origin.

Rasayana Chikitsa used properly will ultimately lead to the achievement of the ultimate effect as stated by Charaka

Dirgamayuhu Smrutim Medhamarogyam Tarunam Vayah | Prabhavarnasvaraudaryam Dehendriyabalmm Param || Vaksiddhim Pranatim Kantim Labhate Na Rasayanam | Labhopayo Hi Shastanam Rasadinam Rasayanam ||

Long life, memory, intellect, freedom from disease, youthfulness, excellence of complexion, luster and voice, optimum strength of physical body and the senses, fulfillment of whatever is spoken, reverence of all people - all these are obtain by proper use of *Rasayanas*. These *Rasayanas* are so called because they replenish the vital fluids in the body. [9]

The concept of *Rasayana* mentioned in *Ayurveda* is a holistic approach for the protection and promotion of health and to cure the disease by increasing the natural immunity. Thus, *Rasayana* formulations are having tremendous potential in immunomodulating activity.

### Sadvritt and Achara Rasayana

Ayurveda believes that mind, soul and the body are like pillars of life. The disease occurs either in the body or mind. *Sadvritt* is about good conduct of mental, religious, social, moral and personal habits. *Achara Rasayana* is a type of *Rasayana* for psychological and spiritual health. It is a code of conduct which includes the maintaining living standard based on honesty, trust, faith, love and truth.

Following the rules relating to eating, sleeping, celibacy create rejuvenation in a person. In addition, following a *Satvik* diet and lifestyle, speaking truth, practicing nonviolence, living in harmony with the nature,

following social ethics and conduct are help in the complete wellbeing of a person.

These principles will help to control the mind and help to prevent and cure psychological disturbances. The main aim of these principles are mental satisfaction and worry free living which provide a good mental, physical, social and spiritual health and wellbeing in turn leads to formation of high quality *Dhatus* and increases quality and quantity of *Ojas*, a vital factor for health and immunity.

### **CONCLUSION**

Vyadhikshamatva as it is understood in Ayurveda has much wider implication than the term immunity used in modern medicine. The basic concept of immunomodulation not only existed in Ayurveda but is being really practiced by the Ayurvedists for centuries. There is no doubt that the principles and guidelines described in Ayurveda to preserve the health, strength and longevity of the healthy person and to care the disease in the ailing and the afflicted are the essential and valuable tools in modulating immunity in a very natural way. But still there is a need for further research in immune modulating effect of this concept in a scientific way to approach for the modern world.

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**How to cite this article:** Nandini R. A conceptual study of Immunomodulation through Ayurveda: A Review. J Ayurveda Integr Med Sci 2022;11:79-83.

**Source of Support:** Nil, **Conflict of Interest:** None declared.

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