

A BRIEF REVIEW ON CONCEPT OF IMMUNIZATION ACCORDING TO AYURVEDA

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Article Received on
20 September 2020,

Revised on 11 October 2020,
Accepted on 01 Nov. 2020

DOI: 10.20959/wjpr202014-19143

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ABSTRACT

In current Pandemic era everyone knows the importance of health and Immunity, and in *Ayurveda* there is detailed description about Immunity as well as Immunization. *Ayurvedic* system of medicine not only deals with treating the diseases but also aims to prevention the disease. *Vyadhikshamatva* (Immunity) is described in *Ayurveda* and this concept is considered equivalent to immunity. To maintain the health is the prime objective of *Ayurveda* which focuses on the significance of a healthy body. It says if the body is strong and capable enough, external factors cannot make much harm to it. Here, is the concept of *Vyadhikshamatva* as put forward in *Ayurveda* classics along with some commonly used drugs and methods for improving it as well as the scientific proof in their favor. The word immunity means the

state of protection from infectious disease. The immune system advanced as defense system to protect animals from invading microorganisms and malignant disorders. Immunology is a branch of biomedical science that covers the study of all aspects of the immune response in all organisms. The study of the molecular and cellular components that comprise the immune system, including their function and interaction, is the central science of immunology. Factors which contribute for *Vyadhikshamatva* are normal *Dosa*, equilibrium state of *Dhatu*, normal *Agni*, and power of *Srotas* etc. or factors which supports the equilibrium state of all physiological parameters. Innate immunity may be correlated to *Sahaja Bala* described in *Ayurveda*. *Kalaja* and *Yuktikrita Bala* may be correlated to acquired immunity. In 7th and 8th century our *rishis* understood the need of immunization. At that time they didn't think of burdening our bodies with cultured organisms. Rather they developed techniques which enhanced our built in immunities. They set certain life time guidelines for these benefits and

they were named *Samskaras*. In present article we mainly focuses on these *Samskaras* and other methods for improving *Vyadhikshamatva* i.e. Immunity.

INTRODUCTION

Today, the society is facing an increase in the occurrence of new diseases every now and then along with the challenge to cope up with the pollution and stress to compete for survival every moment. Inadequacy of the modern medicine to deal with such upcoming issues is making the world look up to *Ayurveda* with hope.

Ayurveda is a vast storehouse of knowledge relevant to human health, disease, medicines and general health-care. However mutual incomprehensibility of the terms and concepts has been a major impediment in meaningful dialogue between modern scientific medicine and *Ayurveda*. Some recent concepts of molecular medicine, immunology etc. has been found to have striking similarities with certain concepts of *Ayurveda*. Therefore, it is being realized that it might be possible to develop a relationship between modern medicine and *Ayurveda*. Here a comprehensive review of the Ayurvedic classical texts is presented to understand the concept of the *Vyadhikshamatva* w.s.r. to immunity and immunization.^[1]

Here, is the concept of *Vyadhikshamatva* as promotes in *Ayurveda* classics along with some commonly used herbal drugs and methods for improving it as well as the scientific proof in their favor. It represents the concept of immunity of the modern science. In *Ayurveda*, *Vyadhikshamatva* is illustrated as the power of resistance capable enough to check the progress, occurrence or recurrence of diseases.^[2]

According to *Ayurveda*, excellent immunity is a creation of good digestion, strong *agni* (the metabolic fire), quality liver functioning, and a balanced endocrine system (which includes appropriately balanced hormones). Factors which accountable for *Vyadhikshamatva* are normal *Dosa*, equilibrium state of *Dhatu*, normal *Agni*, effectiveness of *Srotas* etc. or factors which supports the equilibrium state of all physiological parameters.

Acharya Charaka defines *Ayu* (Life) as a combination of the body, sense organs, mind and soul. 'Swasthasya Swasthya Rakshanam' is the most primitive aim of *Charaka Samhita*. In other words *Ayurveda* has given much priority to live healthy and disease free life.

Need for vaccination was felt in the modern science since 1800. But vaccination came on the top in public health in 20th Century. In 21st century, infectious diseases are spreading on a

large scale. Hence, vaccination plays an important role in preventive medicine, but however prevention of disease still remains unreached, as the micro-organisms keep changing their forms and this acquiring resistance.

This study include the-inter relation between *Vyadhikshamatva*, *Bala*, *Oja* and *Prakrit Kapha*. This study also contains many references regarding how to enhance immunity and keep body disease free by adopting *Ayurvedic* principles of Immunization.

AIMS

- To carry out the conceptual study of Immunization in *Ayurveda*.

OBJECTIVES

- To study the *Ayurvedic* concept of Immunization.
- To study the role of different *Ayurvedic* Methods for improving Immunity.
- To study different *Ayurvedic* formulations for improving Immunity.

MATERIAL AND METHODS

All the classical texts of *Ayurveda* (*Samhitas* along with their commentaries) were referred for the conceptual study. The discussion was made on the basis of conceptual study, and conclusions were drawn considering the conceptual study and discussion.

Different journals, research articles, magazines, health bulletin, text books on Immunity (*Vyadhikshamatva*) and Immunization were also consulted. Different recent research updates in the contemporary science have also been revived for evidence based researches to scientifically justify the *Ayurveda* fundamental facts regarding health, Immunity and Immunization.

VYADHIKSHAMATVA

Definition

It is made up of two words- *Vyadhi* and *Kshamatva*. '*Vyadhi*' derived from "*vyadh-tadne*" is the condition which gives *Kayika*, *Vachika*, *Manasika peeda* to *Shareeradhishtita Purusha*. It is the vitiation of basic elements i.e. *Dosha*, *Dhatu* and *Mala*. '*Kshamatva*' derived from "*Kshamussahane*" means *Shakti* or *Samarthya* in general. Usage of *Kshamatva* word with *Vyadhi* means power to prevent diseases in a healthy body.^[3]

Synonyms of *Vyadhikshamatva*

Its synonyms are not mentioned directly in text but the following may be taken as its synonyms according to sign and symptoms:-

- I. *Swastha*
- II. *Bala*
- III. *Oja*
- IV. *Prakrit Kapha*
- V. *Agni*

Types of *Vyadhikshamatva*

Ckakrapani quoted two types of *Vyadhikshamatva*.^[4]

1. *Vyadhibalavirodhi kshamatva*

This type of *Vyadhikshamatva* destroys the disease which has occurred. It can be correlated with *Yuktikrita bala* or Artificial Immunity of Acquired Immunity.

2. *Vyadhyutpad-pratibandhaka Kshamta*

This type of *Vyadhikshamatva* doesn't let the *Vyadhi* to evolve. It can be correlated with *Sahaja Bala* or Innate immunity.

Relation between *Vyadhikshamatva* and *Bala*

The *Vyadhikshamatva* mostly depends on *Bala* that opposes the disorder state of *Doshas*. *Charaka* describes that the maintenance of health depends entirely upon the *Bala*.

Innate immunity may be correlated to *Sahaja Bala* described in *Ayurveda*. *Kalaja* and *Yuktikrita Bala* may be correlated to Acquired immunity.^[5]

Relation between *Vyadhikshamatva* and *Oja*

In *Ayurveda*, *Ojas* has been considered vital in the defence mechanism of the body. *Ojas* is the positive subtle essence of *kapha*—that which gives the body strength, vigor, vitality, and immunity. It is the superfine essence of all of the bodily tissues and the end product of perfect digestion.

Reviewing the textual knowledge of *Ayurveda* it has come to light that the food and behavior that enhances *Ojas* also enhances the strength. This produces stability of body, growth of muscle tissue, interest in medical and physical pursuits, inclination, cleanliness of tone and complexion, correct inclination or cognizance of sense of organs and functions.^[6]

Relation between Vyadhikshamatva and kapha

Prakrit Kapha is one of the *Tridosha* which possesses properties such as *Snigdha* (unctuousness), *Sita* (cold, producing coldness), *Guru* (heavy) *Manda* (slow in action), *Slaksna* (smooth), *Mrtsna* (slimy) and *Sthira* (stable/static).

According to *Acharya Charaka* the *Shleshma* occurring in the body naturally is the strength of the body. In equilibrium state *Kapha* is considered as a *Prakrit kapha* and when its equilibrium is not maintained it becomes *Vaikrita*. In this condition *Kapha* has lost its natural *Karma* and *Guna*. So a person gets easily suffered with the diseases due to decreased level of *Bala* or *Vyadhikshamatva*.^[7]

Relation between Agni and Vyadhikshamatva

Acharya Charaka in the context of functions of *Agni* narrated that, *Dehagni* or *Jatharagni* (digestive power of stomach) is responsible for life, color (luster of the skin), strength, health, enthusiasm, plumpness, complexion, *Ojas* (energy), *Tejas* (gleam of the body), other varieties of *Agni* and *Prana* (vitality).^[8]

Concept of improving Vyadhikshamatva (Immunization)

Immunization is the Process where a Person is made Immune or Resistant to specific Infectious Diseases, typically by the Administration of a Vaccine. But in *Ayurveda* Immunization is the Process where a person made immune or resistant to any type of diseases with the help of *Aahar* (Diet), *Vihar* (Daily Routine), *Dravya* (Drugs) and other methods like *Rasayana*, *Samskara* etc.

The following are looking to be the immunization measures in *Ayurveda*. Immunization in *Ayurveda* can be divided into two Groups according to time

- Before Birth – with the help of *Garbha Samskara*
- After Birth – with the help of *Bala* and *Kaumar Samskara*

Samskara

This process is beautifully explained by the literal meaning of word *Samskara*. The prefix “*Sam*” means well planned, well thought out, and “*Kara*” means the action under taken. Thus *Samskara* means the impression of the impact of, the action we perform with full awareness of its goals.^[9]

Any Process which brings Continuous Positive Change in a given Material (*Dravya*), Physical Body (*Shareera*), Intellectual Capacity (*Mana*) and The Personality (*Atma*) is called *Samskara*.

There are mainly three types of *Samskaras* for human body

1. *Mana Samskara*

The process which increases the Intellectual Capacity of brain is known as *Mana Samskara*.
Eg.- *Achara Rasayana, Sadvitta Palana* etc.

2. *Atma Samskara*

The Process which brings Continuous Positive Change in the personality is known as *Atma samskar*. Eg.- *Gyana, Meditation* etc.

3. *Shareera Samskara*

The Process which brings Continuous Positive Change in the physical body is known as *Shareera Samsakara*. Eg.- *Garbha Samskara, Bala Samskara and Kaumar Samskara* etc.

Garbha Samskar

The literal meaning of *Garbha sanskara* is educating the fetus in the womb. It is a way of teaching good things to unborn baby in womb during pregnancy. This is why when anyone gets pregnant in home, the elder people advice to have positive thoughts and emotions to the pregnant women.

The popularity of *Garbhsanskara* is also because researchers have proved its relevance and importance in the development of child. There are scientific evidences that prove that baby inside the mother's womb responds to the outside stimulus and have the ability to listen.

The objective of *Garbhsanskara* technique is to create a healthy, good looking, brilliant, cultured, peace loving and free from hereditary disorders progeny for the future. The advantages of *Garbhasanskara* are not only to educate your child but there is also development of a bond between the mother and the child. In fact, this has a great impact on the health of the mother also. The positive thinking and attitude promotes physical well-being of the mother.^[10]

Some *Bala* and *Kaumar Samskaras* which are usefull in immunization of child are as follow-

Jatakarma

A *sanskara* conducted just after birth by giving *madhu* and *ghrita* in unequal quantity or gold to the baby for licking. Where *Madhu* induce active immunity and provides energy to newly born neonate. *Grita* lubricates the oral mucosa also it has healing property which can help neonate to breathe properly. And *Swarna Bhasma* or Gold has detoxification property and it also develop immunity, intellect and memory of neonate.

Benefits - It activates the neonatal digestive system by making external nutrition palatable to them. In addition to this, gold enhances the immune system. With the help of this *Samskara* we can also assess the rooting and sucking reflex of neonate.^[11]

Karnavedhana

A *sanskara* done at 6th or 7th month of age by puncturing the pinna of the ear for *raksha* and *bhushana* where *raksha* means protection from disease as well as improvement of mental status where as *bhushana* refers to cosmetic value.

Benefits - The puncturing injury leads to development of factors responsible for fighting against external stimuli, stimulation of immune system and good psychology against fear in future.^[12]

Lehana (Lickables or Electuaries)-

In *Ayurvedic* texts, various *Acharays* have described countless useful formulations and mode of conduct for children. *Acharya Kashyapa* describes a special formulation by the name of “*Lehana*”.

Similar to the vaccination to prevent bacterial and viral diseases in the present day world, *Kashyapa* indicated *lehana karma* in children for homeostasis of *Dosas* and to improve the immunity of the child.^[13]

Purposes of *Lehana*

1. To enhance growth and development by providing sufficient nutrition.
2. Promote health, complexion and strength (immunity).
3. Protect from various infections alongside improving intellect and speech (delayed milestone).

Some formulation of *lehanas*

- *Brahmi, Mandukaparni, Triphala, Chitraka, Vacha, Saunf, Satavari, Danti, Nagabala, Nisotha, Manjishtha, Bala, Shankhpushpi, Ashwagandha, yashtimadhu, etc.*
- *Suvarna Bhasma*
- *Brahmi ghrita*
- *Astanga ghrita*
- *Vachadi ghrita*
- *Samvardhana ghrita*
- *Saraswat ghrita*
- *Kalyanaka ghrut*
- *Abhaya ghrita*
- *Pancagavya ghrita*
- *Astamangala ghrita*

Suvarnaprashana

Done by rubbing the gold on a clean stone and then mixing it with honey and *ghrita* (in asymmetrical quantity) and make the child lick it, various herbal drugs extract can be added for desirable results.

Benefits - It improve the intellect, strength, digestion, metabolism, immunity, physical strength and longevity of the child. Also enhance the color and complexion, it gives protection from evil spirits and microorganism. If *SuvarnaPrashan* administered for one month, the baby becomes highly intelligent and will not be affected by any disease. And if administered for six month baby will be able to remember the things, which are just heard for one time.^[14]

Concept of improving *Vyadhikshamatva*

- *Ayurveda* assigns prime Importance to Prevention rather than just Curing Diseases.
- A Healthy Immune System reduces your chance of Various Infections. With the help some of these *Ayurvedic* Therapies one can boost the Immune System. These are-
 - *Dincharya*
 - *Rutucharya*
 - *Rasayana*

1. *Dincharya*(Daily Regime)

Dincharya refers to daily routine recommended by *Ayurveda*, that helps in maintaining balance and harmony in your body and nature by regulating your biological clock and advocating a healthy lifestyle.

2. *Ritucharya*(Seasonal Regime)

Ritucharya is the ancient Ayurvedic Practice which includes Seasonal routine to cope with the bodily and mental impact causes by seasonal changes.

3. *Rasayana*(Rejuvenation therapy)

Rasayana means the way for attaining excellence in all body tissue through some special measures and medicines. *Rasayana* therapy is one of eight major specialties of *Ayurveda*. The concepts of immunity and immunomodulation are extensively explored and used in *Ayurveda*, particularly in the form of *Rasayana* therapy. According to *Ayurveda*, *Rasayana* helps in strengthening *Oja*, *Bala* and thus increases *Vyadhikshamatva*.

Benefits of *Rasayana* therapy

Long life (good), memory, great intelligence, perfect health, youthfulness, bright complexion and color bold voice and magnanimity, increase strength, of the body and sense organ, perfection in speech, sexual power and brilliance are all obtained from proper *Rasayana* therapy.

Action of *Rasayana* drugs

Rasayana mainly act at three levels such as at the level of *Poshaka Rasa* (increases nutrition), at the level of *Agni* (increases digestion and assimilation of food) and at the level of *Srotas* (increases absorption of food from serum to various parts of body).^[15]

Sr. no.	Decade of life (In years)	Loss of Impact	Desirable Rasayanas
1	1-10	Balya	Vacha, Svarna
2	11-20	Vruddhi	Kashmari, Bala
3	21-30	Chhavi	Aamalaki, Lauha
4	31-40	Medha	Shankhapushpi
5	41-50	Twaka	Jyotishmati
6	51-60	Drusti	Jyotishmati
7	61-70	Shukra	Aatmagupta, Ashwagandha
8	71-80	Vikrama	Aamalaki, Bala
9	81-90	Buddhi	Bramhi
10	91-100	karmendriya	Bala Rasayana

Achara Rasayana

Achar Rasayana is a mode of Living Behaviour and Conduct. It is the Mental Hygiene, envisages a code to lead Stress free life which inturn fetches Longevity. It is unique non-pharmacological therapy which comprises of wholesome diet, ideal lifestyle, etiquettes to be

followed by person. It includes Good mental Conduct, Good social Conduct, Good personal conduct, Good moral conduct, Good religious conduct.^[16]

DISCUSSION

Ayurveda presents with the concept of *Vyadhikshamatva* (resistance against any disease) equivalent to the immunity of modern medicine which refers to the ability of the body to defend itself against specific invading agents such as bacteria, toxins, viruses and foreign tissues.

Immunity is a biological term that describes a state of having sufficient biological defenses to avoid infection, disease, or other unwanted biological invasion. Immunity involves both specific and non-specific components. The non-specific components act either as barriers or as eliminators of wide range of pathogens irrespective of antigenic specificity. Other components of the immune system adapt themselves to each new disease encountered and are able to generate pathogen-specific immunity. This may be correlated to *Vyadhiksamatwa*.

In modern science immunity is of two types, innate and adaptive. The innate immunity is the first line of defence without antigenic specificity. The innate immunity can be compared with the *Sahaja Bala* of a person which is gained by birth. The second type of immunity is the adaptive immunity, which is characterized by antigenic specificity. The adaptive immunity can be compared with the *Kalaja Bala* and *Yuktikrita Bala*.

According to *Ayurveda* immunity depends on *ojas*, equilibrium state of *kapha* and *Prakrit Agni*. Diseases of immune system arise due to disturbance in *ojas*, *kapha*, *bala* and *Agni*. Failures of host defense do occur, however, and fall into three broad categories: immunodeficiencies (*Ojokshaya*), autoimmunity (*Ojovisramsa*) and hypersensitivities (*Ojovyapat*).

It is possible to increase *Vyadhikshmatva* at the time of conception, during gestational period and even after birth with the help of *Garbha*, *Bala* and *Kaumar Samskara*. Among all factors responsible for increasing the strength of body, *Desha* and *Kala* are such factors which cannot be changed. The *Kala* and *Kshetra* are changeable, the age and time of conception being plannable and the health of *Kshetra* (Uterus) improvable. But these factors are internal factors, the external factors used after conception for healthy progeny being the good quality

of food, adaptability of food and environment, mental relaxation. After birth, daily and seasonal regimes play a major role.

CONCLUSION

Vyadhikshamatva which is synonymous to *Swastha*, *Bala*, *Prakrit kapha*, *Agni* and *Ojas* is a matter of substance in the present world where every day new sort of diseases is evolving.

Different individuals present with different levels of *Vyadhikshamatva* which depends on various factors viz. *Ojas*, *Bala*, Season, Diet and regimen, *Anupana*, *Rasa*, *Jatakarmasanskara*, *Karnavedhanasanskara*, *Lehana karma*, *Suvarnaprashana*; various *dravya* including *Jivaniya*, *Balya*, *Vayahsthapana*, *Brimhaniya* or *Rasayana Dravya*.

One should wisely adopt these into his lifestyle so as to develop and improve their Immunity. And also to make his body and mind strong enough to deal with all the physical and mental stresses of the modern era.

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