



## AYURVEDIC CONCEPT OF IMMUNITY (VYADHIKSHAMATVA) AND ITS UTILITY

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Article Received on 28/08/2019

Article Revised on 18/09/2019

Article Accepted on 08/10/2019

### ABSTRACT

In Ayurveda, the superior vital essence of all bodily tissues is called “Ojas”. Overall it is responsible for the defence of human body against diseases and infirmity. In conditions like diabetes mellitus, immunodeficiency disorders and malnutrition, where loss of *ojas* or *bala* is a constant feature, people are known to be susceptible to various other diseases or recurrent infections. According to the concept of *Ojas* or *Vyadhikshamatva* or *Bala* (immunity), the body’s resistance is of tremendous importance in the daily welfare of living beings not only for disease prevention but also for rapid recovery after disease affliction. Ayurveda propounds that prevention is an equally important aspect of disease management as cure and thus, strengthening the immune system, is a natural way to help the body fight against the disease causing pathogens. *Acharyas* promoted the use of *Rasayana* (Rejuvenation) to enhance *ojas* and *vyadhikshamatva* (immunity). *Rasayanas* are health promoting and rejuvenating agents which by their empirical effects produce resistance against disease both physically and mentally. *Ojas* is responsible for good health, better immunity, longevity, intelligence and thought process. For this purpose, use of different types of *ojas* promoting herbs have been described in *ayurveda* which can be immensely helpful in the management of immunodeficiency disorders.

**KEYWORDS:** *Vyadhikshamatva*; *Sahaja bala*; *Kalaja bala*; *Yuktikrita bala*; *Ojas*; Immunity.

### INTRODUCTION

Modern day researches have implicated the malfunctioning of immune system in various human diseases including not just those caused by the microbes but also non-microbial diseases as cancer, allergies and auto-immune disorders. This has posed as an immense challenge to medical fraternity for not only the immune system plays an important role towards establishing an infection-free state, it can also be stimulated and suppressed by various physical, chemical, and biological agents as it has already been proved by advanced researches. These include various natural products of microbial, animal, and plant origin and drugs (steroids, cytotoxic etc). A definite approach towards the understanding and hence rational therapy of immune disorders all through these years is still elusive since it finds mention in the age-old Indian medical expertise - “Ayurveda”. It is pertinent here to explore the concept of immunity in this ancient science of life which offers a holistic approach and a potential promise regarding immunotherapy. The main purpose and objectives of Ayurveda is the preservation of health in healthy individual and eradication of diseases which are curable.

A person who is having balanced proportion of muscles, compactness, and excellent sensory faculties never suffers from such diseases. Such people can easily withstand extremes of hunger, thirst, heat of the sun, cold and physical exercises. For the same purpose, Ayurveda emphasizes the promotion of health through the strengthening of host defences, to act as a resistive force against day-to-day physiological extremes as well as opportunistic maladies. This force to reckon with, as regards everyday wellness is termed as “*vyadhikshamatva*” in Ayurveda. The concept expounds both preventive medicine aspects, along with curative aspects of treatment as the self-explanatory terms – “*vyadhibalavirodhitvam*” and “*vyadyutpadaprati bandhakatvam*” elaborated by *acharya Chakrapani* in this respect, foretells. The pathological conditions causing compromised immune system such as tuberculosis, hepatic disease etc. can be approached through the concept of immune-stimulation as has been elucidated in *Ayurvedic* texts. The concept of *Vyadhikshamatva* (immunity) is of tremendous importance in the daily wellness of human beings; for prevention and recovery from diseases. When etiological

factors come in contact with the body they try to produce disease. At the same time the body tries to resist the disease. This power of the body, which prevents the development of diseases or resists a developed disease, is called Immunity. *Vyadhikshamatva* in Ayurveda is not merely immunity against a specific infectious agent or disease such as typhoid, measles or rubella for which modern medicine provides "immunizations". Rather, *Vyadhikshamatva* implies a resistance against the loss of the integrity, proportion, and interrelationship amongst the individual's *doshas* (vital forces) and *dhatu*s (bodily tissues). Resistance to disease or immunity against disease is of two kinds i.e. the one which attenuate the manifested diseases and other variety prevents the manifestation of diseases.<sup>[1]</sup> Thus, it is clear that concept of immunity was familiar at that time and has been analyzed in detail in form of *Vyadhikshamatva* in various *Ayurvedic* texts. Various factors which contribute towards *vyadhikshamatva* are normal *doshas*, equilibrium state of *dhatu*s (bodily tissues), normal *agni* (digestive fire), patency of *srotas* (micro channels) etc. During certain conditions or due to certain factors even unwholesome (*ahitakara*) dietary practices do not produce disease immediately. All unwholesome (*ahitakara*) food articles are not equally harmful, all *doshas* are not equally powerful; all persons are not equally capable of resisting diseases.<sup>[2]</sup> Equilibrium state of *dhatu*s (bodily tissues) is health and gives rise to *arogyam* that is a healthy state of being.<sup>[3]</sup> Aims and objective of Ayurveda is the maintenance of equilibrium state of *dhatu*s.<sup>[4]</sup> *Acharya Charaka* describes various *hitkara* (useful) and *ahitkara* (harmful) *dravyas* as in *Sutrasthana* as *Matrashitiya*, *Tasyashitiya*, *Yajyapurshiya*, *Annapaniya* chapters etc. According to *Acharya Charaka*, the following persons are free from disease – those who consume *hitahara-vihara*, are separated to sensual pleasure, who donate regularly, are fair in judgment, speak the truth always, gifted with forgiving nature and the one who is faithful to learned people.<sup>[5]</sup> Here an attempt has been made to compile about the concept of *Vyadhikshamatva* (immunity), important formulations mentioned for *Vyadhikshamatva* and recent research activities of the herbal drugs which are proved for its immunomodulatory activity etc.

## MATERIALS AND METHODS

The materials were collected from the classical *Ayurvedic* literatures, magazines and research journals.

**Synonyms:** Synonyms for *Vyadhikshamatva* which appears in *Ayurvedic* scriptures are: *Shleshma*, *Bala* and *Ojas*.

**I. Shleshma:** *Shleshma* in normal state is called *Bala* and *Oja*. *Shleshma* in abnormal state called "*Mala*" (waste) and "*Papma*" (diseases).<sup>[6]</sup> Function of normal *kapha* (*kapha* is one of the *tridosha* (three vital forces - *vata*, *pitta* and *kapha* - which are said to be responsible for maintenance of homeostasis or equilibrium in the body), which performs the functions like strength, support,

protection, growth and resistance) like that of *ojas*. *Kapha* in normal state provides compactness, stability, heaviness, virility, immunity, resistance, courage and greedlessness.<sup>[7]</sup>

**II. Bala:** *Acharya Sushruta* described *bala* as "*Tatra balen sthiropacitamamsataa sarvachestasvapratigaatah svaravarnaprashado bahyanamabhyantraranam cha karananamatmakarya pratipattirbhavati*" means *Bala* imparts firm integrity to the muscles, improves the voice and complexion, and helps the person to perform his natural functions (including the external and inner function) normally.<sup>[8]</sup> Three types of *bala* (*Vyadhikshamatva* or immunity) in *Ayurveda* are: 1. *Sahaja*, 2. *Kalaja*, 3. *Yuktikrita*.<sup>[9]</sup>

**a. Sahaja bala (innate):-** The constitutional strength present since birth<sup>[10]</sup> It depends on the healthiness of *shukra* (sperms) and *artava* (ovum). According to *Ayurvedic* concept of Genetics, if two parents "genetic makeup is healthy, similar health status is acquired by the children. On the other hand if the genetic makeup of parents is susceptible to certain diseases, those diseases may be carried over into the next generation.<sup>[11]</sup> This concept indicates congenital abnormalities which occur due to abnormal changes at genes or chromosomal levels.

**b. Kalaja bala (according to time, season, and age):-** Encompassing the time of day, season, age etc. (according to *ritu* and *vaya*) factors for enhancing immunity. Strength is assumed to be greater in the early morning, spring, and *yuvavastha* (young age) than in evening, summers and old age.<sup>[12]</sup>

**c. Yuktikrita bala (acquired):-** *Ayurveda* focuses on following plans for acquiring *bala* or enhancing immunity:

- Proper and suitable *ahara* (nutritious diet),
- Performing exercise (*chesta*) with proper method and using different beneficial yoga e.g. *rasayana dravyas*.<sup>[13]</sup>

## Balavridhikarabhava (factors which increase strength/immunity) as described by Acharya Charaka

- Birth in a place where people are naturally healthy or strong, birth in a family of strong person (means without any family history of immunodeficient disorders), birth at a time when people naturally gain strength (*Visarga kala*), favorable time, excellence among qualities of *bija* (sperm and ovum) and *kshetra* (uterus), excellence of diet (*aharasampat*), excellence of physique (*sharirsampat*), excellence of suitability (*satmayasampat*), all mental faculties are proper (*sattvasampat*), natural mechanism (*savabhavsansiddha*), young age, exercise and other physical activities.<sup>[14]</sup> *Bala* or *Oja* abnormalities are of three kinds namely: 1. *Bala Visransa*, 2. *Bala Vyapat* and 3. *Bala Kshaya*.<sup>[15]</sup>

**1) Symptoms observed due to visransa (visransa means displacement from its normal place):-** Looseness of joints, debility, displacement of three *doshas*, fatigue, impaired body functions.

- 2) **Symptoms due to vyapat are as** (*vyapat* means vitiation by *dusta dosha* and *dushya*):- heaviness and stiffness in body, exhaustion, discoloration, stupor, excessive sleep; swelling due to *vata* (*vata* is one of three *doshas*).
- 3) **Symptoms due to kshaya (loss) are as:** fainting, depletion of muscle, unconsciousness, delirium, improper sensory perception, death.

### III. Ojas

- 1) According to *Charaka*, (during embryogenesis) the *oja* appeared foremost in the human body.<sup>[16]</sup>
- 2) The essence of *saptadhatu* (*saptdhatu* means the seven bodily tissues as from *rasa* to *shukra dhatu*) is called *Oja* and it is the seat for strength, hence called *bala*.<sup>[17]</sup>
- 3) In Ayurveda, *Ojas* has been considered vital in the defence mechanism of the body. It resides in the heart (*hridaya*), but also circulates (*vyapata*) all over body and maintains healthy status of the person. If this is lost, life also is lost and if this intact, life also continues.<sup>[18]</sup>
- 4) In conditions like *madhumeha* (diabetes mellitus) and *shosha* (malnutrition), where depleting of *Ojas* (infection fighting power) is a constant feature, people are known to be susceptible to various recurrent infections. Types:
- 5) *Para ojas*: This is *ashtabindu* in quantity, if decreases then person will die.
- 6) *Apara ojas*: which is *ardhanjali ojas*, if decreases or vitiated manifest abnormalities. It is *snigdha* (essence) and *somatmaka* (mild and cool) in nature. Though predominately white in color, has got some yellowish and whitish tinge. Ten great blood vessels connected to heart carry the *Rasatmaka Ojas*, on which the whole life process itself is dependent.<sup>[19]</sup>

Substances, which have opposite qualities to those of bodily tissues (*dehadhatupratyanik bhutani*), (when gain entry into the body) encounter the opposition by the *dehadhatu* (bodily tissues).<sup>[20]</sup> It points that immune system of person attacks any antigen, which has gained entry into the body. *Acharya Charaka* clearly enumerated people who are prone to various types of infections or recurrent diseases as:

- a) Over obese individual (*atisthula*),
- b) Over emaciated person (*atikrisha*),
- c) Whose muscles and blood are diminished markedly (*anavasthitmashasonitasthni*),
- d) Debilitated person (*durbala*),
- e) One who consume unwholesome food (*asatmya-aharasevi*),
- f) One who consume less amount of food, and
- g) Whose mental faculties are weaker (*alpasattva*).<sup>[21]</sup>

In *Ayurvedic* texts, various *acharyas* described countless useful *dravya*, formulations (*yogas*), mode of conducts for adults to enhance immunity (*bala* or *vyadhikshmatva*), similarly for healthy *kshirapa* (infantile period), *kshirannada* (1-2years age period) and

*annada-avastha* (age period from 2-16 years). *Acharya Sushruta*, *Vagbhata*, *Kashyapa* describe a special formulation by the name of "*Lehana*", for this purpose which enhances immunity and thus minimizes infection episodes. The facts stated about *lehana* are as under –

#### *Lehana Karma*

Different *acharyas* also described various *lehana* formulations (*balavardhana yogas* or strength promoting formulation) for use in *balyavastha* (or during childhood period). *Lehana karma's* purposes: 1. to enhance growth and development by providing sufficient nutrition. 2. To promote health, complexion and strength (immunity). 3. To Protect from various infections along with improving intellect and speech (delayed milestone).

**1. Indication of lehana** - children receiving inadequate amount of breast milk due to pregnancy of mother, children having increased demand of food, children passing less amount of urine and stool, children: very lean and thin without any organic problems.<sup>[22]</sup>

**2. Contraindications of Lehana** - children having improper digestion, lethargic, passing excessive amounts of urine and stool, suffering from various disorders like eye, ENT disorders (*shiroroga*), fever, diarrhea, edema, jaundice, anemia, cardiac problems, rectal disorder, excessive vomiting & nausea, abdominal discomforts, *amaroga* (disorders due to toxic residue that is left behind as a by-product of poor digestion).<sup>[23]</sup>

#### Various compound formulations mentioned by *acharyas*

1. *Acharya Charaka* - *Panchgavya ghrita*, *Brahmi ghrita*.<sup>[24]</sup>
2. *Acharya Sushruta* - has described four *lehana yogas* which provide general immunity, body resistance, helpful in growth and development and enhancing the intelligence. These are: 1) *Svarna bhasma* with *kustha* (*Saussurea lappa*), *vacha* (*Acorus calamus*), *madhu* (honey) and *ghrita*. 2) *Svarna bhasma* with paste of *brahmi* (*Bacopa monnieri*), *shankhapushpi* (*Convolvulus pluricaulis*) with *madhu* and *ghrita*. 3) *Svarna bhasma*, *arkapushpi*, *vacha*, *madhu* and *ghrita*. 4) *Svarna bhasma*, *khaidarya*, *shveta durva* and *ghrita*.<sup>[25]</sup>
3. *Lehas* prescribed by *Vagbhata* - *Sarasvata ghrita* and combination of *vacha* and *svarna bhasma* with *madhu* and *ghrita*.<sup>[26]</sup>
4. *Lehas* given by *Kashyapa* - *Svarna Prashana* - Pure gold (in small quantity) is rubbed in water on a clean stone and given with *madhu* and *ghrita*, to the newborn-result in promote health, growth, complexion and strength (immunity), *Panchagavya ghrita*, *Brahmi ghrita*, *Abhaya ghrita*, *Samvardhana ghrita* (effective in children with delayed milestones).<sup>[27]</sup>

**Methods to Boost up Vyadhikshmatva:** In *Ayurvedic* texts, various codes of conducts are described for each persons of any age (from conception to old age) to follow in different seasons, during healthy and diseased

conditions in terms of dietetic (*ahara*) and mode of life (*vihara*). These are:

5. For outcome of healthy fetus – follow *garbhini masanumasic paricharya, punsavana karma*,
6. To promote health of infant - *Lehana Karma*, various *medhya rasayana* (memory enhancing drugs).
7. Following *svasthavritta paripalana (Dinacharya, Ritucharya)*.
8. Proper nutritious diet (*satmya ahara*).
9. Regular proper sleep, exercise, yogic *asanas*,
10. Adopting *shodhana (Panchkarma)* according to *ritu in svastha purusha* (healthy person).
11. Following *achara rasayana*: for promoting mental and spiritual strength.
12. Meditation for spritual growth.
13. Use of various drugs: *Vajikaraka dravya (Vajikarana yogas* help to acquire strength by fulfilling necessary deficiencies in deficient *dhatus*. Proper utilization of sense organs with their objects, normal actions and normal seasons are beneficial in the maintenance of good health.
14. *Rasayana* therapy - It promotes and rejuvenate the physiology of body, produce resistance against disease both physically and mentally.
  - According to *acharya Charaka*, use of *rasayanas* results in disease-free long life (*dirghamayu*), *smiriti* (recapitulating power), *medha, arogyam* (healthy well-being), *taruna vaya* (youthfulness), *prabha, varna* (complexion), voice, strength etc.<sup>[28]</sup>
  - According to *Acharya Sharangdhara*, various drugs, diet and regimens which promote longevity by delaying aging (*jaranashanam*) and preventing diseases (*vyadhinashanam*) are called *Rasayana* e.g. *amrita, guggulu, haritaki* etc.<sup>[29]</sup>
  - *Rasayana* is that treatment which influencing the *dhatus, agni* and *srotansi* and *ojas* (e.g. fundamental aspect of body) etc.
  - *Rasayana chikitsa* boosts the *ojas* (immune system). *Rasayana* is the one that is concerned with the immunity enhancer.

According to Ayurveda, the common cause of all diseases may be due to contact with environmental factors and aging. *Rasayana* is a treatment in which the body constituents are prepared to adapt to a selective tissue endowment program. This concept in modern scientific understanding would mean the enhancement of immune responsiveness of an organism against pathogens by non-specifically activating the immune system with immunomodulatory agents of plant origin. It is now recognized that immunomodulation could provide an alternative or complement to conventional chemotherapy for a variety of diseased conditions; this is especially the case when host defence mechanisms have to be activated under the conditions of impaired immune responsiveness. *Rasayana* drugs are believed to slow down the aging process (*jara*) and provide a defense against diseases (*vyadhi*). *Rasayanas* improve the host resistance of an individual, helping to prevent aging and

diseases. *Rasayana Chikitsa* or rejuvenation therapy helps to promote and preserve health and longevity in the healthy, and to cure disease in sick.

### Classification of *Rasayanas*

#### A) As per method of use by *Charaka*

1. *Kutipraveshika* (indoor regimen): As per the needs of *rasayana*, Patient has to stay in a very specialized manner in the specifically made *kuti*.
2. *Vatatapika rasayana* (outdoor regimen): Person can use it while doing his/her normal duties and staying at his or her own home.<sup>[30]</sup>
3. *Acharya Rasayana* (mode of conduct) - Described in detail in *rasayana* chapter by *acharya Charaka*.<sup>[31]</sup> Aim is to follow a particular code of conduct in routine life, which keeps oneself to attain good mental and spiritual health. By following *achara rasayana*, person can be keep away from anxiety, stress, and thereby from all diseases that are generated due to undue stress, anxiety, fear, anger, depression etc.

#### B) As per scope of use by *Sushruta*<sup>[32]</sup>

15. *Sarvopaghatashamaniya* (*rasayan* formulation which counteract various diseases process)
16. *Medhayushkamiya* (*rasayana* which increase intellect and longevity)
17. *Svabhavavaydhipratishedhaniya* (means delaying onset of *svabhavika* disease)
18. *Nivrittasantapiya*

*Rasayana chikitsa* means rejuvenation therapy. Taking *rasayana* is helpful to increase the immunity of the person to keep him away from opportunistic diseases. The possible mechanisms by which action of *Rasayana* can be interpreted with modern aspects are as follows: nutritive function, immunomodulatory action, antioxidant action, anti-aging action, neuro-protective action, haemopoietic effect etc. In recent years numerous researches have been done to explore *ayurvedic* treasure for benefit of common people to improve health by using different *ayurvedic* drugs.

### CONCLUSION

In brief, through *Ayurvedic* concept of *Vyadhikshamatva* not only we can keep at bay the physical bodily ailments but also definitely prevent various psychosocial discrepancies. For as concluded from above, an *oja* depleted body is breeding ground of various physical and mental diseases. Hence, for attaining good *Vyadhikshamatva*, we should use various regimens and follow conducts as described in *Ayurvedic* texts for the same.

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