

AYURVEDIC CONCEPT OF IMMUNITY AND IMMUNIZATION IN THE CHILDREN
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ABSTRACT

The idea of *Vyadhikshamatva* (insusceptibility) is of colossal significance in the day by day health of people; for anticipation and recuperation from infections. When etiological components interact with the body they attempt to create infection. Simultaneously the body attempts to oppose the infection. This force of the body, which forestalls the advancement of sicknesses or opposes a created illness, is called Immunity. The resistant framework is exceptionally unpredictable and contains various sorts of cells and proteins that capacity to fend off contaminations and keep the body sound the safe framework start created from the intrauterine life and it continuously create after birth and get experienced. Equivalent words for *Vyadhikshamatva* which shows up in Ayurvedic sacred texts are: *Sleshma*, *Bala* and *Ojas*. For expanding the insusceptibility in Ayurvedic messages, different *acharays* depicted incalculable helpful *dravya*, plans, *lehana karma*, *swarna prashan sanskar*. There is likewise a *garbhini masanumasik paricharya* for result of a solid child, with a solid insusceptibility.

KEYWORDS: *Vyadhikshamatva*, *Lehana karma*, *Kashyap Samhita*, *Swarna prashan sanskar*.

INTRODUCTION

The insusceptible framework is extremely intricate and contains various sorts of cells and proteins that capacity to fend off contaminations and keep the body solid. At the point when etiological elements interact with the body they attempt to produce infection. Simultaneously the body attempts to oppose the infection. This force of the body, which forestalls the advancement of infections or opposes a created illness, is called Immunity.^[1] The invulnerable framework is isolated into 2 significant parts: Innate invulnerability and Humoral insusceptibility.

1. Intrinsic insusceptibility resistance which is available upon entering the world, its not explicit to a specific microbe. It's additionally called regular insusceptibility. Inborn insusceptible framework is involved actual boundaries and vague invulnerable cells, counting:

- Skin
- Mucous covering of nose, mouth, sinuses, stomach related plot
- Sweat and tears
- Neutrophils, eosinophil's, basophils, pole cells, and so forth – vague safe cells that perform observation of these actual hindrances.

2. Humoral invulnerability the second line of guard that is additionally called versatile resistance. its portrayed by antigen-explicit reactions to an unfamiliar antigen or microbe. Parts of the versatile resistant framework are:

a. B-cell lymphocytes and dendritic cells: These are coursing cells that perceive the unfamiliar microorganisms and antigens. They are liable for creating antibodies that label any unfamiliar intruders for acknowledgment and mounting insusceptible response.

b. Immune system microorganism lymphocytes: These cells assault and kill any microbes and antigens that are labeled by a counter acting agent.

c. Macrophages: These cells additionally perceive antibodies; whenever they have discovered a microbe, they overwhelm it and break it down.^[2]

Versatile invulnerability is discovered uniquely in vertebrates and depends on age of antigen receptors on T and B lymphocytes by improvements.

Advancement of immune system

In utero, the fetal climate requests that the resistant framework stays open minded to maternal alloantigen's. After birth, the unexpected huge openness to natural antigens, a considerable lot of them got from intestinal commensal microscopic organisms, requires a quick change to make particular invulnerable reactions proper for early life.

The intrinsic safe framework gives an early first line of protection. The cells included are neutrophils, monocytes, macrophages and dendritic cells, which all collaborate with the versatile invulnerable framework. These cells create and develop during fetal life, however at various occasions, and the capacity of all parts of inborn resistance is powerless in babies. Develop neutrophils are available toward the finish of the main trimester and steeply expansion in number.

Their number then, at that point gets back to a steady level in practically no time, however they show powerless bactericidal capacities, poor reactions to incendiary upgrades, decreased attachment to endothelial cells and reduced. These shortages are more striking in preterm babies, which additionally have lower serum IgG and supplement. Subsequently, the infant, and particularly untimely babies, have debilitated neutrophil capacities, putting the youngster in danger of bacterial diseases. In preterm and babies, old style monocytes and macrophages are likewise youthful.

First time during section through the birth trench child open to irresistible living being and afterward when he/she makes oral, skin and respiratory contact with the outside. From that point on, openness to micro-organisms is constant.

The resistant framework slowly develops during earliest stages. Basic early security against numerous irresistible infections recently experienced by the mother is given by the inactive IgG immunizer moved from the mother transplacentally and in milk. When that disappears, small kids become more powerless against contaminations, however by then, at that point better outfitted with the developing inborn and versatile resistant frameworks.^[3]

Idea of insusceptibility as per Ayurveda

The resistance as *Vyadhikshmatva* impeccably portrayed in *Charka Samhita*. Numerous individuals are extremely cognizant about their wellbeing they eat appropriately and eat that useful for wellbeing and they follow a decent day by day schedule for their wellbeing, however they become ill frequently, close to that individuals are indiscreet for their wellbeing, eat at all they get without pondering their wellbeing, with an upset day by day schedule they never become ill, the idea driving that distinction is *Vyadhikshmatva*. Since all unwholesome (*Ahitkar*) food articles are not similarly hurtful, all *doshas* are not similarly incredible; all people are not similarly fit for opposing illness *Vyadhikshmatva*

(resistance) is of colossal significance in the every day health of people; for anticipation and recuperation from diseases.^[4] When etiological variables interact with the body they attempt to deliver sickness. At the same time the body attempts to oppose the infection. This force of the body, which forestalls the advancement of sicknesses or opposes a created infection, is called Immunity. Equivalent words for *Vyadhikshmatva* which shows up in Ayurvedic sacred writings are: *Sleshma*, *Bala* and *Oja*.

Oja-According to Charaka, (during embryogenesis) the oja showed up principal in the human body.^[5] In Ayurveda, Ojas has been viewed as indispensable in the safeguard instrument of the body. It dwells in the heart (*hridya*), yet additionally flows (*vyapata*) all over body and keeps up with solid status of the individual. In case this is lost, life additionally is lost.

Bala gives firm trustworthiness to the muscles, works on the voice and composition, and assists the individual with playing out his regular capacities (counting the outside and inward capacity) normally.^[6]

Three kinds of *bala* (*Vyadhikshmatva* or invulnerability) in Ayurveda^[7]

1. *Sahaja bala*-Procured science birth. It relies upon the solid *shukra* (sperms) and *artava* (ovum). This idea shows innate anomalies which happen because of unusual changes at qualities or chromosomal levels.
2. *Kalaja bala*-Our invulnerability fluctuates as indicated by day, season and age. Our body self-vaccinate as per season. Strength is thought to be more noteworthy in the early morning, spring, and *yuvaawastha* (youthful age) than in evening, summers and advanced age.
3. *Yuktikrita bala*-The invulnerability which we got from *aahar* (great quality food), work out, *yoga*, *ausadhi* (drug or immunization), is *yuktikrita bala*.

Causes of low immunity

Congenital Immunodeficiency

As indicated by *Kashyap Samhita* what so ever etables and drinkables regularly devoured by the pregnant lady, indistinguishable *rasa* is determined, which is used three, one section for sustenance of the mother, second part for the hatchling and third for the improvement of bosoms, (in this way) the baby is sustained by mother, so mother ought to picked their food cautiously, on the grounds that it influence the youngster immunity.^[8] The resistant framework is exceptionally perplexing and contains various kinds of cells and proteins that capacity to fend off diseases and keep the body solid. A deformity or transformation in any of these segments can prompt an inherent immunodeficiency, likewise alluded to as an essential immunodeficiency. The most widely recognized deformity is IgA inadequacy, which can occur as regularly as 1 of every 333 individuals, and is regularly asymptomatic; in any case, patients can

likewise encounter incessant sinus, urinary parcel and intestinal infections.^[9]

Rest- Now daily's overabundance utilization of mobiles and late night study upset the rest pattern of a youngster. The insusceptible framework is impeded by absence of rest. Study showed that losing even as a couple of long stretches of stay in bed only one night can increment irritation in the body and meddle with its capacity to keep itself solid. "Rest is urgent to safe framework work".

Stress- Constant and impermanent pressure can have physiological impacts that can bring down a body's capacity to ward off contaminations. The resistant framework is additionally controlled by the movement of the endocrine framework. The arrival of stress chemical from the hypothalamic, pituitary and adrenal (HPA) framework causes concealment of the resistant system.^[10]

Immunodeficiency Due to Malnutrition

Inadequacy in specific nutrients and minerals can prompt diminished immune system function. Nutrients A, E and C, alongside zinc, copper, iron and selenium, have all been demonstrated to be significant for one or the other neutrophil, T cell or immune response capacities. Individuals with an ineffectively offset diet and those with intestinal infection causing diminished retention of supplements are in danger. Cutoff sugars from juice and other bundled food varieties, like yogurt.

Upgrade your resistance- In Ayurvedic messages, different *acharyas* depicted incalculable valuable *dravya*, details (*yogas*), method of behaviors for grown-ups to upgrade resistance (*bala or vyadhikshmatva*), likewise for solid *ksheerapa* (juvenile period), *ksheerannada* (1-2years age period) and *annada-awastha* (age period from 2-16 years). *Acharya Kashyapa* depict a unique detailing by the name of "*Lehana*", for this reason which upgrades insusceptibility and furthermore satisfy the dietary requirements, thus limits disease scenes.

The realities expressed about *lehana* are as under – (1)To upgrade development and advancement by giving adequate sustenance. (2) Advance wellbeing, composition and strength (resistance). (3) Shield from different diseases alongside improving keenness and discourse (postponed achievement).

Indication of *lehana karma* - Youngsters getting lacking measure of bosom milk because of pregnancy of mother, youngsters having expanded interest of food, kids passing less measure of pee and stool, kids: exceptionally lean and dainty with no natural issues ,stoppage, great stomach related fire.

Contraindications of *Lehana karma* - youngsters having ill-advised assimilation, lazy, passing extreme measures of pee and stool, experiencing different issues

like eye, fever, the runs edema, jaundice, pallor, cardiovascular issues, rectal turmoil, over the top retching and queasiness, stomach discomforts.^[11]

Acharya Sushruta - has depicted 4 plans (containing gold) which give general invulnerability, body opposition, accommodating in development and improvement just as upgrading the insight. These are:

- 1) *Svarna bhasma* with *kustha* (*Saussurea lappa*), *vacha* (*Acorus calamus*), *madhu* (nectar) and *ghrita*.
- 2) *Svarna bhasma* with glue of *brahmi* (*Bacopa monnieri*), *sankhpushpi* (*Convolvulus pluricaulis*), with nectar and *ghrita*.
- 3) *Svarna bhasma*, *arkpushpi*, *vacha*, nectar and *ghrita*.
- 4) *Svarna bhasma*, *khaidarya*, *sweta durva* and *ghrita*.^[12]

Technique for gold licking and its impact

Svarna Prasana - Pure gold (in little amount) is focused on water on a clean stone and given with nectar and *ghrita*, to the infant result in advance wellbeing, development, composition and strength (insusceptibility). By taking care of the gold for one month (the youngster) turns out to be incredibly shrewd and isn't assaulted by the illness, and by utilizing for a half year, can hold what so ever he hear.^[13]

In a pharmaco-clinical investigation, *madhu-ghrita-swarna-vacha* combination given to youngsters showed a critical impact of humoral neutralizer arrangement and it followed up on immunological framework. Which was obvious by setting off the reaction of immunological framework emerge in the all out protein and serum igG level.

Gold is now demonstrated for its immunomodulatory impacts as a result of it antibacterial activity against various life forms yet when it is blended in with *madhu* and *ghrita* it enlarges its range of activity to invigorate body insusceptible cells.

The unmistakable data about does of *svarna bhasma* isn't referenced by *Acharya*. As per some content book as clarification for portion the pediatric portion is^[14]

Outset to long term – 5mg each day
5 - 10 years – 10 mg each day
10-16 years – 15 mg each day

The idea of—"vyadhibalavirodhitam" and "vyadyutpadapratibandhakatvam" explained by *Acharya Chakrapani* in this regard.

Techniques to Boost up Vyadhikshmatva:- In Ayurveda messages, different codes of behaviors are depicted for every people of all ages (from origination to advanced age) to continue in various seasons, during solid and unhealthy conditions in terms of dietetic (*ahara*) and method of life (*vihar*).These are:

1. Antenatal period – Follow *garbhini masanumasic paricharya, punshavana karma*, for out happen to solid child.
2. To advance strength of newborn child *Lehana Karma*, different *medhya rasayana* (memory improving medications).
3. Following *swasthavritta paripalana (Dinacharya, Ritucharya)*.
4. Legitimate nutritious eating regimen (*satmya ahara*).
5. Standard legitimate rest, work out, *yogic asanas*.
6. Receiving *Sodhana (Panchkarma)* as indicated by *ritu in swasth purash* (sound individual).
7. Following *Achara Rasayana*: for advancing mental and profound strength.
8. Reflection for spritual growth.^[15]
9. Dr. Ram Karan Sharma, Vaidya Bhagwan Dash ,Charak Samhita, Edition, Chaukhamba Sanskrit Series Office, 2009; 1: 220-221.
10. Prof. Banwari Lal Gaur, Prof. Radheshyam Kalavatiya, Charak Samhita (Vol.1),2nd Edition Rashtriya Ayurveda Vidyapeeth, 2019; 937-938.
11. Kasyapa-Samhita edited by Prof. P.V. Tiwari Sutrasthan, 18: 5-6.
12. Sushruta Samhita edited by Ambika Dutta Shastri, Sharirsthan, 10/68-70.
13. Kasyapa-Samhita edited by Prof. P.V. Tiwari Sutrasthan, 18/25-28: 7.
14. Brahma Dutta Sharma Review Article On Swarna Prashana Samskara W.S.R. Immunization, International Journal of Applied Ayurved Research ISSN: 2347- 6362.
15. The Concept Of Vyadhikshamatva (Immunity) In Ayurveda Karam Singh 1, Bhavna Verma 2 Ayurpharm Int J Ayur Alli Sci., 2012; 1(5): 99 – 108.

CONCLUSION

Children make the home energetic and they are fate of our country. The insusceptibility start create and develop, during fetal life and soon after the birth, to expand the resistant framework in youngsters we need to began center from the antenatal period by *aahar* (diet) and *vihar* (mode of life) of the mother. Soon after the birth utilize the nectar and *ghrita* to invigorate the resistant arrangement of the new conceived. Gold is demonstrated for its immunomodulatory impacts, we should utilize distinctive *Lehana* for improves insusceptibility and to limits disease scenes. Keep up with cleanliness and calm climate for the appropriate advancement of the youngster.

REFERENCE

1. K Sembulingam and Prema Sembulingam, Essentials of Medical Physiology, 6th Edition, Jaypee Brothers Medical Publishers (p) Ltd, 2012; 107: 116-117.
2. Harsh Mohan, Textbook of pathology, 7th Edition, The Health Sciences Publishers, Jaypee Brothers Medical Publishers (P) Ltd, 2015; 44.
3. P. Kashinath Pandey and Dr. Gorakhnath Chaturvedi, Caraka Samhita, Vol.1, Chaukhambha Bharati Academy, Varanasi, 2014; 228.
4. Dr. M. Rathod, Concept of Immunity in Ayurveda.
5. Dr. P.S. Byadgi, Concept of Immunity in Ayurveda, Journal of Applied Pharmaceutical Science, 2011; 01(05): 21- 24.
6. Dr.Manjari S Deshpande , Dr. Deshpande Sadanand V, Dr. Sonali Meshram, Concept of bala (strength) in Ayurveda, Indian journal of research, 2017; 6(3).
7. Karam Singh, Bhavna Verma, Concept of Vyadhikshamatwa (Immunity) in Ayurveda, Ayurpharm International Journal of Ayurveda and Allied Sciences, 2012; 1(5): 102.
8. Shubhash D. Wagde, Sanjay P.Deshmukh, Critical analysis of Ayurvedokta Vyadhikshamatva concept w.s.r. to modern immunity, April-June 2019; 8: 11.