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Importance of *Oja* in the Body Varieties and their Anatomical and Physiological Status in Modern Parlance

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ABSTRACT

In today's era people suffer from various diseases. Nowadays there is prevalence of various diseases as people do not know what to eat and what to not i.e., proper dietary habits. They are not aware of proper lifestyle. Our body's immune system acts as a defence that in turn protects our body from various diseases by attacking and destroying the bacteria, viruses, germs and parasites. The first line of Défense for a healthy way to enhance or boost the immune system is to choose a healthy life style. Therefore, it is very important to keep our body's immune system healthy, so that it can do its job properly and effectively and protect us from any harm. In spite of balanced diet, daily exercises, yoga practices, people are more prone to develop diseases. Ayurveda is nothing but a science of life. Its main aim is to maintain the healthy status of a healthy living being and to keep the disease person free from diseases i.e., prevention of disease and treatment of disease. One of the basic concepts or fundamental described in Ayurvedic text is *Ojas* or *oja*. *Oja* is the essence of all the seven *dhatu*s also known as *Saptadhatu sara*. It improves the immunity power, strengthen the body.

KEYWORDS

Ayurveda, yoga, Oja, immunity, immune system



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INTRODUCTION

Maintaining good health is a challenging task for an individual these days. Everyone is busy with their hectic and sedentary lifestyle. People these days do not have time for even themselves, resulting in compromised immunity of an individual. Due to this negligence towards one's own health due to sedentary and busy lifestyle, the person lands up with lot of different kinds of diseases. So, basically this immunity factor in an individual's body is encroached by ojas as per Ayurvedic texts. This *Oja* provides '*bala*' or resistance power to the body to fight against various harmful diseases and infections. In ayurvedic texts, *Ojas* is beautifully explained and its significant importance is given. It is said in ayurvedic texts that *Oja* is the essence of all the *dhatu*s inside the body, its maintenance, production, proper circulation, storage and utilization inside the body should be proportionate and consistent. Though *Ojas* is practically invisible but it is very well known through its actions, functions and symptoms.

The theory of '*Oja*' is an independent principle of Ayurveda, which supports life and protects life against various diseases. This is a special concept mentioned in Ayurvedic texts. In adverse conditions, when homeostasis of the living body gets

disturbed, have to be guarded. This guarding entity is titled as '*Oja*'¹. Essence of all seven *dhatu*s is termed as *Ojas*, on which strength of the body depends. The word 'strength' or '*bala*' is applied to many concepts. Strength means immunity. *Ojas* provides immunity to the body, so body can be protected against various infections. Just as *ghee* is assimilated in entire volume of milk, '*oja*' is assimilated in entire unctuous part of all seven *dhatu*. That *Oja* is nothing but '*Bala*' of the body. According to Acharya Vagbhata, '*Oja*' referred to as *Mala of Shukra* in this context². '*Oja*' is directly referred as '*Prakrit Sleshma*'. If '*Oja*' becomes abnormal, it is called as *Mala*.

OJAS-

It is a distinctive concept which has been put forward by Ayurveda science. Any one particular entity cannot be considered as '*Ojas*'. Hence, it must be a physically existing body entity, which functions for harmony of structural body components with their functions and with special sense organs and also with mind. work of '*Oja*' is to bind soul, body and sense organs and mind together, that too harmoniously. For working efficiently, '*Oja*' could be working sometimes through medium of *dhatu*, sometimes through medium of *mala* and sometimes through medium of *dosha*³. The main function of *oja* is *Vyadhikshamatva*.



Synonyms of *Ojas* are *dhatusara*, *dhatu teja*, *bala*, *prana*, *dhatusneha*, *jivashonita*, *rasa*, *shukrasara*. These synonyms indicate the vitality of *Oja* in life⁴.

TYPES OF OJAS- *Ojas* is of two types namely *para ojas* and *apara ojas*. According to acharya Charaka, *Para oja* is situated in the heart⁵ and is said to be ‘*ashtabindu pramana*’ or 8 drops and *apara oja* is present throughout the body and is about ‘*ardhanjali pramana*’⁶. According to Arundatta, volume of *para ojas* is 6 *bindu* or drops⁷. Formation of *Ojas* in Charak sutrasthana is applicable to the formation of *Para oja*. *Ojas*, which nourishes the *garbha* in the early stage of embryonic period and which enters heart of *garbha* is a *para* type of *ojas*. For the formation of *Apara ojas*, acharya Charaka in Charak sutrasthana said that just like bees collect honey from the fruits and flowers, the same way essence of all *dhatu*s collect to form *Ojas*. This description of *ojas* indicates that the formation is applicable to *Apara Ojas*⁸. *Oja* may be defined as supreme and ultimate essence of *Saptadhatu* starting from *rasa* to *shukra*.

OJA- SARVADHATU SARA-

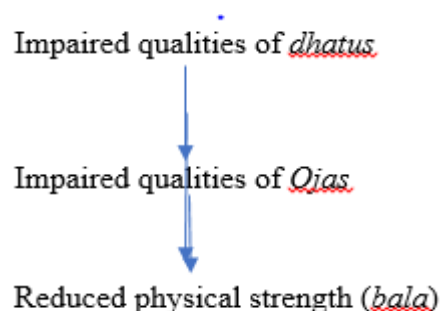
Saptadhatu theory is one of the fundamental aspects of ayurvedic system of medicine. *Oja* is a Sanskrit word that stand for ‘vigour’ and it is the ultimate part from all *dhatu*s and determinant of our immune

status. *Oja* is the determinant factor of immunity, resistance to diseases and ultimately healthy state of a person. *Ojas* protects life, hence it is ‘*pranayatana*’. *Ojas* is an important site of *prana*, if *Ojas* is affected it can cause sudden death.

DEFINATION OF BALA –

Capacity of a person to perform physical work for a longer duration of time is called as *Bala* or Strength. More the strength, more is the endurance power (*bala*). Physical strength (*bala*) of a person depends on *kapha dosha* and high quality *dhatu*s. As *Ojas* is the essence of all *dhatu*s, *bala* ultimately depends on *Ojas*⁹. Essence of all seven *dhatu*s is termed as *Ojas* and the same *Ojas* is also called as *bala*¹⁰. *Ojas* and *bala* are independent concepts. *Bala* depends on *Ojas*. There are three types of *bala* in Ayurveda – *Sahaja bala*, *kalaja bala* and *yuktikrita bala*¹¹.

CHART SHOWING RELATION BETWEEN OJAS AND BALA-



QUALITIES OF OJA –

In table 1, qualities of *Oja* by different acharya’s has been discussed.



Table 1 Qualities of *Oja* mentioned by different Acharya's

CHARAK 12	SHUSHRUTA 13	VAGBHATTA 14
<i>Guru</i>	<i>Somatmaka</i>	<i>Snigdha</i>
<i>Sheeta</i>	<i>Snigdha</i>	<i>Somatmaka</i>
<i>Mridu</i>	<i>Shukla</i>	<i>Sudha</i>
<i>Slakshana</i>	<i>Sheeta</i>	<i>Ishat</i> <i>lohit</i> <i>pitakam</i>
<i>Bahal</i>	<i>Sthira</i>	
<i>Madhur</i>	<i>Sara</i>	
<i>Sthira</i>	<i>Vivikta</i>	
<i>Prasanna</i>	<i>Mridu</i>	
<i>Pichhila</i>	<i>Mrutsna</i>	
<i>Snigdha</i>	<i>Pranayana</i> <i>uttamam</i>	

FUNCTIONS OF OJA –

Most important function of 'Oja' is to protect life and to keep the body alive. *Oja* is also called '*Bala*' as well. Etiological factors of diseases are *Dosha*. These remain in physiological limits in health. Individuals with decreasing *Oja*, become so weak that physiological limit of *Dosha* also does not bring health to them. Due to '*Bala*' quality of '*Oja*', individual shows well-nourished fleshy body with durability, all types of movements in living body are smooth and without any obstruction, functions of external sense organs with organs of functions are smooth¹⁵.

- Function of '*Oja*' in intra-uterine life is as follows¹⁶:

Table 2 Properties and characteristics of *Vatta, Pitta and Kapha*:

	VATA	PITTA	KAPHA
PROPERTIES	Non-unctuous, cold, light, subtle, mobile, non-slimy and rough and is pacified by the drugs having opposite properties ¹⁷ .	Slightly unctuous, hot, sharp, liquid, sour, mobile and pungent and is pacified immediately by the drugs & substances having opposite properties ¹⁸ .	Heaviness, coldness, softness, unctuousness, sweetness, immobility and sliminess which is subsided by (drugs or substances having) opposite properties ¹⁹ .

- It helps in proper union of ovum and sperms.

- It helps in primary stages of foetal development like morula and blastula stage.

- It helps in differentiation of various organs and systems.

Further according to Acharya Sushruta in his commentary explained that *Dhatu-Ojas-Bala* are independent constituents of the body. *Ojas* provides stability to *mamsa dhatu*, increases the endurance power of the body, conducts physical and mental activities smoothly. It maintains the complexion and voice. *Ojas* stimulates functions of five senses and mind. *Ojas* maintains integrity of the body-mind-senses-soul.

BODY TYPES ACCORDING TO AYURVEDA –

- *Vata*
- *Pitta*
- *Kapha*

In table 2, different properties and characteristics of *Vata, Pitta* and *Kapha* has been discussed.



CHARACTERISTICS	The characteristics of Vata prakriti person are- <i>Ruksha, Laghu, sheeta, daruna, Khara, Vishada</i> ²⁰ .	Specific manifestations in the Pitta prakriti person are- <i>Ushna, Tikshana, Drava, Visra, Amla, Katu</i> ²¹ .	Specific manifestations in Kapha prakriti person are- <i>Snigdha, Slakshana, Mridu, Madhura, Sra, Sandra, Manda, Staimitya, Guru, Sheeta, Vijjala, Accha</i> ²² .
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With the above-mentioned qualities, individuals having *Vatala* type of body constitution are mostly dominated by lesser strength, span of life, procreativity, accessories of life and wealth in a lesser quantity as compared to pitta and kapha. *Pitta prakriti* person is comprised of moderate strength, moderate span of life, moderate spiritual and materialistic knowledge, wealth and accessories of life. *Kapha prakriti* individuals are blessed with best strength, wealth, education, vitality, immunity and longevity with peaceful nature. Hence, this type *prakriti* is praised as *Uttama prakriti*²³. Therefore, it is clear that the properties of oja and kapha are almost same. And both are considered as strength of the body.

PRAKRIT KAPHA (BALA) – OJAS

According to acharya Charaka, the *Sleshma* occurring in the body naturally is the strength (Bala) of the body. That means *kapha* in its natural state promotes strength in the form of *Ojas* and when in morbid condition, it takes the form of excreta (*mala*) and causes misery²⁴. So, the goodness of the *Prakrit sleshma* in the body

signifies the goodness of *Ojas* and indicates a good body immunity. In equilibrium or balanced state, *kapha* is considered as a *prakrit kapha* and when its equilibrium is not maintained it becomes *vaikrit*. In that condition, *kapha* lost its normal *guna* and *karma*. So, persons in the state of *kapha kshaya* and *kapha vridhhi* get suffered easily with the diseases due to decreased level of *Bala* or *Vyadhikshamatva* (immunity).

OJAS IN RELATION WITH IMMUNITY –

Oja is the strength of the body like *kapha* as stated by acharya Sushruta. *Oja* in its balanced state is responsible for immunity of the body. The example quoted by acharya Charaka, compares “*Ojas*” with the “antibody” and the “*rajnichara*” with the “antigens”. He further explains that the *Ojas* is eaten up or destroyed by *rajnichara* can be precisely correlated with the serological reactions in which the antibodies are produced in response to the antigens (*Rajnichara*) which combats the antigen and protects the body from diseases.



OJAS – ASSOCIATION WITH AIDS –

As far as association of *Ojas* with AIDS is concerned we can understand and it is can be said very rightly that AIDS is nothing but ‘*ojokshaya*’, because *Ojas* is responsible for *Vyadhikshamatva* or immunity of the body. When a person is affected with HIV or AIDS, the body’s immunity is lost. As mentioned in ayurvedic texts about *Rajnichara* in Charak *Sharirasthana*²⁵, these are responsible for ‘*Ojokshaya*’ or loss of immunity, which is seen in AIDS. AIDS is also a state of *kaphaj bhava kshaya*, where a suffering person loses all the *kaphaj bhava* in their body. In this condition, the *prakrit bala*, mass of the body is lost. The person who is suffering from AIDS loses the body immunity to fight against various diseases. The person becomes prone to different types of infections.

ANATOMICAL ASPECT OF OJAS –

It is mentioned above that there are two types of *Oja*, namely *Para Oja* and *Apara Oja*. ‘*Para Oja*’ is situated in the heart and ‘*Apara Oja*’ is present throughout the body. *Para Oja* is said to be of ‘*ashtabindu pramana*’ or 8 drops in the body and *Apara Oja* is about ‘*ardhanjali pramana*’. *Oja* circulates throughout the body tissues and heart, strengthen the physical self, brings clarity to the mind and balances the emotions.

Vessels attached to the heart – Ten vessels are attached to the heart which carry *Ojas* and pulsate all over the body²⁶.

Person who want to preserve *Ojas* and maintain heart and the ten vessels attached to it in a good and healthy condition, should avoid those factors which may lead to unhappiness (mental worries)²⁷.

Heart seat of *Ojas*– The heart is essential for all the natural mental and physical activities because the entire sense perception representing animation depends on the heart. Moreover, the heart is the substratum of the *Ojas* par-excellence and it is also the controller of the mind. That is why the physicians have designated the heart as ‘*hriday, mahat* and *artha*’²⁸.

PHYSIOLOGY OF OJA –

In *Charka samhita sutrasthana*, it has been clearly mentioned that *prakrit bala* (natural immunity or proneness to sickness as well as physical strength) is due to *prakrit kapha* or *sleshma*. *Ojas* too has *sleshma*- like *guna*’s like *snigdha, shukla, sheeta, sthira, sara, guru, mridu, madhura* etc. Just like *guna samya* the *Ojas* and *sleshma* have *karma samya* also. It is true that in Ayurveda, the major part of *Ojas* is said to be *apara oja* which circulates throughout the body with the help of *hriday* and is responsible for physical, mental and expression-related activities, which are directly dependent on this *Ojus* content of



body. Some commentators may consider *Apar Oja* as plasma, immunoglobulin, leucocytes etc.

CONCEPT OF IMMUNITY –OJAS

As per modern science, the body defence system is termed as Immunity, which is considered as resistance to disease. The human body has the ability to resist almost all types of organisms or toxins that tend to damage the tissues and organs. This capability is called immunity²⁹. In the first line of defence, the body is protected against invading organisms by physical barriers like skin and other epithelial linings. If these mechanisms fail to control the invading organisms, then the second line of defence, the immune system is activated. Lymphoid tissues are fundamentally involved in the process of immunity i.e. body protection power against invasion by undesirable agents like microorganisms, viruses, tumour cells and parasites³⁰. There are two types of immunity: Natural/innate immunity and Acquired immunity.

Natural Humoral Responses-

Complement system: The cell-killing effects of circulating antibodies and cellular immunity are mediated by a system of plasma enzymes, called the complement system. There are 11 proteins in the system³¹.

C-Reactive Protein: Entry of antigens activates the concentration of many plasma proteins, specially C-reactive protein (CRP), which coats the invading antigens. CRP-coated organisms activate the complement system which facilitates phagocytosis³².

Interferons: Interferons are released by virally infected cells into the ECF which forms a protective ring of uninfected cells which limits the spread of infections. It also inhibits the protein synthesis and hence promoting the degradation of mRNA which in turn inhibits replication of viruses.

Natural killer cells (NK Cells): Natural killer cells also known as *non-T, non-B lymphocytes*, are the special type of cytotoxic lymphocytes. These are large lymphocytes that make up to 10-15% of the circulating agranulocytes. They kill the cells without any prior sensitization and involvement of major histocompatibility antigen.

Natural Cellular Responses- when the foreign substances enter the blood stream they are dealt with neutrophils and monocytes, these are the cell mediated 1st and 2nd line of defence respectively.

Acquired Immune System- The body has two acquired immune defence system which works when invaders overcome the natural immune system and they are



humoral immunity and cellular immunity. Both react to antigens.

Humoral response: it involves the antibodies and the major cells involved are the B-lymphocytes. Antigens reacts to extracellular phases of bacterial and viral infections. B-lymphocytes activate the complement system to neutralize antigens. It is a major defence against bacterial infections.

Cellular response: it does not involve antibodies and the major cells involved are the T-lymphocytes. It is responsible for delayed allergic reactions, rejection of transplants of foreign tissue and lysis of tumour cells. It constitutes a major defence against infections due to viruses, fungi and few bacteria. It also helps defend against tumours.

Development of the Acquired Immune System- During development of fetal and during adult life, the precursor of lymphocyte come from the bone marrow. The one which populate the thymus gets transformed into this organ into T lymphocytes by the environment. In birds, the precursors which populate the bursa of fabricius gets transformed into B lymphocytes. There is no such bursa in mammals, and the transformation to B lymphocytes in mammals occurs in bursal equivalents, that is, the fetal liver and after birth, the bone marrow. After residing in the

thymus or liver, many of T lymphocytes and B lymphocytes get migrated to the lymph nodes. T and B lymphocytes cannot be distinguished morphologically but can be identified by the markers present on their cell membranes. B cells differentiate into plasma cells and memory B cells. There are three types of T cells: cytotoxic T cells, helper T cells and memory T cells. Further there are two subtypes of helper T cells: T helper 1 cells, which secrete IL-2 and gamma interferon and are concerned primarily with cellular immunity, T helper 2 cells, secrete IL-4 and IL-5 and interact primarily with B-cells in relation to humoral immunity³³.

CONCLUSION

Oja is the *Saptadhatu sara*, the essence of all the seven *dhatu*s. It is the supreme and ultimate essence of all the seven *dhatu*s starting from *rasa* to *shukra* and is highly responsible for maintaining the tissue elements. When the body is healthy and the person is free from diseased condition it is said to be the healthy state of *Ojas* in the body. When the abnormalities occur in *Ojas* which means alteration of *Apara Oja*. Various factors responsible for vitiation of *dosha*'s and *dhatukshaya* are listed for abnormality of *Ojas*. These factors result in decrease in *oja* in the body which as a result



leads to various immunity deficient disease. So, these factors may be prevented for the betterment of the *Ojas* or *Bala*. To live a better and healthy life person should keep his body and mind healthy by having good dietary habits, good lifestyle and to keep his mind peaceful and relaxed. Leap ahead with positive thinking. Person should think positive so that positive things will happen. A person need faith to stay strong as well as positive thinking to strive.



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