

A REVIEW ON VYADHIKSHAMATVA W.S.R IMMUNITY

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ABSTRACT

According to *Ayurveda*, the power of body which decreases the damaging power of the disease and stops the genesis of the disease is known as *Vyadhikshamatva* (Immunity).

Leucocytes present in our blood are meant to destroy the micro-organisms and their toxins. These are known as white cells and the process is known as Phagocytosis. This phagocytosis is one of the major functions of the immunity that keep person free from various diseases. Therefore good, balanced diet and pure air inhalation is stressed because the person who eats pure balanced food, whose digestion is good in that person the function of white cells and other cells will be much more effective and that person will remain free of diseases. For the same reason people who do not consume quality food suffer from various disorders.

Other to this, antibodies is also formed inside the body in response to the various foreign bodies and they help to counter various diseases. The concept of modern day immunity modulators was described in ancient literature by various *Ayurveda* saints thousands of years ago. It was stated that in every person immunity is present by birth and to some extent it is given to the new born through mothers feed. That is why breast feeding for new born is necessary.

The immune system is an interactive network of lymphoid organs, cells, humoral factors, and cytokines. The essential function of the immune system in host defense is best illustrated when it goes wrong; under activity resulting in the severe infections and tumors of immunodeficiency, over activity in allergic and autoimmune disease. In this review we have covered the normal function of the immune system in recognizing, repelling, and eradicating pathogens and other foreign molecules.

Keywords- Immune System, *Vyadhikshamatva*(Immunity), Immunodeficiency, Antibodies, Epigenetic, Antigen, *Kapha*

INTRODUCTION

Vyadhikshamatva (Immunity) was described by *Acharya Charaka*¹ thousands of years ago. Now-a-days, the same is known as immunity in the modern science.

If the power of the body to counter the disease is less, various diseases occurs and if the same is great, disease will not occur or they were be of mild nature. In atmosphere there are numerous micro-organisms which enter in our body through air respiratory tract. Our blood has the ca-

capacity to damage these micro-organisms and the body remains free of the diseases produced due to toxins of these micro-organisms. This very natural power of the body is known as *Vyadhikshamatva* (Immunity).

The principal of *Ayurveda* is to protect the health of the persons before the occurrence of the disease² for the fulfillment of this principle and to destroy various toxins prevent in the atmosphere *Ayurveda* directs for *Dhoopana* karma. For example,

Guggulu (*Commiphora wightii*), Jatamansi (*Nardostachys jatamansi*), *Dhoompana* is for destroying micro-organisms and thus protecting the health³.

Modern system also accepts that *Dhoompana* karma should be performed. It not only increases immunity but destroys micro-organisms as well. There are many more karmas in *Ayurveda* to increase the immunity. For example Honey and Ghee is given for licking to new born.

ABOUT THE IMMUNE SYSTEM

The immune system is the body's defense against infectious organisms and other invaders. Through a series of steps called the immune response, the immune system attacks organisms and substances that invade body systems and cause disease.

The immune system is made up of a network of cells, tissues, and organs that work together to protect the body. The cells involved are white blood cells, or leukocytes, which come in two basic types that combine to seek out and destroy disease-causing organisms or substances.

Leukocytes are produced or stored in many locations in the body, including the thymus, spleen, and bone marrow. For this reason, they're called the lymphoid organs. There are also clumps of lymphoid tissue throughout the body, primarily as lymph nodes, that house the leukocytes.

The leukocytes circulate through the body between the organs and nodes via lymphatic vessels and blood vessels. In this way, the immune system works in a coordinated manner to monitor the body for germs or substances that might cause problems.

The two basic types of leukocytes are:

1. **phagocytes**, cells that chew up invading organisms

2. **lymphocytes**, cells that allow the body to remember and recognize previous invaders and help the body destroy them

A number of different cells are considered phagocytes. The most common type is the **neutrophil**, which primarily fights bacteria. If doctors are worried about a bacterial infection, they might order a blood test to see if a patient has an increased number of neutrophils triggered by the infection. Other types of phagocytes have their own jobs to make sure that the body responds appropriately to a specific type of invader.

The two kinds of lymphocytes are **B lymphocytes** and **T lymphocytes**. Lymphocytes start out in the bone marrow and either stays there and mature into B cells, or they leave for the thymus gland, where they mature into T cells. B lymphocytes and T lymphocytes have separate functions: B lymphocytes are like the body's military intelligence system, seeking out their targets and sending defenses to lock onto them. T cells are like the soldiers, destroying the invaders that the intelligence system has identified.

HERE'S HOW IT WORKS

When antigens (foreign substances that invade the body) are detected several types of cells work together to recognize them and respond. These cells trigger the B lymphocytes to produce antibodies, specialized proteins that lock onto specific antigens.

Once produced, these antibodies continue to exist in a person's body, so that if the same antigen is presented to the immune system again, the antibodies are already there to do their job. So if someone gets sick with a certain disease, like chickenpox, that person typically doesn't get sick from it again.

This is also how immunizations prevent certain diseases. An immunization intro-

duces the body to an antigen in a way that doesn't make someone sick, but does allow the body to produce antibodies that will then protect the person from future attack by the germ or substance that produces that particular disease.

Although antibodies can recognize an antigen and lock onto it, they are not capable of destroying it without help. That's the job of the T cells, which are part of the system that destroys antigens that have been tagged by antibodies or cells that have been infected or somehow changed. (Some T cells are actually called "killer cells.") T cells also are involved in helping signal other cells (like phagocytes) to do their jobs.

Antibodies also can neutralize toxins (poisonous or damaging substances) produced by different organisms. Lastly, antibodies can activate a group of proteins called **complement** that are also part of the immune system. Complement assists in killing bacteria, viruses, or infected cells.

All of these specialized cells and parts of the immune system offer the body protection against disease. This protection is called immunity.

IMMUNITY

Humans have three types of immunity — innate, adaptive, and passive:

INNATE IMMUNITY

Everyone is born with innate (or natural) immunity, a type of general protection. Many of the germs that affect other species don't harm us. For example, the viruses that cause leukemia in cats or distemper in dogs don't affect humans. Innate immunity works both ways because some viruses that make humans ill — such as the virus that causes HIV/AIDS — don't make cats or dogs sick.

Innate immunity also includes the external barriers of the body, like the skin and mucous membranes (like those that line

the nose, throat, and gastrointestinal tract), which are the first line of defense in preventing diseases from entering the body. If this outer defensive wall is broken (as through a cut), the skin attempts to heal the break quickly and special immune cells on the skin attack invading germs.

ADAPTIVE IMMUNITY

The second kind of protection is adaptive (or active) immunity, which develops throughout our lives. Adaptive immunity involves the lymphocytes and develops as people are exposed to diseases or immunized against diseases through vaccination.

PASSIVE IMMUNITY

Passive immunity is "borrowed" from another source and it lasts for a short time. For example, antibodies in a mother's breast milk provide a baby with temporary immunity to diseases the mother has been exposed to. This can help protect the baby against infection during the early years of childhood.

Everyone's immune system is different. Some people never seem to get infections, whereas others seem to be sick all the time. As people get older, they usually become immune to more germs as the immune system comes into contact with more and more of them. That's why adults and teens tend to get fewer colds than kids — their bodies have learned to recognize and immediately attack many of the viruses that cause colds.

PROBLEMS OF THE IMMUNE SYSTEM

Disorders of the immune system fall into four main categories:

1. Immunodeficiency disorders (primary or acquired)
2. Autoimmune disorders (in which the body's own immune system attacks its own tissue as foreign matter)

3. Allergic disorders (in which the immune system overreacts in response to an antigen)

4. Cancers of the immune system

IMMUNODEFICIENCY DISORDERS

Immunodeficiency occurs when a part of the immune system is not present or is not working properly. Sometimes a person is born with an immunodeficiency (known as primary immunodeficiency), although symptoms of the disorder might not appear until later in life. Immunodeficiency also can be acquired through infection or produced by drugs (these are sometimes called secondary immunodeficiency).

Immunodeficiency can affect B lymphocytes, T lymphocytes, or phagocytes. Examples of primary immunodeficiency that can affect kids and teens are:

- **IgA deficiency** is the most common immunodeficiency disorder. IgA is an immunoglobulin that is found primarily in the saliva and other body fluids that help guard the entrances to the body. IgA deficiency is a disorder in which the body doesn't produce enough of the antibody IgA. People with IgA deficiency tend to have allergies or get more colds and other respiratory infections, but the condition is usually not severe.
- **Severe combined immunodeficiency (SCID)** is also known as the "bubble boy disease" after a Texas boy with SCID who lived in a germ-free plastic bubble. SCID is a serious immune system disorder that occurs because of a lack of both B and T lymphocytes, which makes it almost impossible to fight infections.
- **Di-George syndrome (thymic dysplasia)**, a birth defect in which kids are born without a thymus gland, is an example of a primary T-lymphocyte disease. The thymus gland is where T lymphocytes normally mature.

- **Chediak-Higashi syndrome and chronic granulomatous disease** both involve the inability of the neutrophils to function normally as phagocytes.

Acquired (or secondary) immunodeficiency usually develops after someone has a disease, although they can also be the result of malnutrition, burns, or other medical problems. Certain medicines also can cause problems with the functioning of the immune system.

Acquired (secondary) immunodeficiency includes:

- **HIV (human immunodeficiency virus) infection/AIDS (acquired immunodeficiency syndrome)** is a disease that slowly and steadily destroys the immune system. It is caused by HIV, a virus that wipes out certain types of lymphocytes called T-helper cells. Without T-helper cells, the immune system is unable to defend the body against normally harmless organisms, which can cause life-threatening infections in people who have AIDS. Newborns can get HIV infection from their mothers while in the uterus, during the birth process, or during breastfeeding. People can get HIV infection by having unprotected sexual intercourse with an infected person or from sharing contaminated needles for drugs, steroids, or tattoos.
- **Immunodeficiency caused by medications.** Some medicines suppress the immune system. One of the drawbacks of chemotherapy treatment for cancer, for example, is that it not only attacks cancer cells, but other fast-growing, healthy cells, including those found in the bone marrow and other parts of the immune system. In addition, people with autoimmune disorders or who have had organ transplants may need to take immunosuppressant medications, which also can reduce the immune

system's ability to fight infections and can cause secondary immunodeficiency.

AUTOIMMUNE DISORDERS

In autoimmune disorders, the immune system mistakenly attacks the body's healthy organs and tissues as though they were foreign invaders. Autoimmune diseases include:

- **Lupus**, a chronic disease marked by muscle and joint pain and inflammation (the abnormal immune response also may involve attacks on the kidneys and other organs)
- **Juvenile rheumatoid arthritis**, a disease in which the body's immune system acts as though certain body parts (such as the joints of the knee, hand, and foot) are foreign tissue and attacks them
- **Scleroderma**, a chronic autoimmune disease that can lead to inflammation and damage of the skin, joints, and internal organs
- **Ankylosing spondylitis**, a disease that involves inflammation of the spine and joints, causing stiffness and pain
- **Juvenile dermatomyositis**, a disorder marked by inflammation and damage of the skin and muscles

ALLERGIC DISORDERS

Allergic disorders occur when the immune system overreacts to exposure to antigens in the environment. The substances that provoke such attacks are called allergens. The immune response can cause symptoms such as swelling, watery eyes, and sneezing, and even a life-threatening reaction called anaphylaxis. Medications called antihistamines can relieve most symptoms.

Allergic disorders include:

- **Asthma**, a respiratory disorder that can cause breathing problems, frequently involves an allergic response by the lungs. If the lungs are oversensitive to certain allergens (like pollen, molds, animal dander, or dust mites), it can trigger breathing

tubes in the lungs to become narrowed and swollen, leading to reduced airflow and making it hard for a person to breathe.

- **Eczema** is an itchy rash also known as atopic dermatitis. Although atopic dermatitis is not necessarily caused by an allergic reaction, it more often occurs in kids and teens who have allergies, hay fever, or asthma or who have a family history of these conditions.

- **Allergies** of several types can occur in kids and teens. Environmental allergies (to dust mites, for example), seasonal allergies (such as hay fever), drug allergies (reactions to specific medications or drugs), food allergies (such as to nuts), and allergies to toxins (bee stings, for example) are the common conditions people usually refer to as allergies.

CANCERS OF THE IMMUNE SYSTEM

Cancer occurs when cells grow out of control. This also can happen with the cells of the immune system. Leukemia, which involves abnormal overgrowth of leukocytes, is the most common childhood cancer. Lymphoma involves the lymphoid tissues and is one of the more common childhood cancers. With current medications most cases of both types of cancer in kids and teens are curable.

Although immune system disorders usually can't be prevented, you can help your child's immune system stay stronger and fight illnesses by staying informed about your child's condition and working closely with your doctor.

TOOLS OF IMMUNE SYSTEM

ANTIBODIES

Antibodies are made by B cells, and each antibody recognizes a unique molecule. This specificity makes antibodies a powerful research, diagnostic, and therapeutic tool. Antibodies are used by researchers for a variety of reasons, but they are main-

ly used for labeling, in one form or another. For instance, scientists studying a protein, like a cytokine, need a way to isolate this protein from samples. With an antibody specific for the protein, they may easily separate the protein through binding assays.

Scientists also may want to visualize a protein on a cell to understand how it works. Antibodies coupled with other tags, like a fluorescent label, allow researchers to image a cell and see how the protein is expressed. This concept also is useful for separating cells. For example, scientists studying T cells need to isolate T cells from all others. By identifying proteins expressed only on T cells, an antibody specific for this protein allows researchers to pull T cells out of a sample.

Antibodies are used clinically and are the subject of numerous clinical trials. Conceptually, antibodies may be used to soak up or block harmful proteins in a disease setting. For instance, tumor necrosis factor (TNF) is an inflammatory cytokine that may worsen symptoms in several diseases, like Crohn's disease and rheumatoid arthritis. There are several Food and Drug Administration-approved drugs that target TNF, and these drugs are actually antibodies that block TNF and alleviate disease symptoms. Antibodies also are used in cancer therapy. Proteins that suppress immune cells may be targeted by antibodies, so that immune cells remain active to clear away cancer cells.

GENETIC ENGINEERING

Genetic engineering is another useful research tool. In model systems, scientists can study and manipulate genes, in animals ranging from fruit flies to mice, to understand what causes various diseases and how to treat them. Gene therapy has been studied in clinical trials to treat diseases. For instance, patients with genetic

immune disorders, like severe combined immunodeficiency (SCID), may receive a copy of the gene they are missing, to potentially restore healthy immune function. Gene therapy studies are ongoing, to understand long-term effectiveness and side effects.

EPIGENETICS

Epigenetic is the study of gene expression, particularly factors unrelated to changes in gene sequence that may turn it "on" or "off." Genes are DNA blueprints that code for RNA, which is translated into protein, like a cytokine. When an immune cell activates and needs to produce cytokines to signal other cells, the cytokine gene needs to be in an "on" state for this to occur. If the gene is in an "off" state, it cannot be stimulated, no matter what cues are present around the cell.

Scientists study how gene status is regulated through epigenetic processes that alter the on/off state, generally by regulating how tightly DNA is packed around proteins in the nucleus. Tightly wound DNA is inaccessible and "off," while loosely wound DNA is accessible and "on." Understanding epigenetic mechanisms may lead to new therapy, and drugs that target epigenetic processes are currently being studied in clinical trials. Instead of blocking a harmful protein with antibodies, a drug that targets epigenetic mechanisms may potentially prevent that harmful protein from being made in the first place.

IMMUNOTHERAPY

Immunotherapy is the manipulation of the immune system to solve a health problem. There are many clinical trials examining immunotherapy for cancer by directing the patient's own immune system to attack cancer cells. Researchers have examined the potential of innate and adaptive cells to fight cancer. Similar to how vaccines induce memory responses against a particu-

lar microbe, cancer immunotherapy is an attempt to induce effective immune responses against a specific cancer.

Immunotherapy may be used to treat food allergy, another focus of clinical trials. Oral immunotherapy is feeding small, increasing amounts of a food allergen—milk, egg, or peanut—to an allergic person over time. Studies show that this can decrease sensitivity to an allergen, but it must be done under the supervision of a physician. New clinical trials are testing other routes, like a skin patch, to deliver immunotherapy for allergies.

METABOLISM

In recent years, scientists have focused on the role of the immune system in regulating metabolism. The activity of immune cells, like macrophages, may influence a variety of diseases including diabetes, obesity, and atherosclerosis. For example, signals secreted by macrophages may affect the activity and size of adipocytes, which are the cells that store fat as energy. More research must be done to understand how the immune system and inflammatory responses contribute to metabolic disorders.

MICROBIOME

The human microbiome is the trillions of relatively harmless microorganisms (bacteria, fungi, and viruses) that reside on and in the human body. These resident microbes also are referred to as commensals. Scientists are beginning to understand the essential role of the microbiome in human health. Without commensals, the immune system fails to develop properly.

Studies in animal models have shown that commensals play an important role in altering the activity of immune cells, which may lead to different outcomes in disease settings. More work is needed however, to understand how different commensals skew immune responses and how these

changes may affect various human diseases.

Inside your body there is an amazing protection mechanism called the **immune system**. It is designed to defend you against millions of bacteria, microbes, viruses, toxins and parasites that would love to invade your body. To understand the power of the immune system, all that you have to do is look at what happens to anything once it dies. That sounds gross, but it does show you something very important about your immune system.

COMPARISON BETWEEN AYURVEDIC & MODERN CONCEPT OF VYADHIKSHAMATVA (IMMUNITY)

General Functions: When the *Sleshma (Kapha)* is in normal state, it is called '*Bala*' as well as '*Ojas*'; but when it attains an abnormal state, it is then called '*Mala*' (Waste) and '*Papma*' (Disease)⁴. From the above statement it is clear that '*Bala*', '*Ojas*' and '*Kapha*' are identical entities, at least when '*Kapha*' is in normal state. When '*Kapha*' is in its normal state, it provides compactness, stability, virility, immunity and resistance⁵.

Importance: The most essential fraction of all bodily tissues is called '*Ojas*'. Even though it resides in the heart, it circulates all over the body to maintain the normal healthy status of the body. It is '*Snigdha*' (unctuous) and '*Somatmaka*' (mild and cool) in nature. Though predominantly white in colour, it has got some yellowish and reddish tinge. If this is lost, life also is lost and if this remains intact, life continues⁶. '*Ojas*' has been described to exist in different forms in the body. The fraction of '*Ojas*', that circulates all over the body through the cardiovascular system moves along with '*Rasa Dhatu*'. This is called '*Rastmaka Ojas*'. Another form of '*Ojas*', is present in all tissues and is called '*Dhatutejorupi*'. This indicates the im-

mune mechanisms present at tissue-level. A third form of 'Ojas' is 'Śukra mala rupi'. This enters the foetus to provide protection to the foetus during intrauterine life. Another form of 'Ojas' is described as 'Jivasonita rupi'⁷

Classification of Immunity: Immunity is classified in to three types: Innate (*Sahaja*), Acquired (*Kalaja*) and Artificial (*Yukti krata*)⁸

Factors Influencing Immunity: The following factors influence the promotion of immunity: place of birth, time of birth, favourable weather, excellence of genetic qualities, excellence of properties of food being consumed, excellence of physique, good ability to tolerate various factors, excellence of mental status, favourable factors related to nature, youthfulness, exercise and cheerful attitude⁹

Antigen-Exposure and Host Response: Substances, which have opposite qualities to those of bodily tissues, (when gain entry into the body) encounter the opposition by the bodily tissues¹⁰ Etiological factors, 'Doshas', and 'Dhatus' determine the bodily immunity or susceptibility for the disease. When all the three factors do not support each other or when they are weak due to passage of time, either the disease does not manifest at all or it takes some time in manifestation or the disease is very mild or all its signs and symptoms are not fully manifested. If the situation is opposite to that is mentioned above, the corresponding results also will be otherwise¹¹ this means that susceptibility of a particular tissue to any antigenic attack plays an important role in the manifestation or non manifestation of a disease. At the same time, the potency of the causative agent also is important. Virulent strains of infectious agents produce severe symptoms. Along with these two factors, homeostatic mechanisms also are important. If immune

system is normally functioning, injurious agents will be tackled effectively.

Concept of Active and Passive Immunity: Treatment of the diseases manifested due to the presence of opposing agents in the body, should be planned either by administering the substances having opposite qualities to them or by prior sensitization of the body by administering the similar substances as those of offending agent¹² This forms the basis of active and passive immunity. Prior sensitization of the body with specific antigen makes one develop active immunity. On the other hand, antibodies can be procured out of an animal in which active immunity has been already produced, and can be administered to the individual suffering from the same disease. Other functions of immune system are described under the functions of 'Kapha'.

Concept of 'Kapha': Functions of immune system and all such other protective mechanisms in the body have been grouped under 'Kapha' in *Ayurveda*. 'Ojas' is also closely related with 'Kapha'. '**Avalambaka Kapha**': Situated in the thorax, '*Avalambaka Kapha*' protects the '*Trika*' and other vital structures like heart, through what is called '*Ambukarma*'. Other anatomical sites where other types of 'Kapha' are situated also are dependent on this¹³ '*Trika*' region indicates the meeting point of three bones. As this is present in thorax, it must be indicating the junction between the sternum and clavicles, behind which, the thymus gland is situated. '*Ambu*' means liquid or water. So, '*Ambukarma*' must be referring to lymphatic drainage.

'Kledaka Kapha': This is present in stomach and it moistens the ingested food¹⁴ Mucous secreted in stomach plays important role in offering protection to mucous membrane of the stomach along with providing liquid medium for digestive proc-

ess. Also, Gut Associated Lymphoid Tissue helps in providing protection by preventing the entry of any microbes through gut. HCl secreted in stomach also provides innate immunity to some extent.

All these mechanisms can be explained through 'Kledaka Kapha'.

'Bodhaka Kapha': This is said to be present in oral cavity and helps in the perception of taste. Salivary juice secreted in the oral cavity not only helps in the process of taste perception but also performs some protective functions. Root of the tongue is the site of 'Bodhaka Kapha'. Tonsils are the important lymphoid tissue-containing structures present there.

'Tarpaka Kapha': This sub-type of 'Kapha' is present inside the head and is responsible for the protection and nourishment of sense organs. Microglia and other similar Glial cells of brain tissue are some of the important entities, which may represent 'Tarpaka Kapha'.

'Sleshaka Kapha': This Kapha is present in the bony joints and is responsible for lubrication and easy movements. Movements are most obvious in synovial variety of joints and synovial fluid reduces the friction between two articular bony surfaces. But 'Sleshaka Kapha' is not only synovial fluid. For several reasons known and unknown, these joints are the sites of prominent inflammation in most of the systemic autoimmune diseases like Systemic Sclerosis, Systemic Lupus Erythematosus and Rheumatoid arthritis. Such involvement must be, therefore, ascribed to the problems of 'Sleshaka Kapha'.

IMMUNE-MODULATORS

Immunity should be measured as well as maintained by food, nutritious diet as well as medicines. So the various immune-modulators were introduced thousands of years ago. Those were known as *Rasayanas* and these were used to remain free of

disease, increase the *Ojha* and to maintain the age.

For eg: *Amla - Emblica officinalis*, *Guduchi - Tinospora cordifolia*, *Haritaki - Terminalia chebula*.

There are used as *Rasayanas* medicines in weakness, tuberculosis etc. *Chyavanaprasha*, *Amritarishta*, *Ashwagandha ghrita*, *Abhyarishta* etc are few of the various formulations of these *rasayana* drugs. *Chavanprash* is advised to be taken daily by everyone. Other than these drugs like *Brahmi (Centella asiatica)*, *Kushmanda (Benincasa hispida)*, *Shankhpushpi (Convolvulus plurcaulis)* etc. drugs act on the CNS. To their action as to increase *Ojha*. Power and to counter weakness and emaciation and also increase memory and instilled. The drugs which act on CNS that are specially related to immunity because CNS and immunity affect each other. That is why in anger, horror stressful conditions immunity decreases and people. Suffering from these mentioned disorders also suffers from various other systemic diseases as well. So these drugs acting on CNS are used to enhance the immunity for eg. *Amla (Emblica officinalis)*, *Guduchi (Tinospora cordifolia)* and *Haritaki (Terminalia chebula)* etc. The ideal treatment is that which carries our disease but without creating any other disease. But modern allopathic drugs carry various side effects for this reason while they control. Various major diseases but only to produce various minor diseases as well. This is known as the side effects of these drugs. By 2020, various antibiotics drug will not be able to perform their action because our body will get immune to them.

Ayurveda says pure treatment is that which cures the disease without producing any other disease and which also provides physical, mental as well as social health. This definition which was adopted

by WHO in 1948, was thousands of years ago stated by *Acharya Sushruta* as health is a state of complete physical, mental and social spiritual well being and not merely our absence of disease or infirmity. So, health is multidimensional having four specific dimensions the physical, mental, social and spiritual¹⁵.

Ayurveda according to the definition is the *veda of Ayurveda*. ie. Knowledge of life which increase the span of age. Immunity was described by *Acharya Charaka* in the form of *Vyadhikshamatva*(Immunity).

BALANCED DIET

For the diet to be a balanced one, it should be taken firstly in proper balanced quantity. *Acharya Charaka* says that one part of strength should be for Solid food, one part for liquid and the remaining portion should be left for various digestive juices, enzymes for the digestion to be properly performed. The diet even in its digested form should contain all the healthy and nutritive particles in it otherwise it is useless. So *panchabhautika, shadharasaja* and diet of four types or proteins, carbons and lipids all minerals and vitamins should be consumed i.e. diet containing all the *rasa* gives strength to the body.

VIHARA: Daily excessive, sleep and *sadvritta* should be practised according to time, season and age.

PURE AIR: We get pure air in this form of oxygen. Oxygen is necessary for the proper functioning of all the body tissues and organs and organs systems.

CONCLUSION

When something dies, its immune system (along with everything else) shuts down. In a matter of hours, the body is invaded by all sorts of bacteria, microbes, parasites. None of these things are able to get in when your immune system is working, but the moment your immune system

stops the door is wide open. Once you die it only takes a few weeks for these organisms to completely dismantle your body and carry it away, until all that's left is a skeleton. Obviously your immune system is doing something amazing to keep all of that dismantling from happening when you are alive.

The immune system is complex, intricate and interesting and there are at least two good reasons for you to know more about it. First, it is just plain fascinating to understand where things like fevers, hives, inflammation, etc., come from when they happen inside your own body. You also hear a lot about the immune system in the news as new parts of it are understood and new drugs come on the market -- knowing about the immune system makes these news stories understandable. In this article, we will take a look at how your immune system works so that you can understand what it is doing for you each day, as well as what it is not.

The immune system, which is made up of special cells, proteins, tissues, and organs, defends people against germs and microorganisms every day. In most cases, the immune system does a great job of keeping people healthy and preventing infections. But sometimes problems with the immune system can lead to illness and infection.

So we can conclude that the immunity described by the modern medicine is nothing but the *Vyadhikshamatva*(Immunity). of *Ayurveda*, which was described thousands of years ago. So we must remain cautions to protect the *Vyadhikshamatva*(Immunity) and for this should follow the proper diet and code conduct of *Ayurveda*.

REFERENCES

1. Pandit Kashinath Pandey Charak Samhita Sthana 17/73-74, Chaukhamba Bharti Academy Varanasi India

- (2013).
2. Pandit Kashinath Pandey Charak Samhita Sutra Sthana30/26, Chaukhamba Bharti Academy Varanasi India (2013).
3. Pandit Kashinath Pandey Charak Samhita Sutra Sthana5, Chaukhamba Bharti Academy Varanasi India (2013).
4. Pandit Kashinath Pandey Charak Samhita Sutra Sthana27/117, Chaukhamba Bharti Academy Varanasi India (2013).
5. Pandit Kashinath Pandey Charak Samhita Sutra Sthana18/51, Chaukhamba Bharti Academy Varanasi India (2013)
6. Kaviraj Atridev Gupt, Ashtanga Hradya Sutra Sthana11/37-38 Chaukhamba Sanskrit Sansthan Varanasi India (2005).
7. Kaviraj Atridev Gupt, Ashtanga Hradya Sutra Sthana11/38-39 Chaukhamba Sanskrit Sansthan Varanasi India (2005).
8. Pandit Kashinath Pandey Charak Samhita Sutra Sthana11/36, Chaukhamba Bharti Academy Varanasi India (2013).
9. Pandit Kashinath Pandey Charak Samhita SHarir Sthana6/13, Chaukhamba Bharti Academy Varanasi India (2013).
10. Pandit Kashinath Pandey Charak Samhita Sutra Sthana26/91, Chaukhamba Bharti Academy Varanasi India (2013).
11. Pandit Kashinath Pandey Charak Samhita Nidana Sthana4/4, Chaukhamba Bharti Academy Varanasi India (2013).
12. Pandit Kashinath Pandey Charak Samhita Sutra Sthana26/104, Chaukhamba Bharti Academy Varanasi India (2013)
13. Kaviraj Atridev Gupt, Ashtanga Hradya Sutra Sthana12/15-16 Chaukhamba Sanskrit Sansthan Varanasi India (2005) .
14. Kaviraj Atridev Gupt, Ashtanga Hradya Sutra Sthana12/16-17 Chaukhamba Sanskrit Sansthan Varanasi India (2005).
15. Dr. Ambikadatta Shastri Sushruta Samhita Sutra Sthana15/48, Chaukhamba Sanskrit Sansthan Varanasi India (2013).

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