

CHAPTER 2

LITERARY REVIEW

(Review of traditional literature)

This chapter reviews the traditional texts which explain about the immune system and its management, with special reference to conditions similar to HIV/AIDS.

2.1 AIM

To explore in the traditional literature like the Vedas, yurveda, Upanishads and other Vedic texts, yoga and other related health/spiritual texts, the mention/explanation of disease/conditions similar to HIV/AIDS and the approach/attitude/way of life towards combating/managing the same.

2.2 OBJECTIVES

-) To explore the explanations on the immune system as per traditional literature
-) To explore the explanations on symptoms/situations equivalent to HIV/AIDS mentioned in traditional literature
-) To understand the factors promoting HIV/AIDS.
-) To explore direct/indirect strategies to address the challenge.
-) To provide suitable recommendations based on the understanding of the traditional literature for an integrated approach to combat HIV/AIDS and discuss the same.

2.3 METHODOLOGY OF THE REVIEW

The chapter explores traditional texts on medical sciences which are largely the Vedic, yurvedic and yogic texts which explain about the immune system referred to as *vy dik amatva*, *bala*, *vik r vigh t bh v*, etc., the factors affecting them and strategies for enhancing the system. In particular, the emphasis is on conditions similar to HIV/AIDS and

the challenge it poses. However in order to address the challenge, the approach does not consider the herbal or metal-based yurvedic preparations, but an integrated yogic perspective based on the enhancement of prakriti, through the practice of yoga as suggested by Maharishi Patanjali and other yogic texts. Further, the exploration addresses the issue both in preventive and combat modes.

2.4 INCLUSION CRITERIA

-) Texts that explain about immune system
-) Texts that mention of disease/disorder/problem similar to that of HIV/AIDS.
-) Texts explaining approach/attitude/way of life towards managing issues similar to that of HIV/AIDS.
-) Modern research-based literature explaining traditional literature.

2.5 EXCLUSION CRITERIA

-) Explanations on herbal or metal-based yurvedic preparations concerning cure or prevention of HIV/AIDS.
-) Recommendations on the specific food items to enhance the immune system.

2.6 INTRODUCTION

In general, health is defined as a state of complete physical, mental and spiritual well-being. Su ruta Samhita (sutra 15-41) explains the qualities of a healthy person as follows:

समदोषः समग्निश्च समधातुमलक्रियः

प्रसन्नात्मेन्द्रियमनाः स्वस्थ इत्यभिधीयते

*samado a sam gni ca samadh tumalakriya
prasann tmendriyaman svastha ityabhidh yate*

This means that a person can be said to be healthy if he (or she)

-) has balanced *trido as* (*v tapitta* and *kafa* the three limbs of the tripod of health according to *yurveda*)
-) has balanced metabolism and digestion
-) has balanced *sapta dh tus* (explained later in this chapter)
-) has proper elimination of the wastes of the body viz., urine, feces and sweat (referred to as *tri-mal s*)
-) is happy and possesses a good healthy relationship between his/her mind and senses as well as between mind and soul.

Caraka samhita (sutra 21, 18-19) lists 10 qualities of a healthy person as follows:

सममांसप्रमाणस्तु समसंहननो नरः।
 दृढेन्द्रियो विकाराणां न बलेनाभिभूयते॥
 क्षुत्पिपासातपसहः शीतव्यायामसंसहः।
 समपक्ता समजरः सममांसचयो मतः॥

samam sapram astu samasa hanano nara /
d hendriyo vik r na balen bhibh yate //
k utpip s tapasaha tavy y masa saha /
samapakt samajara samam sacayo mata //

This means, a person who has the following 10 qualities can be called as a healthy person: balanced muscles with well-balanced constitution of the body, has a relaxed and untired body, who has enough immunity to defeat disease-causing agents, who can tolerate hunger, thirst, sunlight, who can exercise the body, who has good digestion system, who is having correct rate of ageing, and the one who is having well balanced activities.

According to Kashyapa Samhita (*khilasthaana*, C5) health is defined as follows:

अन्नाभिलाषो भुक्तस्य परिपाकः सुखेन च।
 सृष्टविण्मृत्रवातत्वं शरीरस्य च लाघवम्॥

सुप्रसन्नेन्द्रियत्वं च सुखस्वप्न प्रबोधनम्।
बलवणायुषां लाभः सौमनस्यं समाग्नित्वा॥
विद्यात् आरोग्यलिङ्गानि विपरीते विषययम्।

*ann bhil o bhuktasya parip ka sukhena ca /
s avi m trav tatva ar rasya ca l ghavam //
suprasannendriyatva ca sukhasvapna prabodhanam /
balavar yu l bha saumanasya sam gnit //
vidy t rogyali g ni vipar te viparyayam /*

A person who has timely hunger, proper digestion, proper excretion, lightness and activeness of the body, soothing body with pleasantness of mind, can have easy sleep, who happily can wake up before sunrise, who has intact the strength vigor and vitality of the body, balanced metabolism and digestion is a healthy person.

2.7 IMMUNE SYSTEM

Traditional literature has ample explanations of the immune system. The Caraka sa hit and the Su ruta sa hit in their s trasthan explain in detail about the immune system. The concepts of *ojas*, *vy di k amatva*, *bala*, *vik r vigh t bh v* correlates to immunity. Of these, the presence of *ojasis* most commonly attributed to the strength of the immune system. Further, *ojasis* the essence of *saptadh tus* the seven body tissues/elements; and the symptoms of depletion of *ojas* referred to as *ojas-k aya* are very closely related to the conditions in HIV/AIDS. Hence the following sections explain in more detail about the *saptadh tus*, *ojas* and *ojas-k aya* and their importance with reference to HIV/AIDS and some explanations to combat the same.

2.8 SAPTA DH TUS

Sapta dh tus are the seven body tissues/elements viz., (1) *rasa* (body fluids), (2) *rakta* (blood), (3) *m msa* (muscles), (4) *medas* (fats and lipids), (5) *asti* (bones), (6) *majja* (bone marrow) and (7) *ukra* (semen). *Saptadh tus* and their formation are explained in several

traditional texts. Some typical texts are mentioned here. The basic raw material for the *saptadh tus* is the food. The *sapta dh tus* are produced in order and each of the *sapta-dh tu* becomes the source for the next *dh tu*, starting from *rasa* to end with *ukra*; i.e. from *rasa* is produced *rakta*, from *rakta* is produced *m msa* and so on, to finally produce *ukra*, the semen (Murthy, 2015a). This aspect is explained through the following verse of a *ga hrudaya* (a *ga hrudaya*, ar rsth na 3-6):

रसाद्रक्तं ततोमांसं मांसाद्येदा

स्ततोस्थिच अस्तितोमज्जाततः शुभ्रं ॥

ras drakta tato m sa m ms dmeeda /

statosthica astitomajj tata ukra //

Bh vaprak a (p rva, 200-203) explains the production of *ukra* as follows:

यथा पयसि सपिस्तु गूढश्चे रसो यथा

एवं हि सकले काये शुभ्रं तिष्ठति देहिनाम्

yath payasi sarpistu g ha ce raso yath

eva hi sakale k ye ukra ti hati dehin m

This means as butter is churned out of curds, churning of body results in the production of *ukra*. Thus production of *ukra* requires the representation of the entire individual. As such *ukra* is the representation of the individual.

2.9 FORMATION OF OJAS

The last of the *sapta dh tus*, the semen is the highest state of matter of all *sapta dh tus*, i.e., a matter with the highest quantum of energy which is the key material for the production of *ojas*. Caraka sa hit (S tra 17:75i) explains about the production of *ojas* as follows:

यथा पयसि सपिस्तु गूढश्चे रसो यथा

एवं हि सकले काये शुभ्रं तिष्ठति देहिनाम्

yath payasi sarpistu g ha ce raso yath

eva hi sakale k ye ukra ti hati dehin m

This means, as a bee collects the nectar from a number of flowers to make the honey, the *ojas* is produced by collecting the essence of the body, the *sapta dh tus*. Thus the *saptadh tus* contribute to the making of *ojas*. The resulting higher energy state, the *ojas* thus produced permeates all through the body.

2.10 FUNCTIONS OF OJAS:

Ojas, the higher state of *sapta dh tus* principally is responsible for immunity in the body. It is grossly responsible for strength, vigor and vitality. It is also understood that the presence of *ojas* is important in performing both the internal and external functions of the body without hindrance, throughout the lifetime. *Ojas* is the energy of life and provides physical, mental and spiritual vitality. It is considered to be vital in the defense mechanism of the body(Sharma and Sharma, 2016) and a biological determinant of bio-strength and immune strength in an individual(Singh, 2015). The physical, mental and spiritual strength of an individual totally depends on *ojas*(Shilwant, 2016). Further,*ojas* is principally responsible for the immunity, referred to as *vy dhikshamatva* and its effect is referred to as *ojabala* or *bala*. *Ojas* determines the capacity of an individual to combat diseases, referred to as *Vy dhibala viroditvam* and also resists virulence of a disease referred to as *vy dhi utp daka pratibandhakatvam*(Gupta *et al.*, 2010).

The *ojas* through its manifestation in different forms performs several functions as follows(Shilwant, 2016):

-) ***Bala***:It is responsible for sustaining immunity in the body. It also retards the aging process.
-) ***Sthira upachita mamsata***:Induces stability and integrity in the body

-) *Sarva chesta swapratighata*: Helps in performing physical, psychological and spiritual activities in the body without hindrances.
-) *Swara varna prasado*: Helps in the development of speech orientation and complexion.
-) *Jeevana*: Responsible for sustaining the stability of all the activities of the body.
-) *Preenana*: Important for proper growth of the body.

V gba c rya in his a ga h daya 's s trasth na (37-39) states as follows:

ओजश्तेजोधातूनांशुक्रांतानांपरंस्मृतं
हृदयस्थमपिव्यापिदेहस्थितिनिबंदनम्॥
र उ द्ध ह्स् ऐ श्रेप
= से ह
निश्पद्यतेयतोभावविविधा श्र
उत्साहप्रतिभाद्यैलावण्यसुकुमारताः॥

oja tejodh t n ukr t n para smruta /
hrdayasthamapi vy pi dehasthiti niba danam //
yasyapr uddh dehsya tu i pu i phloday /
yann oniy ton oyasmin ti hti j vanam //
ni padya teyatobh v vividh dehasa ray /
uts hapratibh dyairyal va ya sukum rat //

This means, *ojas* although resides in the heart, is pervading throughout the body. *Ojas* is important for the strength of the body. It is because of the increase of *ojas* that the body gets vigor, stamina and vitality. Eagerness, courage, fairness, capabilities do not occur without *ojas*. Thus *ojas* is the key to immunity in the body.

A similar term is *bala*. While *ojas* is *dravya* (matter), *bala* is its *kriya* (action). This means while *ojas* is the cause, *bala* is its effect. Thus only if *ojas* is intact, the body has *bala*.

Su ruta sa hit (*S tra* 15:24,25) says:

तत्र रसादीनां शुक्रान्तानां धातूनां यत्परं तेजस्तत् खल्वजेस्तदेव बलमुच्यते

त्र रे प्र ते

tatra ras d n ukr nt n dh t n yatpara tejastat khalv jestadeva balamucyate
tatra balena sthiropacitam sat pratipattirbhavati

This means *bala* enables the man to perform all functions. *Manas*, *buddhi* (intellect) and body perform their functions with the help of *ojas* and *bala*. Low level of *ojas* and *bala* not only decays the body, but also the mental and physical activities are affected adversely (Murthy, 2015a).

Bala is also explained as the capacity to tolerate diseases (*vy dhi-kshamatva*), capacity to oppose the strength of diseases (*vy dhibala-virodhitva*) and capacity of preventing the genesis of diseases (*vyadi utp da pratibandhakatva*) (Caraka Sutra 28/7-Chakrapani's commentary).

The effect of *ojas*, the *ojabala*, is classified into three categories: *sahaja bala* (transferred generation to generation), *k laja bala* (depending on environment) and *andyuktikrut bala* (induced or gained by nutrition, exercise and healthy workouts) (Tripathi Bramhanand, 2004; Shilwant, 2016). This is explained in the Caraka Samhita (Caraka s tra 11:36) as follows:

त्रे - के

trividha balamiti - sahaja k laja yuktik ta ca //

The three categories of *bala* are briefly explained below:

2.10.1 Sahaja bala

It is the innate natural immunity that is transferred generation to generation; could be safely explained to be induced or developed in the body well before the formation of zygote through the sperm and ovum and in the morula stage (Shilwant, 2016). Hence, enhanced *sahaja*

balacould also help in preventing mother-to-child transmission of HIV. Incidentally, it is also reported that yoga helps in preventing mother-to-child transmission (Bhargav *et al.*, 2012).

2.10.2 *K laja bala*

K laja bala refers to environment-dependent immunity and condition based temporally acquired immunity. It is developed due to the environment we live in or the internal environment and other factors like age; wherein one has different immunity pattern in various stages of life. With reference to the external environment, it means pollution, water, the food we consume, etc. Short span internal environment is the resultant of the external environment. It would also refer to the state of mind.

2.10.3 *Yuktikrut bala*

Yuktikrut bala is the cumulatively acquired immunity developed over time in the body. It is the immunity acquired over time. It is developed by the practices of diet, work/exercise and sleep/rest.

2.11 DEPLETION OF OJAS AND ITS IMPACT

If *ojas* is affected it leads to a condition called *ojasdushti*, leading to pathogenesis, which is further divided into three stages viz., *ojas-vistramsa*, *ojas-vyapat* and *ojas-k aya*.

Ojasvistramsa results in fatigue and weakness in the body and results in an environment in the body where disease can easily get lodged in the body.

Ojas vyapat results in fluctuation of immunity leading to autoimmune disorders, hypersensitivity and allergic disorders.

Ojas-k aya which refers largely to the loss, absence or deficiency of *ojas*, causes wasting, decay, degeneration, delirium, apoptosis and thus the destruction of the body (Sharma, 2004; Murthy, 2015b; Ranade and Acharya, 2015; Shilwant, 2016). Figure 2.1 shows an overview

of the concepts presented from food to *ojas* and its states. The condition of the body with *ojas-k aya* is similar to that of an HIV+/AIDS. Hence this aspect is dealt with in more detail.

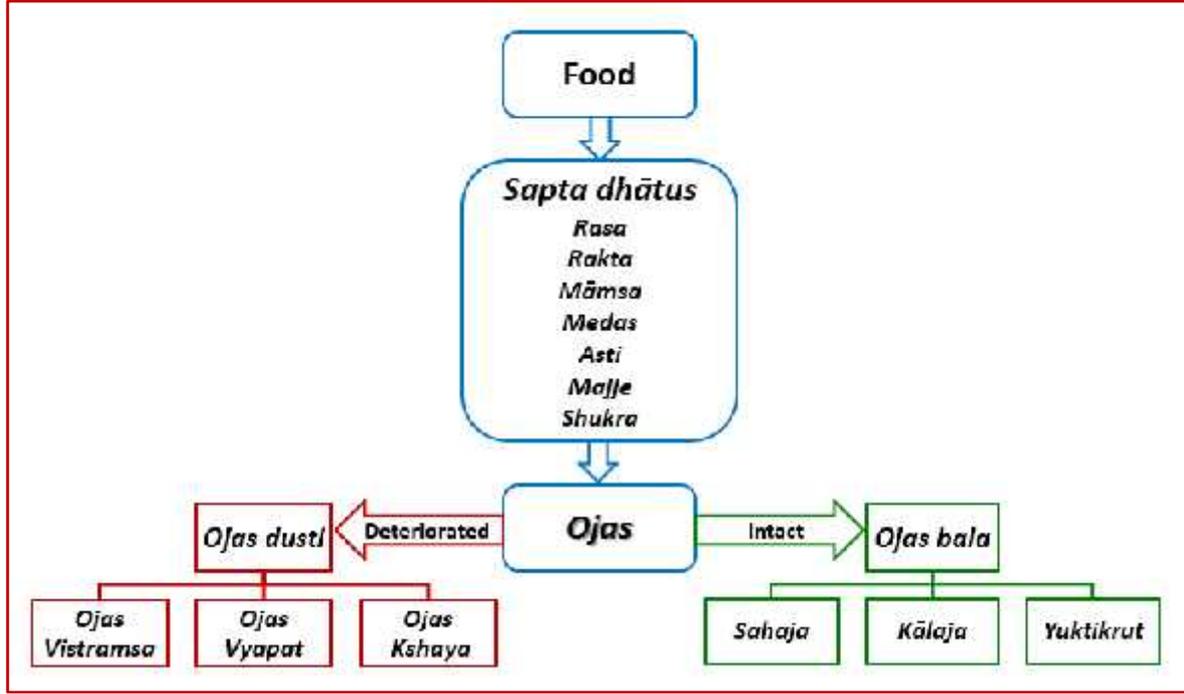


Figure 2.1: Ojas: Production, depletion and enhancement

Ojas-k aya is detrimental to the body. Caraka sa hit (Caraka s tra 17-37,38) describes the effect of depletion of *ojas* as follows:

ओजस्तु तेजो धातूनां शुक्रान्तानां परं स्मृतं
 हृदयस्तमपिव्यापिदेहस्थितिनिबन्धनम्
 स्निग्धंसोमात्मकं शुद्धमीफलोहितपीतकम्
 यन्नाशेनियतं नाशोयस्मिंस्तित्तिष्ठति

*h udayastamapi vy pi dehashthinibandhanam
 snigdha som tmaka uddham phallohitap takam
 yann e niyata n o yasmi sti hati ti hati
 ojastu tejo dh t n ukr nt n para sm ta*

This, in short, means if *ojas* is destroyed, the human being also perishes.

Su ruta Samhita (15-22) also explains as follows (Murthy, 2015b):

देहः सावयवस्तेनव्याप्तो भवति देहिनः।

तदभावश्चशीयन्तेशरीराणिशरीरिणाम्॥

*deha s vayavastena vy pto bhavati dehina /
tadabh va ca ryante ar r i ar ri m //*

This means *ojas* permeates all through the body. Deficiency of *ojas* causes wasting, decay, degeneration and destruction of the body.

V gba c rya also explains the impact of *ojas-k aya* in his a ga h daya 's s trasth na (40) as follows:

दुश्चायो दुमना रूक्षो भवेत्क्षामश्च तत्क्षये॥

दुश्चायो दुमना रूक्षो भवेत्क्षामश्च तत्क्षये॥

*bibheti durbalo bh k a dhy yati vyathitindriya /
du cch ayo durman r k o bhavetk ma ca tatk ye //*

This means that on the decrease of *ojas*, a person becomes frightful, debilitated, more concerned, feels ill working of sense organs. Also, the person grows bad complexion, bad mentality, induces dryness of body and gets emaciated.

HIV/AIDS does not have unique symptoms but, because of the weakened immune system, the victim will be prone to several opportunistic infections. A similar condition described in the *ayurvedic* texts, which is said to be a result of *ojas k aya*. There are several references to this in *ayurvedic* texts. The typical symptoms along with references to modern HIV/AIDS and that to *ojas k aya* are listed in Table 2.1. The same is explained here.

HIV infection which affects several systems, chiefly the immune system is correlated to *ojas k aya* (Gupta *et al.*, 2010). Depletion of *ojas* shows up through symptoms such as fear complex, constant weakness, worry, the affliction of sense organs with pain, loss of complexion, cheerlessness, roughness and emaciation (Sharma and Dash, 2017a) (Sharma,

2014). Further, it is explained that if the *ojas* is destroyed, human beings will also perish (Sharma and Dash, 2017b). Depletion of *ojas* also leads to diabetes (*ojomeha/madhumeha*) (Murphy and McKay, 2013; Shankalala *et al.*, 2017), anemia (*p ndu roga*) (Pande *et al.*, 2011; Makubi *et al.*, 2012; Kavitha *et al.*, 2014; Pennap and Abubakar, 2015), tuberculosis (*Rajayakshma*) (Aaron *et al.*, 2004), loss of immunity (Byadgi, 2011), weight loss and death (Gupta *et al.*, 2010). Similar conditions are also seen with reference to HIV/AIDS as explained in the modern literature. It is also worth noting that *ojas* is further subdivided into *paraojas* and *aparaojas*. While *para* is the subtler *ojas*, *apara* is the grosser *ojas*. In general, *ojas-k aya* means the deficiency of *aparaojas* which leads to immune deficiency (Audet, Ngoben and Wagner, 2017). *Paraojas* depletion being a more serious issue could lead to faster death by disorders in cellular apoptosis (Ranade and Acharya, 2015). Perhaps this would be a condition that could be called AIDS.

Table 2.1: References to typical symptoms for HIV/AIDS and *ojas k aya*

Symptom/condition	References to HIV/AIDS	References to <i>Ojas-k aya</i>
<i>Madhumeha/ Diabetes</i>	(Murphy and McKay, 2013; Shankalala <i>et al.</i> , 2017)	(Kalra <i>et al.</i> , 2011; Deva, 2012; Swati and Agarwal, 2015)
<i>Ojomeha/ Diabetes</i>	(Murphy and McKay, 2013; Shankalala <i>et al.</i> , 2017)	(Shailendra and Byadgi, 2011; Deva, 2012)
<i>P ndu roga / anemia</i>	(Pande <i>et al.</i> , 2011; Makubi <i>et al.</i> , 2012; Kavitha <i>et al.</i> , 2014; Pennap and Abubakar, 2015)	(Deva, 2012; Byadgi, 2013)
<i>Rajayakshma/ Tuberculosis</i>	(Aaron <i>et al.</i> , 2004)	(Debnath <i>et al.</i> , 2012)
Reduced immunity and inability to fight diseases	As the name itself indicates there is loss of immunity	(Byadgi, 2011)
Weight loss	(Hileman, Eckard and McComsey, 2015; Joore <i>et al.</i> , 2015)	(Gupta <i>et al.</i> , 2010)
<i>Marana / Death</i>	(Smith <i>et al.</i> , 2010; Sharma, 2014; Ranade and Acharya, 2015)	(Deva, 2012; Ranade and Acharya, 2015; Saini, Pal and Byadgi, 2016)

Production and protection of *ojas* is important in saving a person with HIV/AIDS. The following section discusses the same.

2.12 ENHANCEMENT OF OJAS

There are two important factors leading to *ojas k aya*.

- (1) Deceiving the body of the basic raw material required for the formation of *sapta dh tu* from which *ojas* is produced, which is food; or in other words malnutrition, and
- (2) By rejection of the *ukra* due to indulgence in unregulated, irresponsible sexual practices.

Addressing both the routes are equally important in combating HIV/AIDS, both with respect to preventing as well as combating HIV/AIDS. The two routes for enhancement of *ojas* are explained in the following sections.

2.12.1 Role of food in production of *ojas*

The basic raw material for *ojas* is the food. If the body is deceived of the essential nutrients required, the *sapta dh tu* production gets affected and thus the production of *ojas*. Hence it is essential to maintain proper nutrition in the body by providing sufficient food or supplements. Further, conducive food is an integral part of yoga. Every being when born weighs on an average of around 3 kg and could go up to 80-90-100 kg or even more. The main ingredient which builds an individual is the food. Food is an inevitable part of life. Traditional literature emphasizes on the quality of food for a yogic practitioner (and for others as well).

Gheranda Samhita which explains the fundamental aspects of yoga doubts about the success of a yogic practitioner if the right type of food is not consumed. Through the following verse (Gheranda samhita 5/16):

स
स र द्यं

*mit h ram vin yastu yog ra bham tu karet
narogo bhavetasya kindcidyogo na sidhyati*

r madBhagavadg t (6-17) also proclaims that the yoga which destroys sorrows of a person can only work for the one who follows a proper diet and resides in a proper place and has balanced walk, activities and sleep.

युक्ताहार विहारस्य युक्तचेष्टस्य कर्मसु
क्त स्वप्नावभोधस्य योगो भवति दुःखहा

*yukt h ra vih rasya yuktace asya karmasu
yukta svapn vabhodhasya yogo bhavati du khah*

Bhagavadg t also classifies food into three types, the *r jasik*, the *masik* and *s tvik* foods, which are selected by an individual based on their qualities (r mad bhagavadg t 17-2).

त्रे शब्द स
ने त श्रु

*trividh bhavati raddh dehin s svabh vaj /
s ttvik r jas caiva t mas ceti t ru u*

Further r mad bhagavadg t explains that the yogi requires *s tvik* food and emphasizes *s tvik* food for a person who wishes to have a good lifespan, intelligence, strength, health, comfort and pleasantness (r mad bhagavadg t 17-2,8)

सुखप्रीति विवधनाः

रस्याः स्निग्धाः स्थिरा हृद्या आहाराः सात्त्विकप्रियाः

*yu sattvabal rogya sukhapr ti vivardhan
rasy snigdh sthir h dy h r s tvikapriy*

Thus, food compatible with yoga is inevitable for a yoga practitioner.

2.12.2 Importance of *ukra* in production of *ojas*

Caraka Samhit (o a nid na 6:9) says as follows;

ॐ
ॐ
h rasya para dh ma ukra
k aya hasya bahun roga mara a va niyaccati

This means, loss of *ukra*, which is the essence of food, when lost, an individual could be a victim of multiple diseases and also could lead to death.

When there is a loss of *ukra* due to excessive indulgence in sex, the physiological qualities of the very *ukradh tu* is vitiated. This effect tries to draw more from its source, the *majja*, the previous *dh tu* (bone marrow). Since *majja* plays an important role in the production of red blood cells, platelets and white blood cells. In particular, lymphocytes which play an important role in the body's immune system, are produced in marrow get vitiated; resulting in harming the immune functioning.

Further, the uncontrolled release of semen throughout life does contribute to premature deterioration of vital capacities of the brain, overburdens the heart and depletes the nervous system (Muktibodhananda, 2003) thus affecting the overall wellbeing. Swami Vivekananda in the lessons on Raja yoga states so: “*ojas* is most easily made from that force which manifests itself in the sexual powers. If the powers of the sexual centers are not frittered away and their energies not wasted (action is only thought in a grosser state), they can be manufactured into *ojas*” (Vivekananda, 2013). Modern findings also correlate the increased prevalence of hypogonadism in HIV infected persons. (Rochira, 2014; Nicholas Wong, Miles Levy and Iain Stephenson, 2017) Reduction in the secretion from gonads is what is being presented here as depleted *ukra dh tu* and thereby the *ojas*. Further, it is observed that multi-morbidity (2+ comorbidities) is high among HIV-infected men with hypogonadism. (Rochira *et al.*, 2015) It is also opined that early recognition of hypogonadism can help improve the quality of life among HIV positives. (Nicholas Wong, Miles Levy and Iain

Stephenson, 2017) Thus it can be safely argued that preventing loss of *ukra* would also help manage comorbidities among HIV positives; perhaps, more so if *ukra* were to be converted to *ojas*; thus preventing *ojas k aya*. Hence the preservation of *ukra* is important in managing the immune system.

2.12.3 Role of *brahmacarya* (Celibacy) in immunity

Preservation of *ukra* requires practice of *brahmacarya* (Sex-sublimation/Celibacy), which forms an integral part of yoga. As such, *brahmacarya* is a part of the *yama*, the first stage of yoga explained in the Patanjali Yoga S tra (PYS) (S tra 30, S dhana p da) which reads as follows:

अहिंसासत्यास्तेयब्रह्मचर्यापरिग्र

ahi s saty steyabrahmacary parigr ha yam

This means *ahimsa* – non-violence, *Satya*-truthfulness, *asteya*-non stealing, *brahmacarya*-Celibacy and *Aparigraha*-non covetousness are the *Yama s*-the restraints for yoga. *Yama* being the first stage of yoga, *brahmacarya*, the part of *yama* becomes a fundamental part of yoga. Patanjali Yoga S tra 2-38 states as follows:

ब्रह्मचर्यप्रतिष्ठायाम् वीर्यलाभः

brahmacaryapрати y m v ryal bha

This means that when *brahmacarya* is practiced, one acquires abundant vitality and energy, which is required for an HIV victim to combat the virus.

Vaidyar j Dhanvantari proclaims:

मृतु व

सौख्यमूलं ब्रह्मचर्यं स्तमेव वदाम्यहम्॥

*mrutyu vy dhijar n i p y a paramau adham /
saukhyam la brahmacarya styameva vad myaham //*

This means celibacy destroys diseases, aging and death.

atapatha br hma a (11.3.6.2) proclaims as follows

ब्रह्मचारि कांचन अति माच्छति

brahmac ri k cana arti m rechati

This means that a person who practices chastity is not afflicted by diseases. Thus there are references to several traditional texts all of which promote *brahmacarya* for a strong immune system and good health.

2.12.4 Other factors

Apart from the above two major factors, there are also other additional factors viz., sleep, mental status, lifestyle and habits also affect *ojas*. Both semen and *ojas* get diminished due to excessive emaciation as a result of anxiety, jealousy, fear, anger and grief (Gupta and Dhaked, 2016). Thus the afflictions of the mind should be avoided. This is explained in the *suśruta samhita* as follows:

तन्महत् ता महामूलास्तच्चौवजः परिरक्षता

f

*tanmahat t mah m l staccavaja parirak at
parih ry vi e e a manaso du khahetava*

Excessive alcoholism is yet another factor that also results in the destruction of *ojas* (Bhosikar and Patil, 2019).

Other factors that are responsible for *ojas-k aya* as per classical texts, viz., *Abhighata* (trauma), *k aya* (emaciation), *kopa* (anger), *shoka* (depression), *dhyana* (worrying), *shramat* (excessive physical work), *akshudha* (starvation), *ativyayama* (excessive exercise), *atimadyapana* (excessive alcohol intake) and *ativyaya* (excessive sex)(Tripathi Bramhanand, 2004; Shilwant, 2016) are all addressed in the yogic approach explained in the *ast nga yoga*

