

Ayurvedic Food Supplements for Sexual Health: A Review Article

Dr. Athira K.S¹, Dr. T.B Tripathy², Dr. Bargale Sushant Sukumar³

¹2nd year PG Scholar, ²HOD and Guide, ³Assistant Professor,
Department of Swasthavritta, Sri Dharmasthala Manjunatheswara Ayurveda College and Hospital, Hassan,
Karnataka

Corresponding Author: Dr. Athira K.S

ABSTRACT

Introduction: Food is one of the basic pillars of human existence. But due to change in life style and food habits of current era made various sexual dysfunctions and impaired reproductive health in community. Food act as Ahara (food article) and Aushadha (medicine). Use of different Ahara Varga contain specific nutrients in daily diet has an important role in maintaining strength of Sukra Dhathu (sperm quality and quantity). Sukra Dhathu is anatomically correlate to both sperm and ovum. Healthy production Ovum and sperm needs various macro and micro nutrients. According to WHO and the office of the surgeon general of the United States have declared sex is a basic human right and an integral part of life. Sex is all about pleasure not always in desire of progeny. Even healthy individual needed some supplements for healthy sexual life. Fructose content present in carbohydrate, amino acid from protein and unsaturated fatty acids from fat have a positive impact on sexual life. Similarly foods which are rich in vitamin A, C, B₃, B₆, B₁₂, B₉, E and minerals like Mg, Se, Zn have significant action on various stages of sexual activity. Quality food again depends on its processing, because a proper selection, processing and administration needed for the complete utilization of nutrients.

Key words - Ahara, Food, Shukra Dhatu, Sexual Health, Vajikarana

INTRODUCTION [1-4]

As compared to previous generation fertility rate is decreasing, around 31% in female and 43% in male. In males decrease in sperm count, sperm motility, morbidity are the main reason for infertility and in females irregular menstrual cycle, oligomenorrhea, p.c.o.s are became main cause for infertility.

WHO defines sexual health as a state of physical, emotional, mental and social wellbeing in relation to sexuality it is not merely the absence of disease, dysfunction or infirmity. As it core is promotion of reproductive health, voluntary and safe sexual and reproductive choices for individual and couples, including decision on family size and timings of marriage. [1] In

present scenario changes has occurred in food habits, life style, environmental pollution are taking part in declining of fertility.

Ayurveda focus on preserving health and cure diseases. Vajikarana and Rasayana are two important branches among Ashtanga of Ayurveda. [2] Vajikaranakarana Tantra (Aphrodisiac Therapy) is a field develops for support Sukra Dhathu (sperm) by increase count, quality and increase sexual vigor among partners. In Charaka Samhitha Chikitsa Sthana in four Padas (parts of one chapter) has given for explaining Vajikarana therapy.

Ayurveda emphasis on Trayopasthambha (3 pillars of life) Ahara (food), Nidra (sleep) and Abrahmacharya

(sex). [3] The world health organization and the office of the Surgeon general of the United States have declared sex is a basic human right and an integral part of life. Desire for sexual act is a physiological phenomenon in every living creature, non-indulgence in the natural activity leads to causation of Prameha (Diabetics), Medo Roga (Dyslipidemia/Obesity) and disarrangement of body tissues. [4]

As per classics cause for declining fertility is due to Ahara and Vihara Dosha (Improper diet and life style). So choose right food based on Prakruti (body constitution), so that balancing three Dosha and equilibrium of three pillars of life can attain.

MATERIAL AND METHODS

References were collected from Ayurveda classics texts, preventive and social medicine, various journals & articles. These references are analyzed logically and conclusion is drawn.

DISCUSSION AND RESULTS [5-50]

In Ayurveda there is separate area has given for discussing the properties of Ahara Varga (food items). By understanding its properties and by proper processing and administration can attain excellent therapeutic effects. Dravya which can increase the sexual potency has mentioned in different terms like Vajikarana, Vajikara, Vrishya, Shukrala, Sukra Rechaka, Shukra Janaka etc.

There are many Ahara Dravyas (food items) has mentioned having the power to increase sexual potency, but some of the drugs are unavailable or can't identify based on morphological and nutritive action. Ahara Dravya which are commonly available are discussing below.

DHANYA VARGA (Whole grains and pulses) [5-7]

Dhanya Varga	Shali (Krishna, Raktha, Sugandha, Shastika and Goura), Godhuma (Laghu Godhuma), Yava, Yavanala (Dhavala, Sarada, Duddala), Mudga(Krishna Mudga), Masha (Raja Masha), Chanaka(ama chanaka),
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Ahara Dravya belongs to this group are mainly classified in to Shuka Dhanyas (cereals), Shali Dhanya (cereals), Vrihi Dhanya (cereals) and Truna Dhanya (millets). These having some general properties like Madhura (sweet), Snigdha (unctuous), Guru (heavy), Shita (cold potency). Among Shali Dhanya most of them are Vrishya (aphrodisiac). [5]

Coming to whole grains and pulses they are rich in some common nutrients so that they have potential role in prevention of chronic disease. Whole grains are important sources of nutrients including dietary fiber, resistant starch, trace minerals, certain vitamins and other compounds of interest in disease prevention, including phytoestrogens and antioxidants. [6]

Pulses are the dry seeds of legumes that contain small amount of fat. On a global basis pulses provide smaller amounts nutrients at 7.8 kg/capita/year, 74 kcal/capita/day and 5.1 g protein/capita/day as compared to cereals at 120 kg/capita/year, 880 kcal/capita/day and 25.8 g protein/capita/day. In addition to the basic nutrients, pulses also contain other constituents known as bioactive compounds which could have health-enhancing and/or disease-prevention properties such as polyphenols, phytoestrogens and pigments. [7]

YAVA (Barley- Hordeum vulgare) [9-11]

It having general properties like Ruksha (dry), Guru(heavy to digest), Madhura (sweet), Sara (laxative), Vatanulomana (remove intestinal gas), Vrishya (aphrodisiac), Sthairyakara (increases stability etc. [8] It is recommended for take daily(Nithyasevaniya Ahara). [9]

It is known for its brain boosting qualities and as a tonic to seniors. It has the capacity to boost circulation to genital organs and boost penile erection. [10] It rich in carbohydrate also contains protein, fat, B complex vitamins, vitamin C, vitamin A, vitamin D, calcium, magnesium, selenium, zinc. It can regulate blood pressure, cardiac diseases, induce sleep and increase immunity and act as an anti-depressant. Due

to low glycemic index it acts as an anti-diabetic material. Due to these qualities barley having a significant role in increasing sexual potency. [11]

GODHUMA (Wheat) (Triticum aestivum) [12,13]

It is Vrishya (aphrodisiac), Sita (cold in potency), Guru (heavy to digest), Snigdha (unctuous), Jivana (enlivening), Madhura (Sweet), Sandhanakari (binding tissues), Sthairyakruth (Increase strength), and Sara (laxative). [12]

It contains antioxidant enzyme Super Oxide Dismutase (SOD) which converts dangerous free radical reactive oxygen species into hydrogen peroxides and oxygen molecule. So that it can control stress, can regulate HPA axis function and regulation of sex hormones. It helps to build blood count, increase absorptive capacity etc. It contains macronutrients that rich in carbohydrate, contains vitamin A, B₁, B₂, B₃, B₅, B₆, B₈, C, E and K, ascorbic acid, sodium, calcium, iron, prosperous, magnesium, zinc, selenium, potassium etc. [13] It is recommended for take daily (Nithyasevaniya Ahara).

SHASHTIKA SALI AND RAKTHA SALI (Red rice- oriza sativa) [14-15]

Shashtika Sali belongs to Vrihidhanya and Raktha Sali belongs to Suka dhanya. Both are similar in properties. It having Snigdha (unctuous), Guru (heavy to digest), Madhura (sweet) and Vrishya (aphrodisiac) properties. [14]

Rice is used as a staple food by more than 60 % of the world population. It contains all macronutrients, rich in carbohydrate, protein, it also contains Vitamins like thiamine, riboflavin and niacin, E, K, minerals like calcium, magnesium, iron, zinc, manganese, copper etc. It also acts as an antioxidant, anti-inflammatory, anti-hypertensive agent. It can restore internal harmony of electrolytes, boost brain cell mechanism. It keeps persons energetic and fresh. Because of these properties it can increase sexual potency [15]

MUDGA (Vigna radiata) [16,17]

It belongs to Shimbidhanya varga. It recommended for take daily basis. It having kashaya- Madhura rasa (astriengent and sweet taste), katu vipaka (Catabolic post digestive effect), hima

(Cold potency). It is good for Meda, Sleshma and Rakthapitta related disease conditions. [16]

It recommended for take daily (Nithyasevaniya Ahara).

It contains different nutrients, it rich in carbohydrates, good source of potassium, magnesium, calcium, phosphorous and iron. It contains vitamins like carotene, thiamine, niacin, riboflavin, ascorbic acid, folic acid etc. It contains 12 amino acids. It contains flavonoids, phenolic acids, protocatechuic acid etc. It has antioxidant and detoxifying property. These all nutrients helpful in maintain overall health and increase fertility by boosting sexual potency. [17]

MASHA [18,19]

It belongs to Shimbidhanya varga, it has a major role in Vajikarana therapy (aphrodisiac treatment). Charakacharya in mashaparnaprabruthya adhyaya has discussed its importance in Vajikarana. He mentioned that if it consume with Sarkara (sugar), Kshoudra (honey) and Gritha (ghee) it will acts as an excellent aphrodisiac. Satavari gritham is an excellent aphrodisiac preparation. One who consume milk along with 1 karsha of yashtimadhu choorna with equal amount of ghee and honey who can indulge in sex daily. Masha having properties like Snigdha (unctuous), Balakara (increases strength), Sleshma-mala-pittakara (increases kapha dosha, excretory materials and pitta dosha). It is Guru (heavy), Ushana (hot in potency), pacifies Vata dosha, Madhura (sweet taste), Sukravruddhi Vireka kruth (promote quantitative increase and ejaculation of semen). [18]

It rich in protein and carbohydrate, it contains minerals like calcium, magnesium, phosphorous, zinc and iron. It contains vitamin B₁, B₂, B₃, B₅, B₆, B₉, vitamin C, E and K. It will improve digestion, boost energy, and boost bone mineral density. It acts as an anti-diabetic, diuretic. [19] It has

the capacity to increase sperm count and regulate hormone levels.

SAKA VARGA (Vegetables) [20,21]

Saka Varga	Palandu, pindalu, lakshmana kanta, Ardrakam, Vasthukam, Vatsadani, Bimbi, Karanbi, sunishanna, Kakamachi, Munjata, Vidari, Satavari angura, Lasuna
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Saka varga are important Ahara varga in Ayurveda. It classified in to Phala saka varga, Patra saka varga, Kanda saka varga, Salana saka varga. Generally it pecess Laghu (light for digestion), Snigdha (unctuous) properties. Acts like tridosahara (pacifies doshas), Vrishya (aprodiastic) and Sara (laxative). [20]

Vegetables are desirable components of a healthy diet; they are ‘perishable’ commodities that may only have a shelf life of days or hours. A diet high in vegetables has been tied to a lower risk of high blood pressure, heart attack, stroke, cataracts, macular degeneration, cognitive decline and digestive-tract cancers. [21]

MUNJATHA/SIGRU (Moringa olifera) [22,23]

It is Vata-Pittajith (decrease Vata and Pitta dosha), Snigdha (unctuous), Sita (cold potency), Guru (heavy to digest), Swadu (sweet taste), Sukrkruthparam (excellent in increases sexual potency). [22]

It rich in vitamin A, C and D. It helpful in strong and long erections. It contains saponin which enhances libido. Especially seeds help to increase hardness of erection. [23]

KUSHMANDA (Benincasa Hispida) [24-26]

It commonly known as ash gourd. It included in both Phala varga and Phala saka varga. It will pacifies both vata and pitta dosha. It is basthisudhikara (clears urinary bladder) and Vrishya (aprodiastic). [24]

The phytochemicals present in ash gourd are carbohydrate, tanninsphenols, glycosides, alkaloids and flavonoids which stimulates lipogenesis and glucose transport in adipocytes. [25] Due to its alkaline property it acts as Aphrodiastic. [26]

GINGER (Zingiber officinale) [27]

It having properties like Katu rasa (acid taste), Ushnam (hot potency), Ruchyam (increase taste), Vrishyam (aprodiastic), Pake himam (cold potency after get digested), Mutrala (diuretic, Bruhmana (nourish body), Kandya (good for throat), Dipana- Pachana (carminative and digestive). [27]

It is commonly using as both vegetable and medicine. It composed 79% water, 18% carbohydrate, 2% protein and 1% fat, It contains vitamin B6, Magnesium and manganese. Due to this nutrient composition it acts as an aphrodiastic.

GARLIC (Allium sativum) [28,29]

Garlic common in many recipes, It has properties like Tikshna (penetrating, Ushna (hot potency), Katupka (catabolic post digestive effect), Hrudhya (god for heart), Keshya (good for hair), Guru (heavy to digest), Vrishya (aphrodiastic), snigdha (unctuous), Rochana (impart taste), Dipana (increase digestive power). It indicated in conditions like Rakthapitta (bleeding diseases), Kushta (skin diseases), Gulma (bloating), Arsha (piles), Prameha (diabetics), Krimi (intestinal worms), Swasa-kasa (respiratory tract infections). [28]

Garlic contains allicin, that will increases blood flow to sex organs. [29] Selenium and vitamin C will eliminate chromosomal defects. It also contains vitamin B6 and dietary fiber.

SATAVARI ANGURA (Asparagus racemosus) [30,31]

The name implies woman possess 100 husbands, it because of its high impact on female reproductive system. It having Madhura-tiktha rasa (sweet and bitter taste), Sitha virya (cold in potency), Madhura vipaka (Anabolic post digestive effect), Vata and Pitta hara and Kapha vardhaka. [30]

It used as overall reproductive tonic, helpful in regulate woman’s reproductive cycle. It helpful in ovulation and increase fertility. Even after menopause it helpful to control hot flush, irritability, irregular memory, dryness of vagina etc. [31] It rich in nutrients like carbohydrate, protein, Vitamin A,C, B6 , minerals like Ca,Mg, Fe etc.

PHALA VARGA (fruits)

Phala varga	Kushmanda, Thumbi, kalinga, Kharbujam, kosataki, sigru, Pakua panasa, rambaphala, Narikela, Kharjura, draksha, Madhura karkati, Badara, jambira, kapitha, tala phala, Amra. Kharjura, Vatada
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They are naturally available, nutrient rich and essential part of human life. They are low calorie and fiber rich food supplements. In Ayurveda fruits are included in phala varga.

DRAKSHA (Vitis vinifera) [32]

It is called Phlaotthama (best among fruits), It having properties like Vrishya (aphrodisiac), Chakshushya(good for eyes), Srushta mutra vit(increase urine ad fecaloutput), Swadupaka rasa (sweet after digestion), Snigdha (unctuous), Kashaya (little astringent taste), Hima (cold in potency), Guru (heavy for digestion). [32]

It rich in nutrients like carbohydrate, protein, vitamin A,C,B₆, minerals like Ca, Fe and Mg. It helps to stimulate both estrogen and testosterone.

AMRA (Mangifera indica) [33]

Mango consider as the national fruit of India and king of fruits. Riped mango having Madhura rasa (sweet taste), Vrishya (aphrodisiac), Snigdha (unctuous), Guru (heavy to digest), Balaprada (Increases strength), Sita (cold in potency), Sukra vardhanam (increases sperm count). [33]

It contains Carbohydrate, proten, vitamin A, C, B₆ minerals like Mg, Ca, Fe etc. Because of these contents mangos are significant in maintain reproductive health.

KHARJURA (Phoenix dactylifera) [34,35]

It included in category of dry fruits. It possess Madhura rassa (sweet taste), Snigdha (Unctuous), Guru (heavy to digest), Vata-pitta hara, Bruhmana (nourishes body), Vrishya (Aphrodisiac). [34]

It rich in carbohydrate, protein, minerals like Fe, Ca, Mg and vitamin B₆. Eating dates will promote sperm quantity and quality. It one among the best fruit for male fertility. It increase size of testis in men and breast in woman. It contains high

amount estradiol and flavonoid which increase sperm mobility and count. [35]

VATADA (Prunus dulcis) [36][37]

It is coming under the category of dry fruits. It is commonly known as almonds. It has Madhura rasa, snigdha guna, vata-pitta hara and Vrishya(aphrodisiac).It indicated in diseases like katisula(arthritis), sirasoola (head ache), pradara (leucorrhoea) etc. [36]

It rich in protein and carbohydrate,Fat vitamins like thiamine,E, Riboflavin, minerals like iron, calcium and phosphorous, selenium, zinc. It helps to reduce stress, produce sex hormones and increases libido. [37]

MAMSA VARGA [38]

Mamsa Varga	Tittiri,kukkuda,chataka, varaha
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Food sources from animals are coming under this. Meat of small and big animals, fish, birds all are included in this. Ayurveda mentioned kukkuda mamsa is the best one for boost fertility. [38] Also Vraha mamsa (meat of pig) also Vrishya but it did not suitable for sedentary life style of present era. Other meats mentioned classically are not feasible.

KUKKUDA MAMSA [38]

It having Kashaya- Madhura rasa, Snigdha,Ushna and Guru guna. Tridosha hara, Bruhmana, chakshushya and Sukrala(increases sperm count). [39] It rich in high protein and fat, vitamins like A, B₁, B₂ and B₁₂ minerals like phosphorous, potassium, calcium and iron.

LAVANA VARGA [39-41]

Lavana Varga	Saidhava Lavana
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Salt is an essential part of diet, commonly all using sea salt .But rock salt is therapeutically recommended. It recommended on daily basis based on RDA. It having some properties like Swadu (sweet taste), Vrishya (aphrodisiac), Hrudha (pleasing), Tridoshanuth (pacifies 3 doshas), Laghu (ilight), Anushnam (not cold or hot), Avidahi (not cause any burning sensation), Agnidepanam (boost digestive fire). [39]

Saindhava Lavana in excess quantity will cause infertility but proper use it acts like aphrodisiac. [40] Contains macro nutrients in small quantities, it rich in minerals Na, Ca, Fe and Mg. It has properties like improves digestion, boost metabolism, stabilize blood pressure, boost immunity and promote weight loss. [41] These all properties will indirectly boost the sexual potency.

KSHEERA VARGA [42-44]

Ksheera varga	Samanya guna, goksheera, mahisha, milk that churned by adding 4 times of water, poorvahna peetham milk, dharoshna paya, Sita or Sitaphala misra ksheera, hasthiksheera
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Ksheera is an important Dravya in Vajikarana. All types (From cow, buffallow,goat etc.) of ksheera are considered to be Vrishya. [42] But it give more aphrodisiac property when it used in 3 ways. Poorvahna peetha (consume before noon), Daroshna (Just drawn from cow) & along with Sitha (by adding sugar).

Milk contains vit B₁₂, Mg, Ca, K and macronutrients. These will help for boost fertility.Luke warm milk along with honey will increase sperm count up to 50% and when milk consume especially at bed time will boost sexual drive. [43] It helps to increase ejaculation in man .Vitamin A will boost production of sex hormones and strengthen reproductive tissue. [44]

TAILA VARGA [45,46]

Taila Varga	Tila tailam, Khasa beeja tailam,erandatailam
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All tailas (oils) considered to be Vata hara , Mainly some common Taila like Tila taila, Eranda taila are possess Vrishya guna (aphrodisiac). Tila taila is Bala varna kara (increase strength and complexion), Vikasi (Spreading), Visada (clear). [45] Eranda taila not practically good for consuming orally but it can be given as enema form.

Sesame is rich in Vitamin E(Sex vitamin),It is an natural ani oxidant, It contains Vitamin K,Mg, Cu,Ca,Fe and, Zn. Here it rich nutrient which good for sexual health. [46]

DRAVA VARGA (Liquid diet) [47,48]

Drava varga	Nalikerodaka, Gangambu
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Liquids are low calorie supplement for strengthening stamina of body. In this category nalikerodaka (tender coconut water), Gangambu (pure rain water) are helpful in increase reproductive potency. Generally they having Madhura rasa (sweet taste), Sita virya (cold potency) .Because of Jivana and Preenana guna Gangambu acts as Vrishya (aphrodisiac). [47] Nalikerodaka which is Vrishya (aphrodisiac) and provide instant energy. [48]

Tender coconut water contains 1.7 grams of protein per serving. It contains vitamins like C, Riboflavin, Folate and pantothenic acid. Minerals like potassium manganese and magnesium. Because of this nutrient composition it acts as an aphrodisiac.

GORASA VARGA (Milk sub products)

Gorasa varga	Ksheera,dadhi,navaneetham and gritham prepared from mahisha and go
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Gorasa varga includes the sub products derived from the milk such as Dadhi (curd), Gritha(ghee), Takra (buttermilk), Navaneetha (butter). These and commonly using in our day to day life and practice from ancient days. These all are act as Vrishya (aphrodisiac). These all are generally Ayushya (increase life span), Medhya (improve intellect), Rasayana (rejuvenative), and Balya(Increase strength). These qualities are essential for good sexual health.

It mainly contains macronutrients rich in fat and protein, vitamins like vitamin A,E,K,D and C, minerals like calcium, iron, magnesium, phosphorous etc. These all nutrients help to improve sexual potency.

IKSHU VARGA (products drawn from sugar cane) [49,50]

Ikshu varga	Ikshu rasa, matsyantika,
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Mainly Ikshu rasa and Matsyandika are more frequently using. Ikshurasa commonly used for to relive daha (thirst) but it having aphrodisiac property. Matsyandika(crystal sugar) are helpful in boost sexual vigor. These two are adviced to take after coitus. Because it having the capcity to restore semen and relive fatigue. [49]

It composed major part fructose and glucose, trace elements like Ca, Fe, Mg,K,Zn, thiamine and riboflavin. It contains no vitamin C, E or A and no

protein and fat. Because this specific composition it acts as instant energy drink, and aprodiasic. [50]

Table of nutrients and their action on sexual health.

Sl.No.	Nutrient	Action on sexual health
MACRONUTRIENTS		
1.	Carbohydrate	Increases libido, fructose increases sperm mobility
2.	Protein	Amino acids can regulate sex hormone levels
3.	Fat	Fatty acid such as omega- 3 help us keep calm and promote healthy mood.
VITAMIN		
4.	A	Essential for production of male and female sex hormones, for normal reproductive cycle in woman
5.	C	Synthesis of hormones like androgen, estrogen , progesterone, strengthen immune system, protect against day-by-day stress
6.	D	Erection of penis, Maintain orgasm and libido
6.	E	Known as sex vitamin, It enhances sexual arousal and behavior, a powerful anti-oxidant and anti- ageing.
6.	B ₁	Maintain energy and sexual drive
6.	B ₃	Enhances sexual flush increases blood flow to genitals and intensify your orgasm
7.	B ₆	Libido enhancer, controls elevated prolactin. It's also aids estrogen, progesterone function, production of red blood cells, serotonin, dopamine and good for increase sperm count
7.	B ₉	It can increase sperm count
8.	B ₁₂	Heighten sex drive, enhance penile erection, stimulate secretion of histamine needed for orgasm
MINERALS		
9.	Mg	Improve libido and sexual performance also increase sexual drive
10.	Selenium	Increase sperm production, it lost through ejaculation of semen so restore it
11.	Zinc	Production of testosterone & sperm, prostrate health, regulate production of semen
12.	Iron	Iron needed to get oxygen to your cells if low iron in the body will show the symptom of low sexual drive
13	Calcium	It is an essential nutrient establishes the link between hormonal glands and brain. Deficiency result low sexual drive.
14.	Manganese	Need for build up a healthy reproductive system

CONCLUSION

As changing dietary habits and lifestyle in present era, cause significant decrease in sexual potency. So that essential nutrients need to restore sexual potency in the body. Vajikarana Dravya used as both food and treatment to promote sexual health. Proper selection, processing & administration are needed for complete utilization of all nutrients from those Dravyas. Ahara (food articles) having generally Madhura Rasa, Sita Virya, Snigdha Guna and Madhura Vipaka, Vata Pittahara and Kapha Vardhaka are should choose for increase sexual potency. Food which contains nutrients like all macro nutrients, vitamin A, D, E, C, B complex, minerals like Mg, Se, Zn, Fe, Ca, Mn are essential for healthy sexual life. Prevention through food & life style is always better than being behind medicines.

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How to cite this article: Athira KS, Tripathy TB, Sukumar BS. Ayurvedic food supplements for sexual health: a review article. Int J Health Sci Res. 2019; 9(5):347-355.
