



**RATIONAL USE OF AYURVEDIC APHRODISIACS****RAJENDRA PRASAD****Associate Proffesor Department of Kayachikitsa  
Faculty of Ayurveda, IMS, BHU, Varanasi (UP), India****ABSTRACT:**

**Abstract:** An aphrodisiac is a type of food or drink that has the effect of making those who eat or drink it more aroused in a sexual way. Aphrodisiacs can be categorized according to their mode of action into three groups: substances that increase libido (i.e. sexual desire, arousal), substances that increase sexual potency (i.e. effectiveness of erection) and substances that increase sexual pleasure. In this article we are also incorporating those drugs which have proved or claimed action on abnormalities of semen such as oligospermia, athenospermia, azoospermia etc. As this may be a most important category of drugs that can be included in the group of aphrodisiac. Large number of drugs has been clearly described in ayurvedic texts working on sexual activities. Separate chapters in *Charak Samhita* named as Rasayana and *Vajikarana* contain so many herbal, herbomineral and non vegetarian products effective in different sexual abnormalities. Particular ayurvedic terminologies are given to theses drugs like *shukra vardhan*, *shukra stambhan*, *shukra shodhan*, *shukra sruti kar*, *praja sthapana* etc. depending upon need and type of action any particular drug. Data and information shown in this article was collected from reputed and authentic texts of ayurveda along with research evidences from web sites of different institutes, journals.

**Keywords:** Aphrodisiacs, Erectile dysfunction, libido, *shukra vardhan*, *vajikarana*.

## INTRODUCTION

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Normal sexual life is an important and considerable part of human being. This is not only from the point of view of producing child but also to maintain healthy and tension free life. By all aspects, it can be abnormal in many ways therefore if any one reports some ailments related to it than it is very important to know that what actually type of problem does he have? Just for example someone may have trouble with very initial part of sexual act i.e. Libido, that may be diminished or completely lost. Than there may be some problem with penile erection it may again can be complete absent or impaired. After erection proper duration to perform sexual act is very important i.e. there should be sufficient time interval before ejaculation after penile insertion. In some patients there may be early ejaculation or premature ejaculation. Beside these there may be abnormalities with quality of semen i.e. azoospermia, oligospermia, athenospermia etc. These conditions actually make unable a man to conceive a woman. Whereas many times

sexual life is unaffected. Therefore while planning management of these conditions this is very important to trace out the actual problem, than we should proceed accordingly.

An aphrodisiac is defined as any food or drug that arouses the sexual instinct, induces venereal desire and increases pleasure and performance. This word is derived from 'Aphrodite' the Greek goddess of love. These substances are derived from plants, animals or minerals and since time immemorial they have been the passion of man. There are two main types of aphrodisiacs, psycho physiological stimuli (visual, tactile, olfactory and aural) preparations and internal preparations (food, drugs, alcoholic drinks and love portion)<sup>1</sup>. Further Aphrodisiacs can be categorized according to their mode of action into 3 groups: substances that increase libido (i.e. sexual desire, arousal), substances that increase sexual potency (i.e. effectiveness of erection) and substances that increase sexual pleasure.

In *ayurveda* many drugs and preparations are available to tackle with these conditions which can be used according to actual need, rationally. "*Rasayana*" and "*Vajikarana*"<sup>2</sup> are the two important parts of *ayurvedic* treatment; being used to tackle with these conditions since long time. But due to lack of clear concept,

many times they are used unwontedly and irrationally. While we know very well that actual problems vary from patient to patient. Although some description by *chakrapani* on *charaka chikitsa- 2/4/51* has been given regarding properties of commonly used drugs. According to which “*Vrishya*” or “*Vajikarana*” *dravyas* are categorised into three<sup>3</sup>:

1. *Shukra vradhi kara* (increasing production of semen) e.g. *Ashwagandha, musli, shatawari*, milk, sugar, *sarpi* etc.
2. *Shukra sruti kara* (promotes ejaculation) e.g. viewing or touch of willing or presumed woman.
3. *Shukra sruti-vradhi kara* (performing both functions) e.g. *Masha*, milk, ghee, *bhallataka*, almond, chestnut etc.

In the similar way some categorisation has been done by *Acharya Priya Vrat Sharma* while describing drugs working against sexual dysfunctions such as <sup>4</sup>:

#### A) DRUGS IMPROVING QUALITY AND QUANTITY OF SEMEN

These drugs can be kept under the category of *shukra vradhi kar, shukra vardhan* and *shukra shodhan*. Because some of them increase sperm count in oligospermic cases whereas some improves motility, viability of sperms or may remove abnormal ones. Few of them are as follow:

1. *Shukra janan* (producing semen) e.g. *Musli, taal musli, shatawari, makhanna, kokilaksha, munjataka, kapikachhu, utangana* etc.
2. *Shukra shodhana* (correcting qualitative abnormalities of semen) e.g. *Kushtha, kataphala*.
3. *Shukrastambhana* (delaying ejaculation) e.g. *Aakarkarabh*.

In addition to these many other herbal and herbo-mineral drugs/preparations are used in the management of different sexual dysfunctions and abnormalities. We have a long list of such drugs and formulations being used in day today practice. Depending upon clinical and practical experiences some authentic categorization is done but most importantly we have certain evidences about particular drugs received after clinical / experimental researches conducted at different institutes. According to which we can categories them and rationalise their use accordingly:

1. **Ashwagandha (*Withania somnifera*)** It is well known herb popularly called Indian Ginseng, used in so many indications, is a good source of herbal proteins. Regarding its action in sexual activities and semen abnormalities number of trials has been performed. According to one study “*Withania somnifera* improves semen quality by regulating reproductive

hormone levels and oxidative stress in seminal plasma of infertile males"<sup>5</sup>.

## 2. *Kapikachhu (Mucuna pruriens)*

Fruits and seeds of this plant causes severe itching if coming in contact with skin. Based on so many observations and studies it is used as anti-depressant, anti-parkinsonism, aphrodisiac etc. Regarding this so many study reports are available. According to one study *Mucuna pruriens* Reduces Stress and Improves the Quality of Semen in Infertile Men<sup>6</sup>. This investigation was undertaken to assess the role of *Mucuna pruriens* in infertile men who were under psychological stress. Study included 60 subjects who were undergoing infertility screening and were found to be suffering from psychological stress, assessed on the basis of a questionnaire and elevated serum cortisol levels. Age-matched 60 healthy men having normal semen parameters and who had previously initiated at least one pregnancy were included as controls. Infertile subjects were administered with *M. pruriens* seed powder (5 g/day) orally. For carrying out morphological and biochemical analysis, semen samples were collected twice, first before starting treatment and second after 3 months of treatment. The results demonstrated decreased sperm count and motility in subjects who were under psychological stress. Moreover, serum cortisol and

seminal plasma lipid peroxide levels were also found elevated along with decreased seminal plasma glutathione (GSH) and ascorbic acid contents and reduced superoxide dismutase (SOD) and catalase activity. Treatment with *M. pruriens* significantly ameliorated psychological stress and seminal plasma lipid peroxide levels along with improved sperm count and motility. Treatment also restored the levels of SOD, catalase, GSH and ascorbic acid in seminal plasma of infertile men. On the basis of results of the present study, it may be concluded that *M. pruriens* not only reactivates the anti-oxidant defense system of infertile men but it also helps in the management of stress and improves semen quality.

In another study treatment with *M. pruriens* significantly inhibited lipid peroxidation, elevated spermatogenesis, and improved sperm motility. Treatment also recovered the levels of total lipids, triglycerides, cholesterol, phospholipids, and vitamin A, C, and E and corrected fructose in seminal plasma of infertile men<sup>7</sup>.

Whereas in one experimental study Methanolic extract of *Mucuna pruriens* seed was tested for their possible androgenic activity in Wister male albino rats. The methanolic extract of *M. pruriens* plant was gavaged separately into 2 group of rat at similar doses of 1000 mg/kg body



weight and 1500 mg/kg body weight for 30 days. At the end of the treatment, the animals were killed and the blood, testis, epididymis, seminal vesicles and prostate were collected for biochemical analysis. The methanolic extracts of *M. pruriens* significantly increased the relative weight of the testis, serum and testicular testosterone level, testicular cholesterol level, protein level in the testis and epididymis, and epididymal alkaline phosphatase activity. The methanolic extracts of *M. pruriens* possess androgenic activity<sup>8</sup>.

### 3. *Shilajit (Black bitumen)*

*Shilajit* is a substance being used in multiple purposes since long time. This is an important example of *Rasayana* and *Vajikarana* drugs being used for management Diabetes mellitus and insipidus, urinary disorders, general weakness etc. Large no. of studies has been done regarding all these indications. In one Clinical study spermatogenic activity of processed *Shilajit* in oligospermia has been proved successfully<sup>9</sup>. Where the safety and spermatogenic activity of processed *Shilajit* (PS) were evaluated in oligospermic patients. Initially, 60 infertile male patients were assessed and those having total sperm counts below 20 million/ ml semen were considered oligospermic and enrolled in the study (n =

35). PS capsule (100 mg) was administered twice daily after major meals for 90 days. Total semenogram and serum testosterone, luteinising hormone and follicle-stimulating hormone were estimated before and at the end of the treatment. Malondialdehyde (MDA), a marker for oxidative stress, content of semen and biochemical parameters for safety were also evaluated. Twenty-eight patients who completed the treatment showed significant ( $P < 0.001$ ) improvement in spermia (+37.6%), total sperm count (+61.4%), motility (12.4-17.4% after different time intervals), normal sperm count (+18.9%) with concomitant decrease in pus and epithelial cell count compared with baseline value. Significant decrease of semen MDA content (-18.7%) was observed. Moreover, serum testosterone (+23.5%;  $P < 0.001$ ) and FSH (+9.4%;  $P < 0.05$ ) levels significantly increased. HPLC chromatogram revealed inclusion of PS constituents in semen. Unaltered hepatic and renal profiles of patients indicated that PS was safe at the given dose. The present findings provide further evidence of the spermatogenic nature of *Shilajit*, as attributed in Ayurvedic medicine, particularly when administered as PS.

### 4. *Kharjur (Phoenix dactylifera)*

The date palm pollen (DPP) is used in the traditional medicine for male infertility.

Whereas in ayurvedic texts it is indicated in *shukra daurbalya* i.e. weakness of semen or to improve semen quantity and quality. In an experimental study the effect of Phoenix dactylifera, pollen, on sperm parameters and reproductive system of adult male rats was studied and the results indicated that the consumption of DPP suspensions improved the sperm count, motility, morphology, and DNA quality with a concomitant increase in the weights of testis and epididymis. The date palm contains estradiol and flavonoid components that have positive effects on the sperm quality<sup>10</sup>.

#### 5. *Sitab (Ruta chalepensis)*

It has been used medicinally in many ancient cultures. In ancient Turkish and

Chinese literature beside *ayurveda*, its use as an abortifacient and uterine stimulant was reported. Plant showed the presence of alkaloids, flavonoids, coumarins, tannins, volatile oil, sterols and/or triterpenes. In experimental study the plant had a spermatrophic action demonstrated by Abdullah and *Qarawi*, by an increase in sperm count, motility, living percent, and a decrease in encountered sperm in the LH and prolactin levels. From the naturally occurring *coumarins*, only the 3-phenylcoumarins have been present in *Ruta chalepensis* possessing potent estrogenic activity. By the study it can be concluded that the stimulatory effects of *Ruta chalepensis* mediated through a pituitary testicle axis participating in the physiological events of spermatogenesis<sup>11</sup>.

### B) DRUGS IMPROVING LIBIDO AND SEXUAL PERFORMANCE

These drugs can be kept under the category of *shukra shruti kar, vajikaraka* and *shukra stambhan*. Because some of them increase serum Testosterone level whereas some improves libido, provides cure in problems of early or premature ejaculation. Few of them are as follow:

#### 1. *Shatawari (Asparagus racemosus)*

It is an important herb used in different indications in lactating women, shows multiple impacts over sex hormones and immunity. Beside this it is a rich source of herbal protein. The herb has been traditionally used as *Vajikaran Rasayana*

herb because of its putative positive influence on sexual performance in humans.

In one experimental study Lyophilized aqueous extracts obtained from the roots of *A. racemosus*, *C. borivilianum*, and rhizomes of *C. orchioides* were studied for sexual behavior effects in male albino rats and compared with untreated control group animals (total N = 60). The rats were evaluated for effect of treatments on anabolic effect. Seven measures of sexual behavior were evaluated. Administration of 200 mg/kg body weight of the aqueous

extracts had pronounced anabolic effect in treated animals as evidenced by weight gains in the body and reproductive organs. There was a significant variation in the sexual behavior of animals as reflected by reduction of mount latency, ejaculation latency, post ejaculatory latency, intromission latency, and an increase of mount frequency. Penile erection (indicated by Penile Erection Index) was also considerably enhanced. Reduced hesitation time (an indicator of attraction towards female in treated rats) also indicated an improvement in sexual behavior of extract treated animals. The observed effects appear to be attributable to the testosterone-like effects of the extracts. Nitric oxide based intervention may also be involved as observable from the improved penile erection<sup>12</sup>. The present results, therefore, support the folklore claim for the usefulness of these herbs and provide a scientific basis for their purported traditional usage.

## 2. Black *Musali* (*Curculigo orchioides*)

The rhizomes of *Curculigo orchioides* have been traditionally used as aphrodisiac. In the present study ethanolic extract of rhizomes was evaluated for its effect on sexual behavior in rats. Administration of 100 mg/kg of extract change significantly the sexual behavior as assessed by determining parameters such as penile erection, mating performance, mount frequency and mount latency.

Moreover a pronounced anabolic and spermatogenic effect was evidenced by weight gains of reflected in reduction of mount latency, an increase in mount frequency and enhanced attractability towards female. Penile erection index was also incremented in treated group<sup>13</sup>.

## 3. *Akarkarabh* (*Anacyclus pyrethrum*)

This drug have been described under category of *shukra stambhan* properties thereby increasing sexual performances. In one experimental study Supplementation of anacyclus pyrethrum ethanolic root extract (50-150mg/kg) over 28 days in rats noted dose-dependent increases in testosterone and luteinizing hormone to approximately two-fold of baseline<sup>14</sup>.

Whereas in another study water extract of *anacyclus pyrethrum* at 50-100mg/kg over 28 days appears to possess libido enhancing properties due to enhancing the penile erection index (202%), mounting and intromission frequency (increases of 196-266% and 173-384%, respectively), and latency time for mounting and intromission (82-90% and 63-76% of baseline, respectively)<sup>15</sup>.

## 4. *Gokshura* (*Tribulus terrestris*)-*Tribulus terrestris* (TT)

(TT) has long been used in the traditional Chinese and Indian systems of medicine for the treatment of various ailments like edemas, renal, prostate and urinary troubles, as diuretic,



anti-hypertensive, as a lithotripter agent and is popularly claimed to improve sexual functions in man. Improvement in sexual functions results through its both paths of action i.e. systemically by androgenic activity and locally due to its diuretic property it causes vasodilatation and thereby increases blood flow in penile artery. That results into penile erection.

In one experimental trial sexual behavior and intracavernous pressure (ICP) were studied in both normal and castrated rats to further understand the role of TT containing protodioscin (PTN) as an aphrodisiac<sup>16</sup>. Adult Sprague-Dawley rats were divided into five groups of 8 each that included distilled water treated (normal and castrated), testosterone treated (normal and castrated, 10 mg/kg body weight, subcutaneously, bi-weekly) and TT treated (castrated, 5 mg/kg body weight, orally once daily). Decreases in body weight, prostate weight and ICP were observed among the castrated groups of rats compared to the intact group. There was an overall reduction in the sexual behavior parameters in the castrated groups of rats as reflected by decrease in mount and intromission frequencies (MF and IF) and increase in mount, intromission, ejaculation latencies (ML, IL, EL) as well as post-ejaculatory interval (PEI). Compared to the castrated control, treatment of castrated rats (with either testosterone or TT extract) showed

increase in prostate weight and ICP that were statistically significant. There was also a mild to moderate improvement of the sexual behavior parameters as evidenced by increase in MF and IF; decrease in ML, IL and PEI. These results were statistically significant. It is concluded that TT extract appears to possess aphrodisiac activity probably due to androgen increasing property of TT (observed in our earlier study on primates).

##### 5. *Utangana (Blepharis edulis)*

It is described and has been used since long time as aphrodisiac agent as well as curing so many abnormalities of semen. In the present study aim was to investigate the effect of *ethanolic* extract of *Blepharis edulis* Linn. (family *Acanthaceae*) on general mating behavior, libido, and adverse effects on sexually normal male albino mice. The suspension of the alcoholic extract was administered orally at the dose of 100, 250, and 500 mg / kg, to different groups of male mice (n = 6) once a day for seven days. The female Swiss Albino mice involved in mating were made receptive by and compared with the standard reference drug sildenafil citrate. Hormonal parameter like testosterone was evaluated. The most appreciable effect of the extract was observed at the dose of 500 mg/kg. The results indicated that the ethanolic extract of *Blepharis edulis* Linn. produced a

significant and sustained increase in hormonal levels of testosterone indication for the sexual activity of normal male mice without any adverse effects<sup>17</sup>.

#### 6. *Kesar* (*Crocus sativus*)

In ayurvedic classics *kesar* is mentioned highly useful in different skin disorders by its local application. In systemic use along with other ailments it is indicated to cure erectile dysfunctions and menstrual disorders.

In a study, the aphrodisiac activities of *Crocus sativus* stigma aqueous extract and its constituents, *safranal* and *crocin*, were evaluated in male rats. The aqueous extract (80, 160 and 320mg/kg body wt.), *crocin* (100, 200 and 400mg/kg body wt.), *safranal* (0.1, 0.2 and 0.4ml/kg), sildenafil (60mg/kg body wt., as a positive control) and saline were administered intraperitoneally to male rats. Mounting frequency (MF), intromission frequency (IF), erection frequency (EF), mount latency (ML), intromission latency (IL) and ejaculation latency (EL) were the factors evaluated during the sexual behavior study. *Crocin*, at all doses, and the extract, especially at doses 160 and 320mg/kg body wt., increased MF, IF and EF behaviors and reduced EL, IL and ML parameters. *Safranal* did not show aphrodisiac effects. The present study reveals an aphrodisiac activity of saffron

aqueous extract and its constituent *crocin*<sup>18</sup>.

#### 10. *Jaiphal* (*Myristica fragrans*)

It is an important drug to be used in patients who have problems of loss of libido and early ejaculation. *Myristica fragrans* *Houtt.* (nutmeg) has been mentioned in Unani medicine to be of value in the management of male sexual disorders. An study was undertaken to evaluate the aphrodisiac effect of 50% ethanolic extract of nutmeg along with its likely adverse effects and acute toxicity using various animal models.

The suspension of the extract was administered (100, 250 and 500 mg/kg, p.o.) to different groups of male rats daily for seven days. The female rats involved in mating were made receptive by hormonal treatment. The general mating behavior, libido and potency were studied and compared with the standard reference drug sildenafil citrate. Likely adverse effects and acute toxicity of the extract were also evaluated. Oral administration of the extract at the dose of 500 mg/kg, produced significant augmentation of sexual activity in male rats. It significantly increased the Mounting Frequency, Intromission Frequency, Intromission Latency and caused significant reduction in the Mounting Latency and Post Ejaculatory Interval. It also significantly increased Mounting Frequency with penile

anaesthetization as well as Erections, Quick Flips, Long Flips and the aggregate of penile reflexes with penile stimulation. The extract was also observed to be devoid of any adverse effects and acute toxicity. The resultant significant and sustained increase in the sexual activity of normal male rats without any conspicuous adverse

effects indicates that the 50% ethanolic extract of nutmeg possesses aphrodisiac activity, increasing both libido and potency, which might be attributed to its nervous stimulating property. The present study thus provides a scientific rationale for the traditional use of nutmeg in the management of male sexual disorders<sup>19</sup>.

### C) DRUGS IMPROVING ERRECTION, SEXUAL PERFORMANCE AND SPERM COUNT

#### 1. *Kokilaksha (Asteracantha longifolia)*

In ayurvedic classics this drug has been used as sexual tonic along with correction of semen abnormalities beside other ailments like urinary disorders and calculi. In an experimental study the ethanolic extract of seeds of *A. longifolia* was administered to groups of rats in 100, 150 and 200 mg kg<sup>-1</sup> doses for a period of 28 days, and the action compared with control rats. The changes in body and organ weight, sexual behavior, histo-architecture and fructose levels of seminal vesicles were observed. The sexual behavior was assessed by determining parameters such as mount frequency (MF), intromission

latency, mount latency (ML) and post-ejaculatory latency. The *ethanolic* extract exhibited pronounced anabolic effects in treated animals, as evidenced by gains in the body and reproductive organ weights. Increased spermatogenesis due to treatment with extracts was also witnessed in transverse section. The treatment further markedly affected sexual behavior of the animals, as reflected by the reduction of ML, increase in MF and enhanced attractability towards females. A significant increase in the sperm count as well as fructose levels of seminal vesicles was noted<sup>20</sup>.

### CONCLUSION

Sexual fitness and normal as well as healthy sperm count is important in many aspects. Before starting management of such conditions it is very important to diagnose the actual problem in any person. Although erectile dysfunctions are the commonest complaints, the other factors

may also count in certain cases. Here we have not considered only those aphrodisiacs working on ED but also included many drugs that can correct different abnormalities of sperms. Management of ED by herbal remedies is useful because of long cultural history of

utilization and the current renewed interest in natural products to sustain health globally. As a way recognizing the values and roles of traditional medical knowledge in health care provision, further research into the efficacy and safety of herbal approach for the management of ED is necessitated worldwide. The search for natural supplement from medicinal plants is being intensified probably because of its reduced side effects, its ready availability and reduced cost. The potency of the herbal plant drug is significant. Therefore, the increasing search for medicinal plants with aphrodisiac potentials has necessitated the need for screening medicinal plants with aphrodisiac potentials. All the herbal plants in this review have exhibited significant pharmacological activity. Large number of such herbal and herbomineral drugs are available in ayurvedic classics and other places. Many of them have proved clinical role in these ailments, whereas significant amount of experimental studies has been

performed with many drugs. Experimental studies has shown specific positive effects over ED, libido, sperm counts, sperm abnormalities, testosterone etc. These effects can be successfully implied in human beings also; in fact it is being used commonly. Depending upon above data *Ashwagandha*, *Kapikachhu*, *Shilajit*, *Kharjur*, *Sitab* can be used different abnormalities of sperms and shatawari, black *musli*, *akarkarabh*, *gukshura*, *utangana*, *kesar*, *jaiphal* can be used to improve erectile dysfunction, loss of libido, premature ejaculation etc. Whereas certain drugs like *kokilaksha* can solve both problems. In addition to these drugs few other drugs e.g. onion, garlic, *Datura metel*, *Atropa belladonna*, *Hyoscyamus niger*, *Cannabis sativa*, *Eurycoma longifolia*, *Avena sativa*, *Ginko biloba*, *Psoralea coryifolia* posses aphrodisiac activity. They can also be used after proper recommendations and with special precautions.

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