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Polycystic Ovarian Syndrome



# Role of Ayurveda and Yoga in the management of Polycystic Ovarian Syndrome (PCOS)

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Polycystic Ovarian Syndrome (PCOS) is the most common endocrine disorder affecting women of reproductive age, leading to symptoms such as irregular periods, pelvic pain, excessive hair growth, weight gain, acne, mood swings, and infertility. Stress and an unhealthy lifestyle worsen the condition, with prevalence rising to 5-10% among young women seeking infertility treatment. Unopposed estrogen exposure may increase the risk of endometrial and breast malignancies, while anovulation remains the primary cause of infertility. Conventional treatment options include hormonal therapy and surgical intervention, but these come with side effects like withdrawal bleeding, nausea, ovarian hyperstimulation, strokes, and shortness of breath. Yoga therapy and Ayurveda offer holistic alternatives for PCOS management. Yoga helps relieve stress - one of the major contributors to PCOS - through postures like Asanas, relaxation exercises, pranayama, and meditation, all of which balance hormonal function and soothe the mind. Specific Ayurvedic formulations, such as Rajahpravartini Vati, Dasamularishta, Ashokarishta, Kumaryasava, Phalaghrita, Rajadoshaharavati, Vyoshadi Guggulu, and Kanchanar Guggulu, are traditionally used to regulate hormonal balance and promote reproductive health. A structured daily practice of Yoga for 30 minutes, including Pranayama, meditation, and Shavasana, aids weight management and stress reduction, ultimately stabilizing hypothalamopituitary-ovarian function. This paper highlights the integrated approach of Ayurveda and Yoga in addressing PCOS, emphasizing their efficacy in restoring hormonal balance and improving overall reproductive health.

Keywords: Polycystic Ovarian Syndrome, Endocrine Disorder, Yogasanas, Rajapravarthinivati, Varunadhi Kashaya, Kalyanakshara

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## Introduction

Polycystic ovarian syndrome is the most common endocrine disorder in a woman of reproductive age. This heterogeneous disorder is characterized by excessive androgen production by the ovaries mainly. PCOS is a multifactorial and polygenic condition. Diagnosis criteria is any two of this three 1. Oligo-ovulation or anovulation manifested as oligomenorrhea or amenorrhea 2. Hyperandrogenism (clinical evidence of androgen excess) or hyperandrogenemia (biochemical evidence of androgen excess). 3. Polycystic ovaries (as defined on ultrasonography.[1]

In PCOS hormonal imbalance affects follicular growth during the ovarian cycle causing the affected follicles to remain in the ovary. The retained follicle forms into a cyst, with each ovarian cycle a new cyst is formed leading to multiple ovarian cysts, ultrasonic morphologic evidence of  $\geq$  12 follicles measuring 2.9mm diameter in single plane during quiescent phase of ovary i.e., 27 days of cycle associated with obesity, oligomenorrhea, anovulation, hyperandrogenism, hyperinsulinemia increased level of insulin in the blood is due to sensitivity of cells to insulin, androgen secretion by the ovarian stroma, and reduces serum sex hormone binding globin (SHBG) causing increased levels of free testosterone. Due to the presence of increased androgen in the ovary, the follicle undergoing maturation in the ovarian cycle is affected causing anovulation of particular follicle.

The ovarian cycle is governed by a hormonal feedback system moderated by the hypothalamus thus it requires constant feedback of hormonal for it properly regulate the release of follicle stimulating hormone (FSH), luteinizing hormone (LH) from the anterior pituitary gland. The hormonal feedback that the hypothalamus is receiving is due to high levels of oestrogen that has been formed from free androgens in the peripheral tissue. PCOS mainly caused by Stress & strain, Perennial tension, Modern faulty lifestyle, Anxiety, depression and its signs and symptoms are amenorrhoea, Irregular menstrual cycle, DUB, Ovarian cyst, infertility, Acne and blemishes Hair loss, Baldness similar to male, Dandruff, Acanthosis nigricans, Abdominal bloating, Frequent mood swings, Irritability, syndrome, Hair growth on the face and rest of the body, obesity and insulin resistance.[2]

The risk factors of PCOD are as follow: Heart attack, Diabetes, Strokes, Anxiety disorder, Depression and Uterine cancer are the consequences of PCOS.[3] In India, the prevalence of PCOS is highly variable, ranging from 2.2% to 26%.[4]

#### **Incidence**

The prevalence of PCOS in South Indian states like Andhra Pradesh is 9.13%,[5] In worldwide an estimated 6-13% of reproductive age women affects PCOS.

The features of PCOS may be correlated with "Puspaghnee Jataharinee"[6] described in Ayurvedic classics (Kashyapa Samhita, Kalpasthana) having the clinical features, viz. Vrutha Pushpa (may be correlated with amenorrhea anovulatory cycle), Sthulalomasha Ganda, i.e., obese cheeks with hairs be correlated with hirsutism hyperandrogenism). Another specific condition "Nashtarthava"[7] told by Susrutha can also be considered as PCOS. Major etiological factors are Atisnigdha, Atimadhura (high calorie food), Abhishyandi Ahara (Junk food), Alpa Vyayama (reduced bodily activities), *Divaswapna* (day sleep) are causes vitiation of Kapha Dosha.

PCOS is a disorder involving *Pitta, Kapha, Medas, Ambhuvaha Srotas* and *Artava Dhatu*. The causes of PCOS as per Ayurveda can be taken as eating excessive sweet and *Kaphavardhaka Ahara* and *Mandagni*. Because of this *Kapha* getting aggravated in PCOS, all three *Doshas* play important and distinctive role in the production, development, maturation and release of ovum, therefore the ovarian cycle and menstrual cycle is under control of Three Doshas.

On analysing the signs and symptoms of PCOS based upon Ayurvedic principles, it can be inferred that the Kapha, Vata vitiation is the main cause of this disease along with Rasa, Raktha and Medho Dhatu Dushti. The Agneyatwa of the Pitha is reduced in this condition. Kapha Vata Shamana and Pitha Vardhana is the basic treatment principle in Arthavarodha. So, a better intervention is that which improves Agni and clear Srotorodha. For this approach the available medicaments in the said classics are to regulate the menstruation and ovulation, weight reduction, and assisting fertility, many effective Ayurvedic regimens are described, [8] namely Rajahpravartini Vati, Dasamularista, Ashokarista, Kumaryasava, Phalaghrita,

Rajadoshaharavati, Vyoshadi Guqqulu, Kanchanar Guggulu, Varunadhi Kashayam Kalyanakshara etc. and also other herbs like Asparagus racemosus (Shatavari), Anethum graveolens (Shatapushpa), Tinospora cordifolia (Guduchi), Mentha spicata (Spearmint), Glycyrrhiza glabra (Yashtimadhu), Trigonella foenum graceum (Fenugreek), Cinnamomum cassia etc. were useful. Yoga and Meditation are amazing tools to boost the overall health and wellbeing of both the mind and body. Yoga has proved to play an important role in preventing and controlling Polycystic Ovarian Syndrome. Meditation that makes mind and body relax, improves the body metabolism and which enhances the strength of reproductive organs is a great treatment for PCOS. Especially with regards to PCOS Yoga helps in loss of weight, improve blood circulation to the ovaries and regulate the endocrine glands to balance hormones. All these leads to restore both mentally and physically. Yoga is the most beneficial form of exercise for the mind, body and the spirit. Regular practice of yoga enhances physical fitness and strength, de-stresses and regulates hormonal imbalance.

# Aim and Objectives

To evaluate possible line of treatment for the syndrome PCOS through *Ayurveda* along with Yoga and meditation

# **Materials and Methods**

Ayurveda classics, commentaries, modern literature, other recently published books and Research journals were thoroughly studied and then an effort was made to understand this syndrome.

# **Literary Review**

#### Reference of PCOS in Ayurveda

Word Aartava has been used extensively in Samhita in context of menstrual blood, ovum and ovarian hormones. If we interpret word Artava with menstrual blood, in Nashtartava due to obstruction of Artavavahasrotas by Vata and Kapha Dosha, passage of Aartava carrying channels is obstructed. So Aartava is not apparent monthly as in normal menstrual cycle bleeding which results in amenorrhoea. Ovum is a microscopic structure. Its presence in our texts was imagined by its role in conception.

If we say *Aartava* refers to ovum then we can consider *Nastartarva* as anovulatory cycles which causes infertility. Keeping this in view, we can consider *Vandhya* as female with anovulatory cycle in whom menstrual flow may be normal or not. This condition is seen in PCOS as 30% of women with PCOS have normal menses. If *Aartava* is taken as ovarian hormones, the basic pathology of PCOS in context of *Avarana* by *Dosha* can be understood. This *Aavarna* disturbs homeostasis of HPO axis causing hormonal imbalance leading to PCOS.

#### Nidana (causative factors)

PCOS is functional disorder of unclear aetiology and as such, is a diagnosis of exclusion with other androgen and ovulatory disorder of clearly defined aetiologies. We can correlate PCOS with *Vandhya Yonivyapad* and *Nashtartava*. As in our classics no specific etiology is described, so general causative factors for *Yonivyapad* can be considered as etiological factors.[9]

- 1. Mithyachara: Under this heading we can include Mithyaahara (faulty dietary habits) Mithyavihar (abnormal mode of life style) both. In PCOS under the heading of abnormal diet we can include pizza, burger, bread, cold drinks, spicy, oily, junk food consumption. Abnormal life style may be faulty habits of sleep (Diwaswapna, Ratrijagrana), stress, competition pressure and other Mansikbhawa like Irshya, Krodh, Dwesh. We can see that all these are also causative factors for obesity, which play a very important role in appearance of this particular disease also.
- **2. Pradushtartava:** The word *Aarthava* should be regard for ovarian hormones. As menstrual blood is a result of cyclic endometrial shedding under the influence of various hormones of HPO axis. In patients with PCOS ovarian compartment is the biggest contributor of androgens. Dysregulation of CYP 17, the androgen forming enzyme in both adrenals and ovaries may be the central pathologic mechanism underlying Hyperandrogenism in PCOS.
- **3. Bijadosha:** Various chromosomal and genetic abnormality comes under this heading. Its genetic origins are likely polygenic and/or multifactorial. This is complex multigenic disorder that results from the interaction between multiple genetic and environmental factors. A high prevalence of PCOS or its features among first degree relatives is suggestive of genetic influences.

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**4. Daiva:** Unknown or idiopathic causes comes under this heading. Each cause has its own causative process, potential and mode of action.

Evidence shows lifestyle modifications as a viable first-line effective means for preventing PCOS.10 It has been well documented that lifestyle modifications, such as proper diet,11 yoga, and exercise, help in decreasing the symptoms and severity of the disease.

**Yoga:** These are some of the ways in which yoga helps in PCOS

 Promotes mental wellbeing thus addressing issues of stress and anxiety. Helps in dealing with stressful situations of everyday life through breathing exercises.

- Solves digestive disorders which prevail in PCOS by improving functions of digestive organs.
- Increases heart rate, provides a cardiovascular workout and leads to weight loss.
- Builds muscles which combat insulin resistance which is very important to manage PCOS.
- Promotes hormonal balance, relaxation and brings adrenal and cortisol levels in control thus healing stress. This can enhance chances of conception too.
- Yoga helps to regulate endocrine glands in body thereby beneficial in balancing of hormones. Yoga is effective in keeping ovaries and uterus healthy along with solving issues such as infertility, weight gain & psychological problems.

#### Some of the important Yoga postures which are beneficial for PCOD are:

Yoga postures	Name of the Asana	Benefits
		Is also called as Anulom Vilom and it helps to soothe mind and refresh brain nerves with this brings peace and comfort to body thus cure PCOS naturally.
	Bhramri Pranayama	It control stress, strain, anxiety, tension and depression, etc. and helpful in contending mood swings.
		Stabilizes the mind, mood elevator and facilitates calming effect and it brings harmony within the body, mind and emotions to control PCOD naturally.

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		It helps to open up the pelvic area and promote relaxation and controls stress and relieve menstrual discomfort.
0	Sun Salutation (Surya	Sun Salutation is good to enhance flexibility in the body and controlling hormonal imbalance and weight.
Surya Namaskar		helps to de-toxify and de-stress the entire system
	Dhudan an ann a (Calaus	
*		Cobra pose exerts pressure on the stomach and helps to stimulate ovarian function. It has many
	pose)	advantages like improves digestion, bust stress, well for chest, lungs, and shoulder.
	Naukasana (Boat pose)	1. Naukasana is good in case of PCOS as the boat pose put excess pressure on the abdom inal region.
	ChakkiChalanasana(movin g the grinding wheel)	2. Helps to modify the endocrine glandular function thus enhances the efficiency of hormonal secretion.
	Padmasana	3. Helps to stretch the pelvic region and good to control hormonal imbalance.
		4. It control stress, strain, anxiety, tension facilitates calming effect of mind and it brings harmony within the body, mind and emotions to control PCOD naturally

The first step in management of PCOS is to get rid from obesity and stress. Relaxation is the key in PCOS. Integrating *yoga* and meditation at an early age in life can help us attain a disease-free body and a healthy mind. *Asanas* (*Yoga* postures) designed for PCOS help open up the pelvic area and promote relaxation and *Pranayamas* (breathing exercises) are powerful techniques that help to keep mind calm. Coupled with these are some soothing meditations that work at a very deep level and help de-toxify and distress entire system. Practicing above mentioned *Asanas* will help to boost health of pelvic organs such as uterus and ovaries and improve functioning of endocrine glands.

**Management of PCOS:** needs individualisation of patient. It depends on her presenting symptoms, menstrual disorder, infertility, obesity, hirsutism or combined symptoms. Patient counselling is important. Treatment is primarily targeted to correct bio chemical normalities. Weight reduction in obese patient is first line of treatment. Weight reduction (2-5%) improves metabolic syndrome and reproductive function for this physical exercise like **Yogasanas** are found beneficial.

**Ayurvedic Treatment:** includes *Shodhana* and *Shamana* therapy.

#### Shodhan therapy (cleansing measures):[12]

- Abhyangam with any Vata Hara Tail like Tila Tail, Erandatail
- Swedam (sudation) will be done with Vatahara Patra Swedam, Bashpa Sweda
- Vasthi with Narayana Tail, Varunadi Gritham, Bala Tail, Eranda Tail, Karpasa Tail, Kumari Tail. Maadhutailika Vasthi.
- Uttara Vasthi with Ksara Tail, Dhanvanthari Tail, Guduchi Tail, Ksheera Balatail, Brihath Shatavari Ghritam.
- Pichu Dharana with Phalatailam, Mundi Tail, Kumari Tailam

# Shamana therapy (conservative Treatment) [13]

Rajapravarthini vati, Asokadivati,
Rajodoshaharavati, Yogarajguggulu,
Vyoshadiguggulu, Kanchanaraguggulu,
Varunadikashayam, Dasamoolarista, Asokarista,
Kumaryasava and Pugapaka etc are some
formulations from our classics.

#### Pathyam (Diet according to Ayurveda)

Shali Rice, Barley, cereals, Lasuna (garlic), Kulutha (blackgram), Mastya (Fish), Mamsa (meat), Manda (wine), Krishna Tila (black sesame), Ksheera (milk), Haridra (turmeric), Sunthi (zinger) and all Agneya Dravyas & Pittavardhaka Ahara etc. are useful.[14]

#### General diet for PCOS:

- Take balanced and healthy diet, fresh fruits and fresh vegetables which are having enough fibre and roughage.
- Focus on protein like egg, fresh fruits, lentils, peas should be taken as it reduces oestrogen levels.
- Low saturated fats, nuts, seeds and olive oil should be encouraged as they contain essential fatty acids.
- Avoid more sugary and carbohydrate foods. Low glycaemic foods should be preferred.
- Vitamin B6 helps to maintain hormone balance and good to control PCOD.
- Vitamins B2, B3, B5 and B6 are good in controlling weight.

Do's	Don'ts
Drink adequate quantity of water.	Avoid junk, fast and
Take fresh foods and fresh vegetables salads	processed foods, milk
One should do regular exercise, Yoga and brisk	and milk products,
walk to maintain her weight	coffee.
Focus upon soothing music, nature and scenic	Avoid alcohol, Avoid
beauty gardening, and spending time at natural	faulty modern life
place	style

## **Discussion**

The successful treatment of PCOS is usually possible in the majority of patients by using natural, noninvasive and non-chemical remedies. The herbal therapies are found to restore the normal rhythm of the menstrual cycle by balancing the hormones and also they are found to restore the imbalance of Doshas occurring due to anovulation. Moreover, there are some herbs like Shatavari, Shatapuspa, Yastimadhu, Guduchi, Haridra etc are having available phytoestrogens, which can also maintain the level of insulin and lowers the lipid levels thus helpful in the treatment of PCOS. Yoga is a holistic science and art of living. This is because routines Yoga Asanas, Pranayamas breathing techniques and Kriyas (cleansing exercises) prescribed in Yoga help to tone up the whole system.

Daily yoga for 30 minutes with 4 Asanas, 4 Pranayama, meditation and Shavasana helps in weight reduction and stress management which ultimately stabilize the normal function of hypothalmo- pituitary – ovarian axis and cure PCOS. So, it is time to acknowledging the role of Yoga as a safe and effective treatment for PCOS.

### Conclusion

Polycystic ovarian syndrome is a complex disorder with multiple aetiologies for which multiple treatment approaches are required, depending on the reason a patient seeks treatment. For this one needs controlled and balanced diet and exercise for weight reduction along with medication and lifestyle management. Thus, adopting a holistic treatment mentioned in Ayurveda, good life style with appropriate diet, *yoga*, *Pranayama* and stress-free living synergistically can prove to be effective in the management of PCOS.

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