

## PREVENTIVE ROLE OF *YOGIC* PROCEDURE INCLUDING *ASHTANGA YOGA* IN PCOD

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### ABSTRACT

*Polycystic Ovarian Disease (PCOD), a very common hormonal disorder was originally described in 1935 by Stein and Leventhal. The prevalence of this disease is ranging from 20-30% in females. It is a heterogenous disorder that usually present during adolescence (according to WHO, adolescent age is between 10-19 years). This condition is arising these days due to busy schedule, abnormal physical, mental, behavioral problems. Therefore, a holistic approach is required to tackle such problem. In this study an attempt has been made that how Yogic procedures including Ashtanga Yoga is helpful in preventing this condition along with awareness to prevent the upcoming problems. I will highlight the usefulness of **Shatkarma**-Jala Dhauti, Jala Neti, Trataka, Kapalbhathi; **Ashtanga Yoga**- Yama (Ahimsa, Satya, Asteya, Bhramcharya, Aparigraha), Niyama (Saucha, Santosha, Tapa, Swadhyaya, Ishwara pranidhana), Asana, Pranayama, Pratyahara, Dharna, Dhyana, Samadhi.*

**Key words:** PCOD, Yogic procedures, Ashtanga Yoga, Shatkarma.

### INTRODUCTION

PCOD is one of the most prevalent female endocrine health problem. It is a multifactorial and polygenic condition. Diagnosis is based upon the presence of any two of the following criteria (ASRM/ESHRE, 2003): Oligo and/ or anovulation, Hyperandrogenism, polycystic ovaries. On ultrasonography, ovaries are enlarged, ovarian volume is increased  $\geq 10\text{cm}^3$ , capsule is thickened and pearly white in color, presence of multiple ( $\geq 12$ ) follicular cysts measuring about 2-9 mm in diameter are found crowded about the cortex.[1] There is no known cause of PCOD. However, there are association with excess insulin, low grade inflammation and genetics. PCOD is thought to have a genetic component. People who have mother or sister with PCOD are more likely to develop this condition.

This condition is alarming these days in adolescent girls because of faulty lifestyle like less physical activities or sedentary lifestyle, changed eating habits and their pattern, inadequate sleep. Most youngsters eat processed and junk food, use of gadgets left no time to them for physical activities. One of the chief causes is stress and it slows down metabolism making food stay in stomach. Timings of meals, sleep and awake affects our cortisol level. Cortisol is also known as “stress hormone”. Now, children not only have new resources in their lives, but are expected to perform well. Different institutions in adolescent lives, such as family, school and the media constantly provide stimulation as well as expectations. This exposure to new expectations and demands has the potential to create stress in them. Due to chronic stress, adrenals secrete more cortisol hormone which leads to many problems like PCOD and this is the most prevalent disease these days having prevalence rate 20-30% in young females.[1] Girls with PCOD are at high risk of fertility problems (menstrual disorders, failure to ovulate, infertility), metabolic problems (insulin resistance, type 2 Diabetes Mellitus, dyslipidemia, hypertension and cardiovascular diseases), physical problems (obesity, acne, hirsutism, hair loss and baldness) and Psychological problems (depression, stress, anxiety).

### AYURVEDIC PERSPECTIVE OF PCOD:

There is no direct reference in *Ayurveda* for polycystic ovarian diseases. But according to symptoms this disease can be correlated with *Artavakhsaya*, *Nashtartava*, *pushpaghani* *Jathaharini*.

आर्तवक्षये यथोचितकालादर्शनमल्पता वा योनिवेदना च ॥ (सु. सं. सू. १५/१२)

In the event of deficiency or loss of *Artava*, the menstruation does not appear in its appropriate time or is delayed, is scanty and does not last for three days. There is also pain in vagina.

वृथा पुष्पं तु या नारी यथाकालं प्रपश्यति।

स्थूललोमशगण्डा वा पुष्पघ्नी साऽपि रेवती॥ (का. सं. क. रेवतीकल्प/३३)

जिस स्त्री को यथासमय रजोदर्शन होता है परन्तु वह व्यर्थ (बिना फल वाला) होता है। जिसके गण्डस्थल (कपोल) स्थूल एवं लोम युक्त होते हैं उस रेवती को पुष्पघ्नी कहते हैं।

नष्टार्तवः दोषैरावृतमार्गात्वादात्तं नश्यति स्त्रियाः। (सु. सं. शा. २/२१)

दोषों से मार्ग (आर्तववह स्रोतस मुख) के अवरूद्ध हो जाने से आर्तव का नाश हो जाता है अर्थात् वह प्रवर्तमान होकर दिखाई नहीं देता, यद्यपि उसका सम्पूर्ण नाश नहीं होता।

यहाँ पर दोषों से तात्पर्य वात एवं कफ से है क्योंकि पित्त की वृद्धि से रक्त की वृद्धि होने के कारण अतिप्रवृत्ति अर्थात् आर्तव की अत्यधिक प्रवृत्ति रूप लक्षण दृष्टिगोचर होता है। ख२,

वातकफावृतमार्गाणां त्वप्रवर्तमानं.....।। (अ. सं. शा. १/१३)

.....वातश्लेष्मणा आवृत्तरक्तमार्गाणां.....। (अ. सं. शा. १/१३ की इन्दु टीका)

वात एवं कफ के द्वारा मार्ग अर्थात् रक्त मार्ग का अवरोध हो जाने से आर्तव की प्रवृत्ति नहीं होती।

**Patho-physiology of PCOD:** As this disease is correlated with stress. Any stressful situation affects balance between sympathetic and parasympathetic systems by activation of Hypothalamo-pituitary-adrenal axis (HPA). The Pituitary gland, stimulated by the brain via hypothalamus, secretes adrenocorticotrophic hormone (ACTH) which stimulates adrenal gland to produce cortisol, adrenaline and nor-adrenaline. ACTH follows diurnal rhythm, meaning it's higher in morning and lower in evening, but spikes in response to physical and emotional stress. High cortisol level causes- rapid weight gain, high blood pressure, muscle weakness, mood swings, depression, anxiety, irritability and irregular periods.[3] In addition to these stress hormones, ACTH also stimulates the production of adrenal androgen hormones, including DHEA, DHEA-S, Androstenedione and these hormones also cause the symptoms of elevated androgens seen in PCOD.

## PREVENTION OF PCOD:

“Yoga is not an ancient myth buried in oblivion. It is the most valuable inheritance of the present. It is the essential need of today and culture of tomorrow.”

-SwamiSatyanandaSaraswati.

Yoga is a science of right living and it works on all aspects of health dimensions: physical, mental, social, emotional and spiritual. The word *Yoga* means “union” or “oneness” and is derived from the *Sanskrit* word *Yuj* which means to join.

Yoga is lot to offer in terms of Psychosomatic disorders and in stress related disorders in which PCOD is one of them. For detoxification of body *Shatkarma* procedures are helpful.

## SHATKARMA:

मेदः श्लेष्माधिकः पूर्वं षट्कर्माणि समाचरेत्।

अन्यस्तु नाचरेतानि दोषाणां समभावतः।। (ह. यो. प्र. २/२१)

Persons having excess of *Shleshma* and *Medas* (fat), should practice *Shatkarma*, otherwise it is not necessary as *Doshas* are in equilibrium.

Following *Karma* are given below for the prevention of PCOD:

**A. Jala Dhauti:**

स्त्रीहृक्कुष्ठं कासश्वासं कफरोगाश्च विंशतिः।

धौतिकर्मप्रभावेण प्रयान्तेव न संशयः॥ (ह.यो.प्र.२/२५)

Also known as *Vaman Dhauti* and *Kunjla Kriya* and *Gajkarni Kriya*. *Dhauti* is one of the six purification methods or *Shatkarma* of *Hathayoga*. Since *Jala Dhauti* works on *Kaphaja* diseases and it seems that PCOD is also *Kapha* dominant disease. So, *Jala Dhauti* may help to balance the state of *Kapha* in the body and thus give relief in this diseases.

**B. Jala Neti:**

कपालशोषिणी चैव दिव्यदृष्टिप्रदायिनी। (ह.यो.प्र.२/३०)

It clears nasal passage and affects whole head region due to its cleanliness process. It calms the mind thus helps to reduce emotional and mental cause/etiology of the PCOD and it may help to regulate the hormones present in the body. Also by *Acharya Vagbhata* in *Ashtanga Hridaya*: नासा हि शिरसो द्वारं. ....(अ. ह.) By this *Shloka* it is clear that nasal passage is the way to head region, Therefore, *Neti* can help balance hormones in the body. Cleanses the nervous system and calms the mind, helps relieve stress and develop health oriented farsightedness (fnO;n`f`Viznkf;uh).

**C. Trataka:**

*Trataka* provides stability to mind. It reduces stress, develops concentration & confidence and regulates activities of mind which again taking us in balance state by acting on mind. It helps to reduce mental, emotional and hormonal cause of the diseases.

**D. Kapalbhathi:**

कपालभातिर्विख्याता कफदोषविशोषिणी॥ (ह.यो.प्र. २/३५)

It is a *Pranayamic* exercise of forceful exhalation and passive inhalation. This is great way to focus on *Prana* or life force through breath and channel it for purifying the body with great oxygenation. It also massages the abdominal and pelvic organs which balance *Agni*, improves digestion and maintaining the functions of pelvic organs.

**ASHTANGA YOGA:**

The purpose of this paper is to guide and make awareness in young girls towards their health that can be achieved by balanced mind and the body and to give them proper direction in life. We can introduce them with the knowledge of *Ashtanga Yoga*- eight limbs of *Yoga* (*Maharishi Patanjali*).

*Yama, Niyama, Asana, Pranayama, Pratayahara, Dharna, Dhyana, Smadhi.*

**1) Yama**- (Universal moral commandments) It is the first step or component of *Patanjali's Ashtanga Yoga*. *Patanjali* has described five *Yamas* namely-

श्रद्धिसासत्यास्तेयब्रह्मचर्यापरिग्रहा यमाः॥१ ;पं. यो. सू.२/३०६

By *Mana, Vachana, Karma* (mentally, verbally or physically) one should not hurt or steal anything, speak truth, practice celibacy especially in adolescent age and not preserve things which help to more flourish positive attitude and thereby positive personality of a human being. As we know almost diseases are caused by *Asatamyaindriyarthasamyoga, Pragyapradha, Parinama and Mithya ahara-vihara* where more or less mental and sensual imbalance are present in various ratio. It can be corrected by *Ashtanga Yoga* using *Yama* which is almost mental practice. Therefore, one must follow *Yama* because it teaches the principles & values and lay the foundations of social behavior.

**2) Niyama**- (Self purification by discipline) There are five *Niyamas*:

शौचसन्तोषतपः स्वाध्यायेश्वरप्रणिधानानि नियमाः॥१ ;पं. यो. सू.२/३२६

These are the rules of life which every youngster has to follow:

a) *Shaucha*, purity external and internal. External purity is attained by cleanliness of the body, clothing, residence and utilization of clean food whereas internal purity is attained by removal of lust, anger, greed, jealousy etc.

b) *Santosh*, cuts root of all desires, it does not mean satisfaction only but willingness to accept things as they are and to make best of them.

c) *Tapa*, means adolescent should do everything with full determination and one should do their *karma* without any desire.

d) *Swadhyaya*, means study of self and scriptures & statements of the evolved and enlightened persons which may enable an individual to differentiate between the good and the evil.

e) *Ishwar pranidhana* means total surrender to God.[4] By practicing *Niyamas* youth become disciplined and their willpower become so strong that they can make themselves out of the trap like junk food, more use of gadgets, late night sleep etc. and also they will be inclined towards the God.

*Yama* and *Niyama* are the ethical practices and they control the passion and emotion and keep an adolescent in harmony with the society.

### 3) Asana and Pranayama:

“स्थिरसुखमासनं” (पं. यो २/४६) means *Asana* is a posture in which an individual may stay stable and comfortable for a prolonged period.

तस्मिन् सति श्वासप्रश्वासयोगतिविच्छेदः प्रणायामः। (पं.यो. २/४६)

It is related with the practice of breath control. *Pranayama* is concerned with the expansion of vital energy i.e. *Prana*.

Weight loss and balanced mind is the powerful prevention for PCOD, therefore, increased physical activities help a lot in losing weight and balancing mind.

*Asana* and *Pranayama* promote hormonal balance and deep relaxation, helping to bring the adrenal and cortisol levels of stressed-out PCOD minds and bodies in check and assisting in healing from chronic inflammation.

Following *Asanas* are helpful in strengthening the pelvic organs and the body system affected by PCOD and also reduces stress that can aggravate the condition:

सूर्यनमस्कार, भद्रासन, पश्चिमोतानासन, अर्धमत्स्येन्द्रासन, शशांकासन, मण्डूकासन, मार्जारासन, पवनमुक्तासन, नौकासन, भूजंगासन, धनुरासन श्वासना।

*Asanas* reduces hormonal imbalance, it also reduced hirsutism and improve menstrual frequency and can help reducing anxiety symptoms in adolescent girls.[5]

Following *Pranayama* for preventing PCOD are

भस्त्रिका, भ्रामरी।

In *Bhastrika Pranayama*, abdominal muscles and diaphragm are used which puts pressure on internal organs. In PCOD there is excess of accumulation of adipose tissue in abdominal region due to insulin resistance. This *Pranayama* can help in raising metabolic function at the cellular level to increase the burning of fat and promoting healthy, natural weight loss. Further it will help in relieving insulin resistance.

*Bhramari* relieves stress and cerebral tension alleviating anger, anxiety, insomnia and reducing blood pressure. It strengthens the endocrine glands especially thyroid and nervous system.

**4) Pratayahra-** It is the practice of self control for an individual attempts to withdraw the senses from their object. A person is able to effectively engage into the practice of *Samyama*. Youngsters are very fond of junks, gadgets etc. This practice helps them to control their desires.

Here we automatically withdraw from the external and bring our focus inwards towards our breath.

5) *Dharna, Dhyana*-Maharishi Patanjali says *Dharna, Dhyana*, together constitute *Samyama* (unity or mastery) and from mastery of that *Samyama* pure consciousness is attained as a permanent state. "योगश्चित्तवृत्तिनिरोधः॥" One can make control over *chitta* by practicing this. It can help adolescent make healthy society by controlling their anger, irritability and aggressive behavior and that will not lead to stress and negative behavior and therefore no hormonal imbalance is there in the body. It will prevent from lifestyle disorders and can help in making healthy society.

## DISCUSSION AND CONCLUSION:

Adolescent period is the best time to correct any growth deficiency. PCOD is very common diseases of today in young girls. To prevent this, holistic approach is needed because it takes into consideration the individual's whole wellbeing including physical, mental, spiritual and emotional health. We should give proper direction to young girls regarding *Yogic* procedures like *Shatkarma* and *Ashtanga Yoga*.

These purificatory practices are designed in *Hathayoga* tradition for purifying the body time to time. It is known that due to routine wear and tear of body tissues, food and air pollution etc. in daily life a range of impurities accumulate in the body at all levels- organs, viscera, tissues, cells and body fluids. They block the channels of the body making the body functions sluggish. Hence periodical purification of the interior of the body is essential to conserve the normal body-mind function and also to facilitate the practice of Yoga.[6] Therefore, it is important to teach these things in adolescent age and encourage them to do these practices. It will improve health of youngsters and make them active to perform their activities. *Shatkarma* is necessary before any other practices because it purifies the body and mind and facilitates the body for *Yoga* practices. These *Yogic* procedures also include *Ashtanga Yoga* and it is the potential tool for the youth to deal with stress and make them aware about the consequences of their present lifestyle. Adolescence is a growing age and if proper understanding & guidance is provided to youngsters in the initial stage they can be prevented from various psychosomatic diseases like stress, depression, anxiety, PCOD etc. It can be believed that *Ashtanga Yoga* is one of the complete *Yoga* practices, as it not only works physically, but also creating unification between body and mind. The ultimate goal is to achieve peace, good health, harmony and calmness.

Practicing *Yogic* procedures in adolescent with PCOD is better than a conventional physical exercise program in reducing anxiety symptoms, reducing mFG (modified Ferriman and Gallway) score for hirsutism, improving menstrual frequency, improving glucose, lipid and insulin values.[7]

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