IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.53
Volume 5, Issue 2, January 2025

To Study the PCOS (Polycystic Ovary Syndrome)

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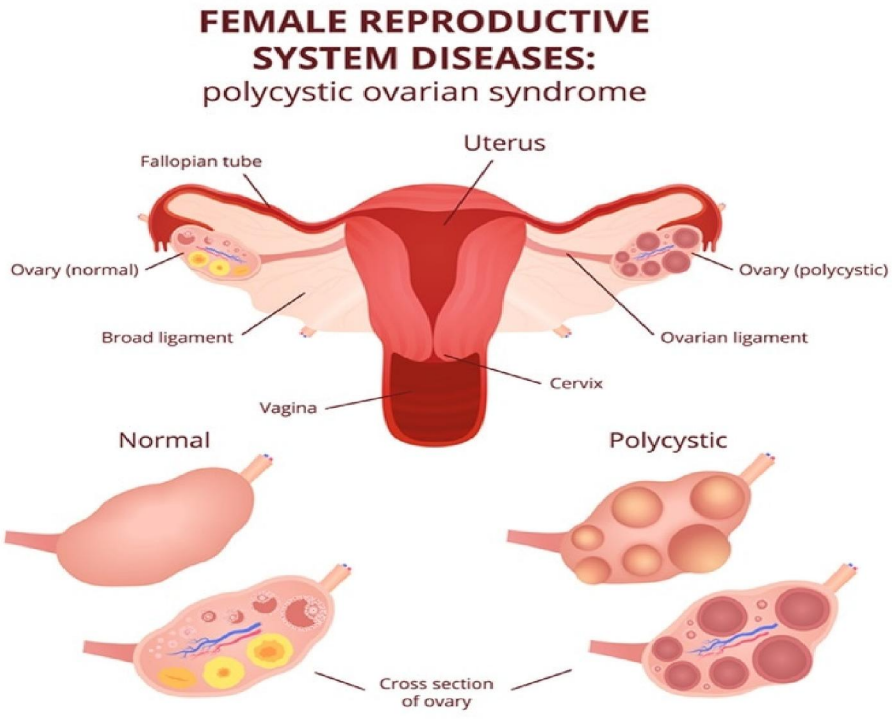
Abstract: *Polycystic ovary syndrome (PCOS) is an endocrine-gynacology disorder affecting many women of childbearing age. Although a part of the involved mechanism in PCOS occurrence is discovered, the exact e. Epigenetics, environmental toxicants, stress, diet as external factors, insulin resistance, hyperandrogenism, inflammation, oxidative stress, and obesity as internal factors were investigated etiology and pathophysiology are not comprehensively understood yet. According to the World Health Organization (WHO) estimation revealed over 116 million women (3.4%) are affected by PCOS worldwide.*

Keywords: Polycystic ovary syndrome

I. INTRODUCTION

Polycystic ovary syndrome (PCOS) is a heterogeneous endocrine disorder that impacts many women of the reproductive age worldwide. It is estimated that is every 1 in 10 women face PCOS before menopause and struggle with its complications.

To manage this condition, the most crucial step is to lose at least 5% of the weight; therefore, having a regular exercise plan and fat and sugar free diets are also recommended to every woman with PCOS. This review discusses PCOS's definition, diagnosis, and etiology, focusing on the pathogenesis and management of this syndrome. Internal and external factors contributing to PCOS have been comprehensively studied, and several commonly prescribed medications with their complete drug information are provided. Subsequently, a couple of repurposed medications are mentioned thoroughly, reviewing the related clinical trials over the past five years.



DOI: 10.48175/IJARSCT-23068

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What is polycystic ovary syndrome (PCOS)?

Polycystic overy syndrome (PCOS) is one of the most common endocrine and metabolic disorders of reproductive-aged individuals assigned female at birth. Heterogeneous by nature, PCOS is described through a combination of signs and symptoms of androgen excess and overien dysfunction, in the absence of other specific diagnoses.

Three main features are identified in individuals with PCOS, including irregular menstruation ovulation does not follow a regular pattern); elevated androgen levels that may increase the appearance of facial or body hair, and polucysticoveries.

Lifestyle Modification and Non-Pharmacological Approaches:-

Weight Loss:

Elevated androgenic hormone levels lead to weight gain in women with PCOS, mainly in the abdominal area.The first step for women diagnosed with PCOS would be weight reduction and calorie intake restriction. Many studies demonstrate that even a 5% to 10% reduction in weight can restore the regular menstruation cycle.

Exercise:

Exercise and physical activity play a key role in weight reduction. Several studies show that exercise, with or without being on a diet, can resume ovulation in women with PCOS. In overweight and obese women, exercise leads to lower insulin and free androgen levels, inducing the restoration of HPA regulation of ovulation.

Diet:

To achieve specific goals for each woman, the best diet or nutrient regimen would be the tailored one. some suggestions may help choose what to eat more or less. An ideal diet would be rich in fibers and low in saturated fats and carbohydrates. Low glycemic index carbohydrates are at the top of our agenda; they include foods and vegetables like broccoli, raw carrot, lentils, soy, bran breakfast cereals, whole-grain bread, etc. Patients should also be aware that foods with a high glycemic index for prevention, white rice, cakes and cookies, fries or chips, and some fruits such as pineapple or watermelon are actual examples.

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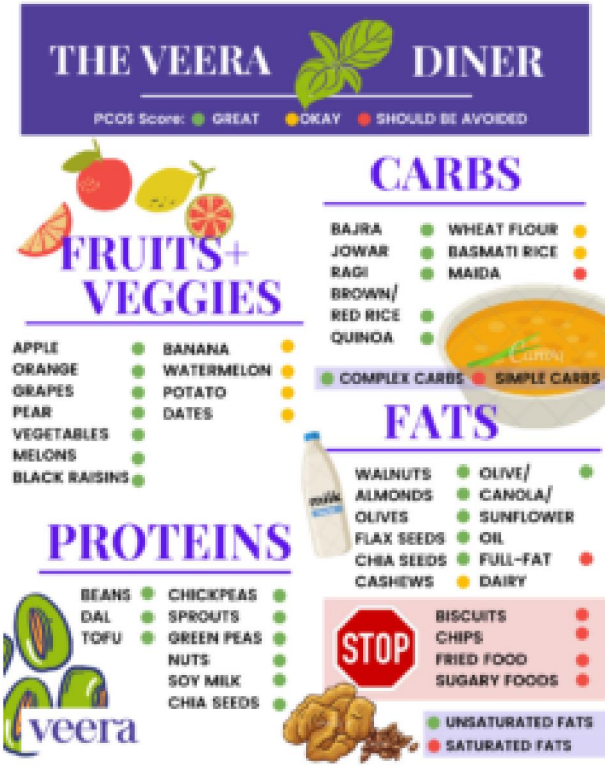
Lifestyle Changes:

Adopting a healthy lifestyle, including a balanced diet, regular exercise, stress management, and adequate sleep, can help improve symptoms and regulate menstrual cycles in women with PCOD and PCOS.

Pharmacological Treatments:

Before heading to pharmacological approaches, healthy lifestyle advice must be given to all women diagnosed with PCOS regardless of their weight, complaint, or anything else.This is because, in most cases, and especially in mild to moderate forms, women can solely benefit from diet and exercise. the treatment would rely mainly on the patient's choices and condition in others.

There are lots of limitations and precautions, and not everyone can benefit from the agents mentioned above owing to their adverse effects or contraindications. Many COC agents cause nausea and vomiting as they try to stimulate the pregnancy situation for the body. In addition, depression, headaches, and migraine are commonly seen in those taking them.



Symptoms:

Symptoms of pcos often start around the time of the first menstrual period.

Common symptoms of pcos include:

- Irregular periods =difficulty getting period (because the irregular ovulation or no ovulation)
- Excessive hair growth =usually on the face, chest, back.
- Weight gain
- Thinning hair and hair loss from the head
- Oily skin or acne
- Difficulty getting pregnant (infertility).
- Mood swings, anxiety, or depression.

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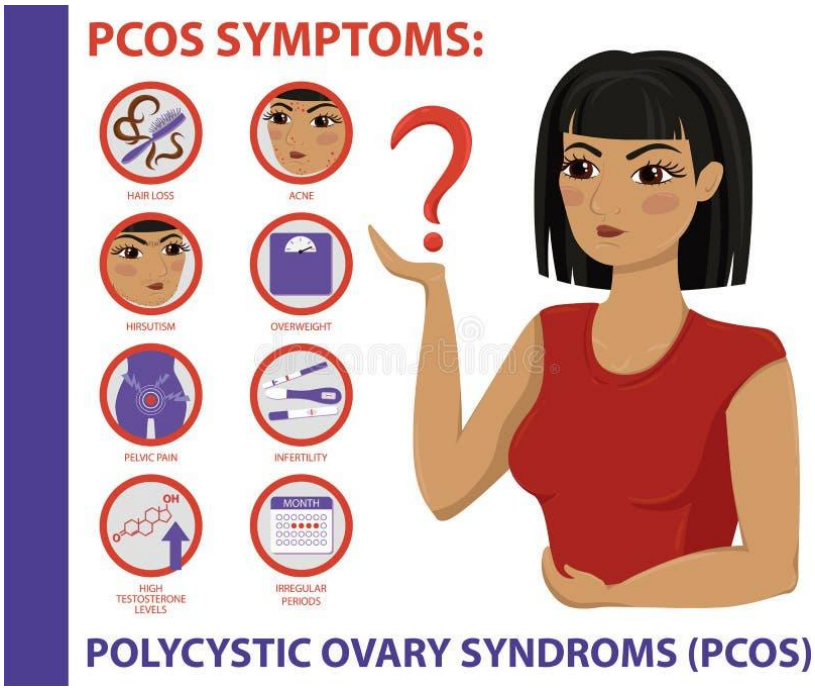

Fertility problems:

Pcos is one of the most common cause of female infertility. Many women discover they have pcos when they are having difficulty getiing pregnant.

During each menstrual cycle, the ovaries release an egg into the uterus . This process is called as ovulation usually occurs once a month.

But women with pcos do not ovulate or ovulate, which means they have irregular or absent period and find it difficult to get pregnant.

Cause:

Hormone imbalance:

Many women with pcos are found to have an imbalance in certain hormones, although all women usually produce small amount

Raised level of luteinising hormone (LH)-this stimulates ovulation, but may have an abnormale effect on the ovaries if level is to high.

Genetics:

Pcos sometime in families. If any relative, such as your mother,sister or aunt,have pcos, risk of you developing it is increased.

This suggests there may be a genetic link to pcos, although specific genes associated with the condition have not yet been identified.

II. CONCLUSION

While significant progress has been made in understanding PCOS, several research Questions remain. For instance, there is a need for further investigation into the etiology of PCOS, including the role of genetic and environmental factors, to aid in earlier diagnosis and Treatment. Additionally, while some therapies have been effective in managing the Symptoms of PCOS, their long-term efficacy and safety remain uncertain. There is a need To better understand the long-term health consequences of PCOS, particularly regarding Cardiovascular disease and cancer risk. Early diagnosis,

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lifestyle modifications, and Appropriate medical interventions can help to reduce the risk of complications and Improve the overall health outcomes of women with PCOS. Looking forwards, there is a Need for a multidisciplinary approach to studying PCOS, including collaborations Between researchers healthcare providers, and patient advocacy groups. This may involve Developing new tools and technologies for diagnosis and treatment, as well as exploring Novel interventions and therapies. There is a growing recognition of the importance of PCOS as a major health issue affecting millions of women worldwide, and continued Research efforts will be critical for improving diagnosis, treatment, and long-term Outcomes for those affected by the condition.

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