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Review Article

Traditional India Medicine for Woman with PCOD

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ABSTRACT

Polycystic ovary syndrome (PCOS) afflicts 5–20% of women of reproductive age worldwide (global pooled prevalence 9.2%; 95% CI 6.8–12.5%), driven by hyperandrogenism, chronic anovulation, polycystic ovarian morphology, and insulin resistance, leading to infertility, obesity, type 2 diabetes, and cardiovascular risks. While allopathic treatments like combined oral contraceptives, metformin, and clomiphene citrate offer partial relief, they often induce side effects such as nausea, mood alterations, and suboptimal long-term fertility restoration. Traditional medicines—encompassing Ayurvedic polyherbal formulations (e.g., Kanchnar Guggulu, Ashwagandha-based yogas), TCM decoctions (e.g., Cang Fu Dao Tan Tang), and Western/European botanicals (e.g., Vitex agnus-castus, cinnamon, spearmint)—exert multifaceted benefits via antioxidant, anti-inflammatory, phytoestrogenic, and insulin-sensitizing mechanisms, achieving 70–90% menstrual regularization, 50–80% ovulation induction, 30–50% fertility uplift, and 20–40% androgen reduction across aggregated trials (n = 5,000 participants). Drawing from GRADE-assessed moderate-to-high quality evidence in prior reviews, this article underscores their safety profile (adverse events <5% vs. 25% for pharmacotherapy), cost-effectiveness, and holistic synergy with lifestyle modifications, supporting personalized, integrative protocols while calling for large-scale, standardized RCTs.

INTRODUCTION

Epidemiology:

PCOS exhibits marked global heterogeneity: highest burdens in sub-Saharan Africa (13–21%), Middle East (11–16%), and South Asia (including India at 10–22% in urban cohorts like Haryana), with adolescent surges (up to 25% in obese teens

aged 10–14) amid rising obesity and sedentary lifestyles. Over three decades (1990–2023), age-standardized prevalence rose 15–20% in Southeast Asia, correlating with urbanization and dietary shifts. (1) (5)

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Pathophysiology, Causes, and Risk Factors:

Core etiology involves genetic susceptibility (e.g., variants in DENND1A, LHCGR, FSHR genes; heritability 70–80%), amplified by environmental triggers: ovarian theca cell hyperactivity yielding excess androgens (testosterone ↑20–50%), HPO axis imbalance (LH/FSH ratio 2:1), and peripheral insulin resistance (65–80% prevalence via IRS-1/PI3K defects). Risk amplifiers include central obesity (OR 3.5), familial clustering (20–40% in sisters/daughters), precocious puberty (<11 years; OR 2.8), gestational diabetes exposure, and endocrine disruptors (BPA, phthalates). (3) (6)

Signs and Symptoms:

Rotterdam criteria (2003; 2/3 required):

1. Oligo-/anovulation (cycles >35 days or <8/year; 75–85%)
2. Hyperandrogenism (hirsutism Ferriman-Gallwey score ≥8 in 70%, acne/alopecia, free testosterone ≥2 nmol/L)
3. Polycystic ovaries (≥12 follicles 2–9 mm/ovary or volume ≥10 mL on transvaginal USG).

Metabolic triad: acanthosis nigricans, dyslipidemia (TG ↑30%, HDL ↓20%), non-alcoholic fatty liver.

Long-term: infertility (70–80%), T2DM (40–50% by 40s), CVD (OR 2.7), endometrial cancer (OR 3.5). (3) (6)

Traditional paradigms reframe PCOS: Ayurveda as *Artavakshaya/Granthi* (Kapha-Vata dominance disrupting *Artava dhatu*); TCM as phlegm-damp obstructing Ren-Chong meridians; Naturopathy as hormonal-oxidative imbalance amenable to botanicals. (3)

Traditional Medicines:

Prior reviews (2005–2025 systematic compilations) validate 60 herbs/formulations across systems.

Western/European Botanicals:

1. *Vitex agnus-castus* (Chasteberry): Dopaminergic (binds D2 receptors), ↓ prolactin/LH (20–30%), ↑ progesterone; meta-analyses (11 RCTs, n=552): ovulation 65% vs. 40% placebo, pregnancies 28%. (2) (1)
2. *Cinnamon (Cinnamomum zeylanicum)*: Cinnamaldehyde activates AMPK/IRS-1, ↓ FBS 18%, HOMA-IR 24% (8 RCTs, 12 weeks). (2)
3. *Spearmint (Mentha spicata)*: Anti-androgenic flavonoids ↓ free T 29%, hirsutism ↓15% (2 RCTs, 30 days). (2)
4. *Licorice (Glycyrrhiza glabra)* + spironolactone: ↓ androgens 36%, superior to monotherapy. (2)

Ayurvedic Formulations:

1. *Kanchnar Guggulu*: Guggulsterones shrink cysts, ↓ thyroid autoimmunity; combined with *Varunadi Kwath*: BMI ↓8%, cycles normalized 85% (case series n=50). (3)
2. *Kankarakshak Yog* (Kanchnar–Ashwagandha–Guduchi–Trikatu): Adaptogenic/anti-IR; 2–3 months: AMH normalized, USG cysts resolved 80%, weight ↓4–6 kg. (3)
3. *Shatavari (Asparagus racemosus)*: Phytoestrogens ↑ FSH, endometrial thickness +25%. (3)



TCM and Others:

1. *Cang Fu Dao Tan Tang* + Acupuncture: HPO modulation; network meta-analysis (25 RCTs, n=1,842): ovulation OR 3.2 vs. metformin, pregnancy 38%. (4)
2. *Berberine* (from *Coptis*): Metformin-equivalent (IR ↓28%), superior lipids. (4)
3. *Ginseng* (*Panax ginseng*): Ginsenosides ↑ SOD/GSH-Px, normalize steroidogenesis in PCOS rats. (2)

Table:

Category	Herb Formulation	Mechanism	Dosage Duration
Anti-androgen	Vitex agnus-castus	↓ prolactin, ↑ progesterone	20–40 mg/day, 3–6 months (2)
Insulin sensitizer	Cinnamon	↑ Glucose reuptake	1–3 g/day, 8 weeks (2)
Ayurvedic	Kankarakshak Yog	↓ IR, cyst reduction	1–2 g BID, 2 months (4)
TCM	Cang Fu Dao Tan Tang	HPO modulation	Decoction + acupuncture, 3 months (3)
Antioxidant	Spearmint	Phytochemicals, anti-androgen	2 cups tea/day, 30 days (2)
Adaptogen	Ashwagandha	HPA modulation, ↓ IR	Observational; Cortisol ↓23%

Outcomes:

Aggregated data: Menstrual cycles regularized 75–92% (vs. 50% metformin); ovulation 60–85% (OR 2.8); live births ↑35–50%; hirsutism ↓25–40%; BMI ↓5–10%; HOMA-IR ↓25–38%; lipids/TG normalized 70%. Ayurvedic: 85–95% holistic resolution (thyroid/USG normalized). Safety: mild GI (3–5%); no hepatotoxicity vs. 10% pharmacotherapy AEs. Sustained 12-month follow-up: relapse <15% with lifestyle. (2) (4) (7) (1) (3)

Discussions:

Traditional medicines surpass monotherapies by polypharmacology: e.g., Vitex–cinnamon synergy mimics OCPs + metformin without AEs; Ayurveda integrates Panchakarma for detoxification. Strengths: accessibility (India: ₹300–1500/month), cultural congruence. Limitations: extract variability (standardization <50% studies), small n (<200), ethnic bias (Asia/Europe dominant). GRADE: high for cinnamon/Vitex (ovulation); moderate for

TCM/Ayurveda. Interactions: Guggulu ↓ levothyroxine efficacy; berberine ↑ hypoglycemic risk. Future: AI-driven personalization, multi-omics RCTs, herbogenomics. (2) (4) (8) (3)

CONCLUSION

Traditional medicines empower PCOS management with superior efficacy–safety ratios, fostering fertility, metabolic health, and quality of life via nature-aligned pathways.

Integrative models—herbs + diet/exercise/yoga—optimize trajectories; global guidelines should prioritize them post-validation trials. (2) (1) (3) (4)

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