

# Polycystic Ovary Syndrome (PCOS) Management and Treatment of Clinical Hyperandrogenism



Clinical Hyperandrogenism includes: hirsutism, acne, alopecia, male-pattern baldness

Lifestyle Considerations for All Patients		
Healthy Diet	Physical Activity	Weight Loss:
<ul style="list-style-type: none"> <li>Mediterranean-style, anti-inflammatory diet</li> <li>Tailor guidance to individual's personal and cultural food preferences</li> <li>Recommend Medical Nutrition Therapy, if available</li> </ul>	<ul style="list-style-type: none"> <li>150 minutes per week moderate intensity OR</li> <li>75 minutes per week vigorous activity</li> <li>Include muscle strengthening</li> <li>Higher intensity of duration for weight loss</li> </ul>	5-10% of body weight for patients who are overweight or obese
Use SMART (Specific, Measurable, Achievable, Realistic and Timely) goal setting and self-monitoring.		

Pharmacotherapy for Acne and Androgenic Alopecia			
Mild Acne	Moderate Acne	Severe Acne	Androgenic Alopecia
<ul style="list-style-type: none"> <li>Benzoyl peroxide alone or in combination with topical antibiotics</li> <li>Retanoids as monotherapy in primarily comedonal acne or in combination with topical antimicrobials</li> </ul>	<ul style="list-style-type: none"> <li>Benzoyl peroxide in combination with topical retinoids or systemic antibiotic therapy</li> <li>Retinoids in combination with topical or oral antimicrobials inflammatory acne</li> <li>Topical dapsone 5% gel for inflammatory acne</li> </ul>	<ul style="list-style-type: none"> <li>Benzoyl peroxide in combination with topical retinoids or systemic antibiotic therapy</li> <li>Retinoids in combination with topical or oral antimicrobials inflammatory acne</li> <li>Oral isotretinoin is recommended for treatment of severe nodular acne</li> </ul>	<b>First Line:</b> Topical Minoxidil 2% or 5%  <b>Other Options:</b> <ol style="list-style-type: none"> <li>1. Finasteride</li> <li>2. Spironolactone</li> <li>3. COCs + spironolactone</li> <li>4. COCs + finasteride</li> </ol>
<ul style="list-style-type: none"> <li>COCs (especially those with norgestimate and drospirenone) can be particularly useful in acne with PCOS</li> <li>Spironolactone and metformin can be helpful in some cases</li> </ul>			<b>Flip for Pharmacotherapy for Hirsutism</b>

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Pharmacotherapy for Hirsutism			
Combined Oral Contraceptive Pills (COCs)	Antiandrogens	Metformin	Myo-Inositol
<ul style="list-style-type: none"> <li>Start with low estrogen dose (20-35 micrograms (mcg) ethinyl estradiol or equivalent</li> <li>Evaluate medical contraindications per Centers for Disease Control and Prevention (CDC) and Medical Eligibility Criteria (MEC)</li> <li>No COC preparation is superior for PCOS</li> <li>If acne also present, drospirinone and norgestimate progestin component may be more effective</li> </ul> <p>Note: Other contraceptives don't suppress hepatic SHBG production and have limited efficacy for hyperandrogenism</p>	<p><i>Contraindicated when trying to conceive and during pregnancy due to risk of male fetal virilization.</i></p> <p><b>Spironolactone:</b></p> <ul style="list-style-type: none"> <li>Start at 25mg BID and titrate to 100mg BID as tolerated (effective dose range 50-200mg daily)</li> <li>Common side effects: dizziness, GI, headache, breast soreness</li> <li>Can also treat co-morbid hypertension</li> </ul> <p><b>Finasteride:</b></p> <ul style="list-style-type: none"> <li>5mg daily</li> </ul>	<p><i>This is a safe option for people who are currently trying to conceive.</i></p> <ul style="list-style-type: none"> <li>Start at 500mg daily and increase in 500mg increments to target of 1500mg daily as tolerated</li> <li>Take with meals to reduce side effects</li> <li>Common side effects: abdominal pain, nausea and diarrhea</li> <li>Side effects, including gastrointestinal (GI), are dose related and often self-limiting.</li> </ul>	<ul style="list-style-type: none"> <li>2000-4000mg dose has been shown to improve hirsutism in small studies; still considered experimental for PCOS</li> <li>Available over-the-counter as a supplement</li> <li>Side effects include: dizziness, GI, headache, fatigue</li> <li>Likely safe when trying to conceive, but limited data.</li> </ul>
Combining Methods			
<p><i>Treatments for hirsutism can be safely combined. It is important to consider safety of each treatment separately.</i></p> <p><b>COCs + Metformin:</b> Most beneficial in high metabolic risk groups including those with diabetes risk factors, impaired glucose tolerance, body mass index (BMI) greater than or equal to 25</p> <p><b>COCs + Antiandrogens:</b> May be beneficial in androgenic alopecia</p>			
Counsel that all treatments for hirsutism require at least 6 months for clinical improvement.			