

ACNE

Scientific Guidelines

ACNE TREATMENT ALGORITHM

Severity	Appearance	Type	First-line treatment	Second-line treatment
Mild Acne	<p>Blackheads and whiteheads (clogged pores or comedones)</p> <p>Not deep or painful</p> <p>May have scattered superficial papules or pustules</p>	Comedonal, noninflammatory	<p>Benzoyl peroxide OR Topical retinoid OR TOPICAL COMBINATION THERAPY: Benzoyl peroxide + antibiotic or retinoid + benzoyl peroxide or retinoid + benzoyl peroxide antibiotic +</p>	<p>Add topical retinoid or benzoyl peroxide (if not on already) OR Consider alternate retinoid OR Consider topical dapsone</p>
Moderate Acne	Papules and pustules with yellow or white heads	Comedonal, inflammatory, mixed lesions	<p>TOPICAL COMBINATION THERAPY: benzoyl peroxide OR Retinoid + (benzoyl peroxide + antibiotic) OR Oral antibiotic + topical retinoid + benzoyl peroxide OR Oral antibiotic + topical retinoid + benzoyl peroxide + Topical retinoid + benzoyl peroxide + topical antibiotic</p>	<p>Consider alternate combination therapy OR Consider change in oral antibiotic OR Add combined oral contraceptive or oral spironolactone (in females) OR Consider oral isotretinoin</p>
Severe Acne	<p>Deep nodules and cysts</p> <p>Painful to the touch</p> <p>May redden and scar</p>	Inflammatory, mixed or nodular lesions	<p>ORAL ANTIBIOTIC + TOPICAL COMBINATION THERAPY: benzoyl peroxide + antibiotic or retinoid + benzoyl peroxide or retinoid + benzoyl peroxide + antibiotic OR Oral isotretinoin</p>	<p>Consider changing oral antibiotic OR Add combined oral contraceptive or oral spironolactone (in females) OR Consider oral isotretinoin</p>

RECOMMENDATIONS FOR TOPICAL THERAPIES

Benzoyl peroxide or combinations with erythromycin or clindamycin are effective acne treatments and are recommended as monotherapy for mild acne, or in conjunction with a topical retinoid, or systemic antibiotic therapy for moderate to severe acne

Benzoyl peroxide is effective in the prevention of bacterial resistance and is recommended for patients on topical or systemic antibiotic therapy

Topical antibiotics such as erythromycin and clindamycin are effective acne treatments, but are not recommended as monotherapy because of the risk of bacterial resistance

Topical retinoids are important in addressing the development and maintenance of acne and are recommended as monotherapy in primarily comedonal acne, or in combination with topical or oral antimicrobials in patients with mixed or primarily inflammatory acne lesions

Using multiple topical agents that affect different aspects of acne pathogenesis can be useful

Combination therapy should be used in the majority of patients with acne

Topical adapalene, tretinoin, and benzoyl peroxide can be safely used in the management of preadolescent acne in children

Azelaic acid is a useful adjunctive acne treatment and is recommended in the treatment of post-inflammatory dyspigmentation

Topical dapsone 5% gel is recommended for inflammatory acne, particularly in adult females with acne

There is limited evidence to support recommendations for sulfur, nicotinamide, resorcinol, sodium sulfacetamide, aluminum chloride, and zinc in the treatment of acne

RECOMMENDATIONS FOR SYSTEMIC ANTIBIOTICS

Systemic antibiotics are recommended in the management of moderate and severe acne and forms of inflammatory acne that are resistant to topical treatments

Doxycycline and minocycline are more effective than tetracycline, but neither is superior to each other

Although oral erythromycin and azithromycin can be effective in treating acne, its use should be limited to those who cannot use the tetracyclines, such as pregnant women or children less than 8 years old

Erythromycin use should be restricted because of its increased risk of bacterial resistance

Use of systemic antibiotics, other than the tetracyclines and macrolides, is discouraged because there are limited data for their use in acne

Trimethoprim-sulfamethoxazole and trimethoprim use should be restricted to patients who are unable to tolerate tetracyclines or in treatment-resistant patients

Systemic antibiotic use should be limited to the shortest possible duration

Reevaluate at 3-4 months to minimize the development of bacterial resistance

Monotherapy with systemic antibiotics is not recommended

Concomitant topical therapy with benzoyl peroxide or a retinoid should be used with systemic antibiotics and for maintenance after completion of systemic antibiotic therapy

RECOMMENDATIONS FOR ISOTRETINOIN

Oral isotretinoin is recommended for the treatment of severe nodular acne

Oral isotretinoin is appropriate for the treatment of moderate acne that is treatment-resistant or for the management of acne that is producing physical scarring or psychosocial distress

Low-dose isotretinoin can be used to effectively treat acne and reduce the frequency and severity of medication-related side effects

Intermittent dosing of isotretinoin is not recommended

Routine monitoring of liver function tests, serum cholesterol, and triglycerides at baseline, and again until response to treatment is established, is recommended

Routine monitoring of complete blood count is not recommended

All patients treated with isotretinoin must adhere to the iPLEDGE risk management program

Females of child-bearing potential taking isotretinoin should be counseled regarding various contraceptive methods, including user-independent forms

Prescribing physicians also should monitor their patients for any indication of inflammatory bowel disease and depressive symptoms and educate their patients about the potential risks with isotretinoin

RECOMMENDATIONS FOR HORMONAL AGENTS

Estrogen-containing combined oral contraceptives are effective and recommended in the treatment of inflammatory acne in females

Spironolactone is useful in the treatment of acne in select females

Oral corticosteroid therapy can be of temporary benefit in patients who have severe inflammatory acne while starting standard acne treatment

In patients who have well-documented adrenal hyperandrogenism, low-dose oral corticosteroids are recommended in treatment of acne

Recommendations for miscellaneous therapies and physical modalities

Estrogen-containing combined oral contraceptives are effective and recommended in the treatment of inflammatory acne in females

Spironolactone is useful in the treatment of acne in select females

SOURCES:

<https://www.jaad.org/action/showPdf?pii=S0190-9622%2815%2902614-6>