

Skin Care Pearls for the Pediatric Healthcare Team: From Newborn Skin to Teenage Acne

INTRODUCTION

Acne vulgaris affects approximately 85% of individuals aged 12 to 24 years, and approximately 50% of patients aged 20 to 29 years. It is common in preteens and seen most in teenagers, but is rare and can be a sign of pathology in mid-childhood. While acne can vary considerably in severity, essentially all cases can be controlled with over-the-counter (OTC) and prescription preparations.

ACNE BASICS^[1]

In the tween and teen years, the sebaceous glands respond to hormonal stimulation resulting in increased oil in the skin; corneocytes lining follicles adhere and clump, forming obstructions. This is one of the root causes of acne, and as children are undergoing puberty earlier (some as young as 8/9 years old), acne is being seen at younger ages.

- Acne is classified based on patient age, lesion morphology (comedonal, inflammatory, mixed, nodulocystic), distribution (location on face, trunk, or both), and severity (extent, presence or absence of scarring, postinflammatory erythema, or hyperpigmentation)
- Severity may be broadly categorized as mild, moderate, or severe
- Acne can cause permanent physical scarring and have a negative effect on quality of life and self-image; it has also been associated with increased rates of anxiety, depression, and suicidal ideation

COMEDONAL ACNE^[1]

Comedonal acne is a pattern of acne in which most lesions are comedones, and primarily affects the forehead and chin. Mild or early comedonal acne is very consistent with a T-zone presentation and present as whiteheads (closed comedones) and blackheads (open comedones).

- Noticing acne early can allow preventative guidance to "keep ahead of it" with a good skincare regimen
- If a more moderate or severe outbreak is observed in a younger preteen, it may be associated with more severe acne over time
- Increasing data suggest that a family history of more severe acne is a risk factor for development of more severe acne

TREATMENT OF MILD ACNE^[1]

Management is usually based on several factors, including acne type, extent, anatomic location, and evidence of scarring and pigmentary changes. Standard guidelines from the American Academy of Dermatology and the American Academy of Pediatrics suggest the use of topical agents, including retinoids, benzoyl peroxide, and/or topical antibiotics, be used as first-line treatment. They advise combinations of topical agents with systemic agents for more severe disease.

Skin care regimens, including the frequency of washing, types of cleansers, and use of moisturizers and over-the-counter therapies can affect acne. Patients should be advised to cleanse skin gently and to avoid scrubs and exfoliating washes, which can cause irritation and reduce regimen adherence.

Table 1: OTC Products^[1]

Topical therapies are appropriate for mild acne, and there are many options for OTC products.

Benzoyl peroxide products	<ul style="list-style-type: none"> • Among the most inexpensive and effective acne therapies, and a very reasonable first-line agent • Available as washes, gels, creams • Does not induce bacterial resistance, unlike topical or oral antibiotics 	Adverse events include erythema, dryness, irritation, allergic contact dermatitis, bleaching of fabrics
Salicylic acid	Has comedolytic effects; less of an evidence basis, but a common alternative	Adverse events: irritation and allergic contact dermatitis
Adapalene	Topical retinoid, available in several formulations as an OTC product	Adverse events: erythema, dryness, irritation, photosensitivity, rare allergic contact dermatitis

Table 2: Prescription Topical Agents^[1]

Prescription retinoids: adapalene, tazarotene, tretinoin, trifarotene	May be useful alone, or in combination with benzoyl peroxide plus or minus a topical antibiotic for mild acne	Adverse events: erythema, dryness, irritation, photosensitivity, rare allergic contact dermatitis
Topical antibiotics: erythromycin, clindamycin, minocycline	Reduce bacterial colonization of skin and follicles, and decrease inflammation	Adverse events for erythromycin and clindamycin: irritation and allergic contact dermatitis; for minocycline: yellow glare to skin, headache

MODERATE/SEVERE ACNE^[1]

Moderate/severe acne may be inflammatory, or mixed inflammatory and comedonal. A more aggressive therapeutic regimen is generally indicated.

- Appropriate therapy should be initiated, either with combination topical agents alone or with systemic agents, including antibiotics or hormonal treatment
- Consider referral for isotretinoin for severe acne or inadequate response to treatment
- It is important to assess for post-inflammatory erythema, hyperpigmentation, and scarring

Table 3: Systemic Treatments^[1]

Oral antibiotics	Commonly used to induce relatively rapid control of moderate-to-severe inflammatory acne (within 1 to 2 months), generally in combination with a topical retinoid and benzoyl peroxide	Adverse events: may include gastrointestinal upset, allergic rash, vaginal candidiasis
Hormonal: spironolactone, combined oral contraceptives	Suppresses ovarian androgen production and blocks the effects of androgens on sebaceous glands, decreasing sebum production and improving acne	Adverse events: may include menstrual irregularity, breast tenderness, hyperkalemia, gastrointestinal upset, hypertension, thrombo-embolism
Isotretinoin	Approved for treating severe recalcitrant nodular acne and often used to treat resistant or persistent moderate-to-severe acne; is considered to have the potential to induce acne remission	Contraindicated during pregnancy; adverse events include mucocutaneous dryness, hyperlipidemia, elevated aminotransferases, muscle and/or joint pain, mood changes

References

1. Eichenfield DZ, et al. JAMA. 2021;326:2055-2067.