

Topical Therapies for Pediatric Atopic Dermatitis and Their Place in Therapy

Stepwise Approach to Atopic Dermatitis

Prescription topical therapy (all atopic dermatitis severities, if needed)

- Corticosteroids
- Calcineurin inhibitors: tacrolimus, pimecrolimus
- PDE-4 inhibitor: crisaborole, roflumilast
- JAK inhibitor: ruxolitinib
- AhR-modulating agent: tapinarof

Basic management (optimize at all atopic dermatitis severities)

- Emollients
- Warm baths or showers using nonsoap cleansers
- Trigger avoidance

Stepwise treatment approach

If needed for uncontrolled moderate to severe atopic dermatitis

- Phototherapy: NB-UVB, PUVA, UVA1
- Biologic agents: dupilumab, lebrikizumab, tralokinumab
- Oral JAK inhibitors: abrocitinib, upadacitinib
- Conventional oral systemics: azathioprine, cyclosporine, methotrexate, mycophenolate mofetil
- Oral corticosteroids (generally avoided but used in select situations as a bridge to another long-term systemic treatment)
- Hospitalization for intensive wet wrap therapy

▲ Should be adjunctive to other topical or systemic therapies

Topical Agents by Class

Class/Agent	Guideline Recommendations	Dosing	Considerations
Corticosteroids	First line with nonresponse to skin care routines and emollients	Apply 1-2x/day	• Address steroid phobia and assess adherence
Calcineurin inhibitors • Tacrolimus • Pimecrolimus	Short term, noncontinuous	Tacrolimus: 1-2x/day Pimecrolimus: 2x/day	• Approved for patients ≥2 yr of age • May cause burning or stinging • Risk of secondary infections and rare cases of malignancy
PDE-4 inhibitor • Crisaborole • Roflumilast	Safe and effective option for mild to moderate AD	Crisaborole: 2x/day Roflumilast: once daily	• Crisaborole approved for patients ≥3 mo of age • Roflumilast approved for patients ≥6 yr of age
JAK inhibitor • Ruxolitinib	Reserved for patients who do not respond to other treatments	Apply 2x/day, not exceeding 20% BSA or 60 g/wk	• Approved for adolescents ≥12 yr of age • Approved for short-term and noncontinuous treatment in nonimmunocompromised patients
AhR-modulating agent • Tapinarof	Not yet in guidelines	Apply once daily	• Approved for patients ≥2 yr of age • Most common ADRs included URTI, folliculitis, headache, asthma, vomiting, pain in extremities

AD, atopic dermatitis; ADR, adverse drug reaction; AhR, aryl hydrocarbon receptor; BSA, body surface area; PDE-4, phosphodiesterase-4; URTI, upper respiratory tract infection.

Shared Decision-making Principles for Atopic Dermatitis

Build trust by...



- taking time to listen to patients and caregivers
- shortening time between visits

Individualize treatment plans by...



- learning patients' preferences
- asking about treatment and life goals

Provide quality education by...



- giving clear information about treatments
- providing structured education or workshops
- creating written action plans