Treatments for Rosacea

Rosacea is characterized by facial erythema, flushing, papulopustular lesions, thickened skin, and/or ocular involvement.[1] Therapeutic options include trigger avoidance (e.g., alcohol, spicy foods, sun exposure), appropriate skin care (e.g., gentle cleansers, mineral sunscreen), topical agents, oral therapies, and phototherapy.[2] This table reviews topical and oral options for the treatment of erythema and papulopustular lesions of rosacea.[c]

Topical Therapy[b]			
Drug[a]	**Pros**	**Cons**	**Comments**
Metronidazole 0.75%, 1%, (e.g., MetroGel, Noritate, generics [US]) **US**: ~$90/45 g **Canada**: $42/55 g (1%)	• Effective for papulopustular lesions.[1-3] • May be effective for erythema but little evidence in patients without papules/pustules.[1] • Safe in pregnancy.[4] • Well tolerated.[1]	• May cause mild itching, irritation, and dry skin.[3]	• First-line treatment of papulopustular lesions.[1,2] • May be better tolerated compared to azelaic acid.[3] • No difference in efficacy between 0.75% and 1% formulations.[1] • Improvement typically seen after three to six weeks.[3]
Azelaic acid (Azelex 20% [US], Finacea 15%, generics [US]) **US**: ~$145/50 g **Canada**: $45/50 g	• Effective for papulopustular lesions.[1-3,6] • Limited efficacy for erythema.[1] • Safe in pregnancy.[4]	• Can cause mild burning, stinging, and irritation.[3]	• First-line treatment of papulopustular lesions.[1,2] • As effective as metronidazole; however, may not be as well tolerated.[7] • Cream and foam cost over twice as much as the generic gel. • Less expensive 10% formulations are available OTC (many online); however, there is no evidence to support their efficacy. • Improvement typically seen after three to six weeks.[3]
Ivermectin 1% (Soolantra [US]; Rosiver [Canada], generic [US]) **US**: $475/45 g	• Effective for papulopustular lesions.[1,2,6,14] • Well tolerated.[1,8]	• May cause skin irritation, dryness, burning, and pruritus.[5,9] • More expensive compared to metronidazole and azelaic acid.	• First-line treatment of papulopustular lesions.[1,2] • May be slightly more effective than topical metronidazole 0.75%.[3,10] • Anti-inflammatory and antiparasitic (vs *Demodex* mites) effects.[2,11,d]

Topical Therapy[b]			
Drug[a]	**Pros**	**Cons**	**Comments**
Canada:$227/60 g			• May be better tolerated than azelaic acid.[12]
Minocycline 1.5% foam (Zilxi) (US only) **US**: $485/30 g	• Effective for moderate to severe papulopustular lesions.[13] • Well tolerated.[13] • Minimal systemic absorption.[13]	• Can cause pruritus.[13] • May temporarily tint skin yellow, but can be washed away about an hour after application.[13]	• May be considered if metronidazole or azelaic acid are not effective. • Formulation is flammable. Fire, flame, and smoking should be avoided during and immediately following application.[5]
Brimonidine gel 0.33% (Mirvaso [US], Onreltea [Canada], generic [US]) **US**: $520/30 g **Canada**:$142/30 g	• Effective for moderate to severe erythema.[1,2,8,9] • Well tolerated.[9]	• Not effective for reducing papulopustular lesions.[8] • Can worsen erythema and cause flushing or pruritus.[9] • Case reports of a rebound effect and worsening erythema after discontinuation.[1]	• Can be used as monotherapy for erythema.[1] • Similar in efficacy to oxymetazoline.[9] • Improvement may be seen within 30 minutes, with maximum effect at about three hours.[16] • Anecdotal reports of using (off-label) brimonidine 0.15% eye drops topically for rosacea.[17] May be a less expensive option.
Oxymetazoline 1% cream (Rhofade) (US only) **US**: $650/30g	• Effective for moderate to severe erythema.[2,9,22] • Well tolerated.[15]	• Not effective for reducing papulopustular lesions.[8] • May cause pruritus, redness, and worsening of inflammation or pustules.[5] • Less than 1% of patients report a rebound effect after discontinuation.[22]	• Can be used as monotherapy for erythema.[15] • Similar in efficacy to brimonidine.[9] • Oxymetazoline 0.05% nasal spray has been used topically for rosacea.[18] • Significantly reduces erythema within 1 hour; maintains effect for up to 12 hours.[15] • Appears to have lower rates of rebound effect and worsening erythema compared to brimonidine.[15]
Sodium sulfacetamide 10%/sulfur 5%	• Might be effective for papulopustular lesions and erythema.[6,19]	• Odor may be unappealing.[19] • Avoid in patients with sulfonamide allergies.[19]	• Off-label indication. • Limited evidence to support use.[6,8]
Benzoyl peroxide 5%/clindamycin 1%	• May reduce papulopustular lesions.[19]	• May trigger erythema, stinging with initial therapy.[4]	• Off-label indication. • Limited evidence to support use.[19]
Topical retinoids (tretinoin, adapalene)	• May reduce papulopustular lesions.[19]	• Use with caution due to risk of skin irritation, photosensitivity.[7,19] • May not be effective for erythema.[19] • Caution in pregnancy.[4]	• Off-label indication. • Limited evidence to support use.[2,6]

Topical Therapy[b]			
Drug[a]	**Pros**	**Cons**	**Comments**
Topical calcineurin inhibitors (pimecrolimus, tacrolimus)	• May improve erythema.[19]	• Reports of rosaceaform dermatitis when used for other indications.[19] • Do not appear effective for papulopustular lesions.[19]	• Off-label indication. • Limited evidence to support use.[6,8]
Permethrin 5% cream	• Effective in eliminating *Demodex* mites.[d] • May improve erythema and papulopustular lesions.[19]	• Long-term safety unknown.[19]	• Off-label indication. • Limited evidence to support use.[6,8,19]
OTC topical skin care products	• Ingredients often have claims of anti-inflammatory properties.[2]	• Little to no evidence to support claims of efficacy.[2]	• May include ingredients such as sulfur, allantoin, bisabolol, licorice root extracts, sallow bark, aloe vera, others.[2]

Oral Therapy[b]			
Drug	**Pros**	**Cons**	**Comments**
Antibiotics (doxycycline, minocycline, tetracycline, azithromycin, trimethoprim-sulfamethoxazole, erythromycin, metronidazole, clindamycin)	• Low-dose doxycycline is effective for papulopustular lesions.[1-3] • Generally inexpensive (exceptions doxycycline 40 mg, minocycline 40 mg [US only]) compared with other rosacea therapies. • Low-dose doxycycline has not been associated with antibiotic resistance.[2]	• Concerns about bacterial resistance (low-dose doxycycline may be an exception).[4] • Rosacea products (i.e., 40 mg doxycycline or minocycline) are more expensive than generic 50 mg forms and other antibiotics (e.g., tetracycline). ▪ 40 mg doxycycline:[a] **US**: ~$674/month, **Canada**: $88/month ▪ 40 mg minocycline:[a] **US**: $1,300/month • Various adverse drug reactions (e.g., gastrointestinal, photosensitivity).[1]	• Consider in patients who may prefer oral therapy or for moderate to severe disease.[1,6] • Low-dose (subantimicrobial dose) minocycline 40 mg (Emrosi [US only]) OR doxycycline 40 mg (Oracea [US], Apprilon [Canada]), all once daily, are approved for rosacea.[5,20,21] ▪ Approvals based on efficacy studies of 16 weeks duration.[5,20,21] ▪ Limited data suggest minocycline 40 mg once daily improves lesion count and treatment success in moderate to severe rosacea, compared to doxycycline 40 mg once daily.[23] ▪ Limited evidence with other antibiotics.[2] • Efficacy of low-dose doxycycline 40 mg is similar to 100 mg daily; however, the lower dose is better tolerated.[1,3] • Often used in combination with a topical product for short-term treatment of flares or as initial therapy (e.g., up to 12 weeks).[4]

Oral Therapy[b]			
Drug	**Pros**	**Cons**	**Comments**
Isotretinoin	• May be effective in combination with a topical agent for refractory cases of papulopustular lesions.[1,2]	• Contraindicated in pregnancy. • Requires monitoring for adverse effects (leukopenia, neutropenia, liver dysfunction, lipid abnormalities, etc).[1,5]	• Off-label indication. • Once rosacea is controlled, switch to intermittent therapy.[6]

a. Pricing based on the average wholesale acquisition cost (WAC) for generic formulation, if available. US medication pricing by Elsevier, accessed May 2025.

b. Topical monotherapy may be sufficient for mild disease. Multi-symptom (e.g., redness plus papules or pustules) or more severe disease may require a combination of treatments, especially for initial therapy.[2,8,19] After 8 to 12 weeks, if response is inadequate, an increased dose or frequency can be tried or an alternative agent used.[1] Once improvement is achieved, the dose can be tapered and/or the medication can be switched to a milder agent.[1] First-line treatments for mild rosacea are recommended for long-term maintenance therapy.[1]

c. Various meds are sometimes used off-label to control flushing in patients with rosacea including NSAIDs, antihistamines, clonidine, and beta-blockers.[2] Evidence of efficacy with these meds is limited.[2]

d. *Demodex* mites are part of normal skin flora; however, they are often found at higher concentrations in patients with rosacea compared to those without.[2] They appear to be a rosacea trigger for some patients.[1,6]

Users of this resource are cautioned to use their own professional judgment and consult any other necessary or appropriate sources prior to making clinical judgments based on the content of this document. Our editors have researched the information with input from experts, government agencies, and national organizations. Information and internet links in this article were current as of the date of publication.

References

1. Asai Y, Tan J, Baibergenova A, et al. Canadian Clinical Practice Guidelines for Rosacea. J Cutan Med Surg. 2016 Sep;20(5):432-45. Erratum in: J Cutan Med Surg. 2021 Jul-Aug;25(4):466.
2. Thiboutot D, Anderson R, Cook-Bolden F, et al. Standard management options for rosacea: The 2019 update by the National Rosacea Society Expert Committee. J Am Acad Dermatol. 2020 Jun;82(6):1501-1510.
3. van Zuuren EJ, Fedorowicz Z, Carter B, et al. Interventions for rosacea. Cochrane Database Syst Rev. 2015 Apr 28;2015(4):CD003262.
4. Baldwin HE. Diagnosis and treatment of rosacea: state of the art. J Drugs Dermatol. 2012 Jun;11(6):725-30.
5. Clinical Pharmacology powered by ClinicalKey. Tampa (FL): Elsevier. 2025. http://www.clinicalkey.com. (Accessed May 7, 2025).
6. Del Rosso JQ, Tanghetti E, Webster G, et al. Update on the Management of Rosacea from the American Acne & Rosacea Society (AARS). J Clin Aesthet Dermatol. 2019 Jun;12(6):17-24.
7. Canadian Dermatology Association. Rosacea. http://www.dermatology.ca/skin-hair-nails/skin/rosacea/. (Accessed May 7, 2025).
8. Del Rosso JQ. Management of cutaneous rosacea: emphasis on new medical therapies. Expert Opin Pharmacother. 2014 Oct;15(14):2029-38.
9. Gold LM, Draelos ZD. New and Emerging Treatments for Rosacea. Am J Clin Dermatol. 2015 Dec;16(6):457-61.
10. Taieb A, Ortonne JP, Ruzicka T, et al. Superiority of ivermectin 1% cream over metronidazole 0·75% cream in treating inflammatory lesions of rosacea: a randomized, investigator-blinded trial. Br J Dermatol. 2015 Apr;172(4):1103-10.
11. Ebbelaar CCF, Venema AW, Van Dijk MR. Topical Ivermectin in the Treatment of Papulopustular Rosacea: A Systematic Review of Evidence and Clinical Guideline Recommendations. Dermatol Ther (Heidelb). 2018 Sep;8(3):379-387.
12. Stein Gold L, Kircik L, Fowler J, et al. Long-term safety of ivermectin 1% cream vs azelaic acid 15% gel in treating inflammatory lesions of rosacea: results of two 40-week controlled, investigator-blinded trials. J Drugs Dermatol. 2014 Nov;13(11):1380-6.
13. Stein Gold L, Del Rosso JQ, Kircik L, et al. Minocycline 1.5% foam for the topical treatment of moderate to severe papulopustular rosacea: Results of 2 phase 3, randomized, clinical trials. J Am Acad Dermatol. 2020 May;82(5):1166-1173.
14. Stein Gold L, Kircik L, Fowler J, et al. Efficacy and safety of ivermectin 1% cream in treatment of papulopustular rosacea: results of two randomized, double-blind, vehicle-controlled pivotal studies. J Drugs Dermatol. 2014 Mar;13(3):316-23.
15. Del Rosso JQ, Tanghetti E. Topical Oxymetazoline Hydrochloride Cream 1% for the Treatment of Persistent Facial Erythema of Rosacea in Adults: A Comprehensive Review of Current Evidence. J Clin Aesthet Dermatol. 2021 Mar;14(3):32-37.
16. Product monograph Onreltea. Galderma. Thornhill, ON L3T 7V9. August 2018.
17. El-Domyati M, Rezk AF, Nasif G, et al. Topical brimonidine for the management of facial erythema in rosacea: a histological, histometric, and immunohistochemical study. Int J Dermatol. 2023 Jul;62(7):888-894.
18. Generali JA, Cada DJ. Oxymetazoline (topical): rosacea. Hosp Pharm. 2013 Jul;48(7):558-9.
19. Maier LE. Management of rosacea. Last updated June 29, 2022. In UpToDate, Post TW (ed), UpToDate, Waltham, MA 02013.
20. Product information for Emrosi. Journey Medical. Scottsdale, AZ 85258. November 2024.
21. Product monograph for Apprilon. Galderma Canada. Thornhill, ON L3T 7W3. May 2018.
22. Draelos ZD, Gold MH, Weiss RA, et al. Efficacy and safety of oxymetazoline cream 1.0% for treatment of persistent facial erythema associated with rosacea: Findings from the 52-week open label REVEAL trial. J Am Acad Dermatol. 2018 Jun;78(6):1156-1163.
23. Bhatia N, Del Rosso J, Stein Gold L, et al. Efficacy, Safety, and Tolerability of Oral DFD-29, a Low-Dose Formulation of Minocycline, in Rosacea: Two Phase 3 Randomized Clinical Trials. JAMA Dermatol. 2025 Mar 5:e246542.

Cite this document as follows: **Clinical Resource*, Treatments for Rosacea. Pharmacist's Letter/Pharmacy Technician's Letter/Prescriber Insights.* June 2025. [410660]**