

Q18 Treatment of Acne Vulgaris

For the treatment of acne vulgaris, isotretinoin is unlikely to be associated with neuropsychiatric disorders.

- True
- False

Educational Point: Isotretinoin is the only approved treatment for severe nodular acne vulgaris in Canada. It reduces sebum secretion by shrinking sebaceous glands, limiting sebum-dependent **Cutibacterium acnes** growth. Isotretinoin prevents comedone formation by normalizing keratinization and reducing inflammation. Isotretinoin is indicated for severe or refractory acne in patients aged 12 and older with scarring or psychosocial distress. Dosage starts at 0.3 to 1 mg/kg daily until a cumulative dose of 120 to 150 mg/kg is achieved. Studies suggest that higher cumulative doses are associated with lower recurrence rates.

Isotretinoin remains the criterion standard for treating severe acne and scarring; frequent monitoring is unnecessary for most patients receiving oral isotretinoin, and it is unlikely to be associated with neuropsychiatric disorders (depression, anxiety and suicidal thoughts) or inflammatory bowel disease.

Adverse effects may involve the mucocutaneous, musculoskeletal, and ophthalmic systems, and typically resolve after discontinuation. Before initiating oral isotretinoin, serum alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels, fasting triglyceride levels, total cholesterol level, and human chorionic gonadotropin tests are needed at baseline and every 8 weeks. Complete blood count monitoring is not recommended in patients who are otherwise healthy. Due to isotretinoin's potent teratogenicity, strict safety protocols are recommended for patients who may become pregnant.

The correct answer is true.

Overuse alert!

This practice question aligns with the Canadian Dermatology Association's Choosing Wisely Canada **recommendation**: Don't order unnecessary blood tests (ie. complete blood counts and basic metabolic panels) for the routine monitoring of isotretinoin in otherwise healthy individuals treated for acne.

Reference: Keow S, Xiong G, Abu-Hilal M. Update to acne vulgaris treatment for Canadian practice. *Can Fam Physician*. 2025;71(7-8):455-466.

Link: <https://www.cfp.ca/content/71/7-8/455>

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Which *one* of the following statements about the use of topical agents to treat acne vulgaris is *false*?

- 1. Daily sunscreen should be used concurrently with topical retinoids to protect against ultraviolet radiation damage.
- 2. Resistance to benzoyl peroxide is increasing in frequency.
- 3. Combining topical antibiotics with benzoyl peroxide improves efficacy.
- 4. Azelaic acid is the acne vulgaris treatment of choice during pregnancy.

Educational Point: Since the last Canadian guidelines for acne vulgaris (AV) management were published in 2016, there have been important advances and updates to treatment recommendations. Topical therapies are fundamental in the first-line management of AV, either as monotherapy or adjuncts. Combining multiple therapeutic modalities that target different pathogenic mechanisms is advised to enhance efficacy and lower the potential for antibiotic resistance. Retinoids are comedolytic and anti-inflammatory agents. No single topical retinoid outperforms others. Most topical retinoids are photolabile and should be applied at night. Adapalene and tretinoin exhibit greater photostability and may be applied during the day. **Daily sunscreen should be used concurrently to protect against ultraviolet radiation damage.**

Benzoyl peroxide (BP) is available over the counter (OTC) in concentrations of 5% or less, or as a prescription of 10% cleansing gel. It functions as a topical antimicrobial agent and has mild comedolytic properties. **There have been no reported**

instances of BP-resistant Cutibacterium acne, highlighting its advantage amid growing antibiotic resistance concerns. No evidence supports the superiority of a single topical antibiotic. **Combining antibiotics with BP is recommended for improving efficacy** and decreased antibiotic resistance. Retinoid-antibiotic combinations are also advised. A topical triple-combination of clindamycin, adapalene, and BP for patients with AV older than 12 years is approved.

The safety and efficacy of many acne treatments in pregnancy and lactation cannot be confirmed. Topical azelaic acid, clindamycin, BP and salicylic acid are safe for use during pregnancy. Salicylic acid and lower concentrations of azelaic acid are available (OTC), whereas 15% azelaic acid is prescription only. **Azelaic acid offers additional antibacterial, anti-inflammatory, and antipigmentary properties, and is the AV treatment of choice during pregnancy.**

The correct answer is 2.