

## Acne and Rosacea: Lifestyle and pharmacologic intervention

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### Disclosures

- Speaker's Bureau for Abbvie, Beiersdorf, Eli Lilly, Janssen, Sanofi Genzyme, Sanofi-Aventis/Regeneron®, and Sun Pharma
- Strategic Advisor and Medical Board Member: Arcutis Biotherapeutics, Incyte Labs, Leo Pharma, and Novartis.
- No experimental or investigational use of drugs or devices will be presented.

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### Objectives

- At the end of this presentation, the participant will be able to:

1. Identify the pathophysiology of acne and rosacea.
2. Describe the most effective lifestyle and pharmacologic approaches for treatment.
3. Recognize new indications and cautions for established products.

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## Tips



- References
  - Listed throughout and at the end of the presentation
- To facilitate your learning
  - Specific tables/images can be viewed full page at the end of your handout.

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## Introduction to Acne

- Acne vulgaris accounts for 12% of all dermatology visits.
- Most common skin disorder in America, with 17 million people suffering at any given time
- #1 most common dermatology diagnosis
- Considered by many one of the most difficult conditions to treat.
  - Drug resistance, compliance, access to medications, drug reactions, and home remedy additions/social media confusion

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## Acne Vulgaris

- Acne vulgaris is considered a key driver of teen depression and suicidal ideation.
- However, many insurance companies will not cover acne treatments when the policy-holder becomes aged 18 or 21 years old.

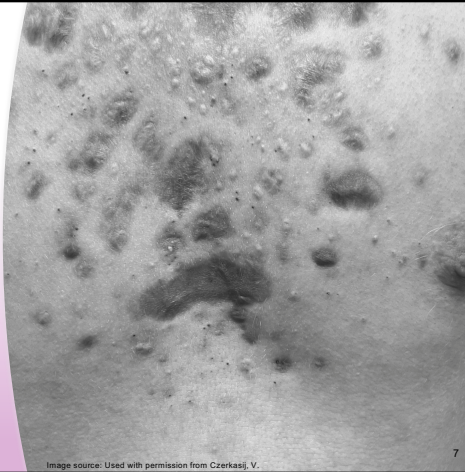


Image source: Used with permission from Czerkas, V.

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## Acne Vulgaris (continued)

- At that point, it is considered “cosmetic” and thus not necessary for treatment.

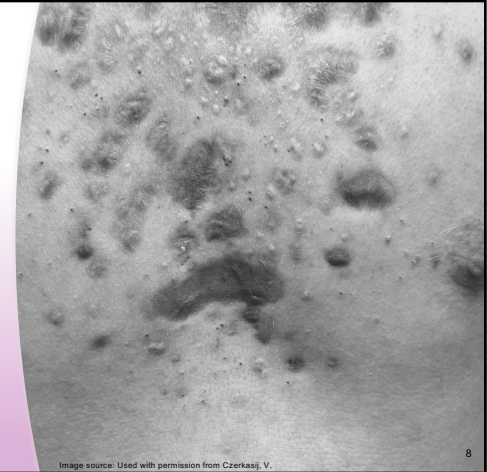


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## Acne Fast Facts

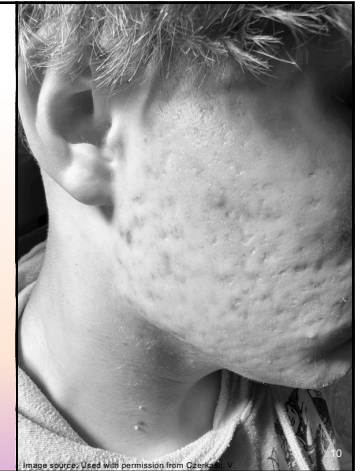
- Women affected slightly more than men, especially when older (age 40+ years).
- Not common in some non-Westernized peoples
- Cleopatra used sulfur soap.
- From Greek "ionthos" for "facial eruption," or Latin "acnae"
- Bacteria first observed in acne in the mid-1880s.



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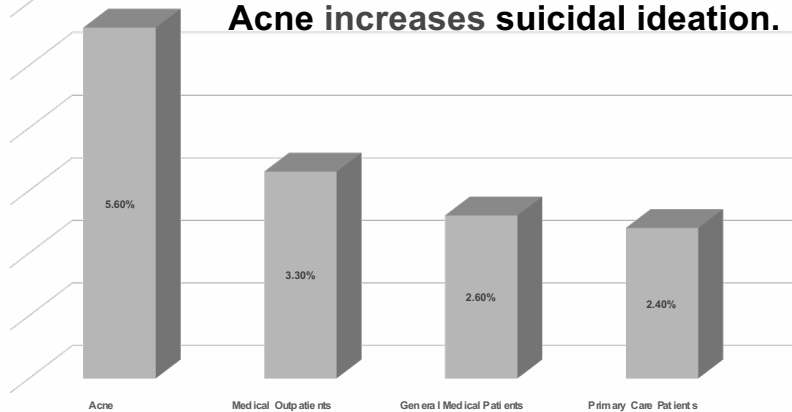
## Psychological Effects of Acne

- Acne can have profound social and psychological effects not related to its clinical severity.
- Affects around 85% of people between ages 12 and 25 years.
- Appearance linked to peer status
- Distress may result in depression and suicidal ideation.



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## Acne increases suicidal ideation.



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## Psychological Impact of Acne (continued)

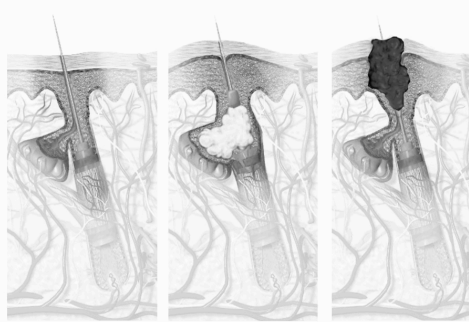
- Teens say parents misguided in perceptions of severity
- Only 30% of teens seek medical help, 70% too discouraged.
- Of the teens who sought medical help, 91% reported improvement.
- Huge over-the-counter market
- Studies show severity of acne can affect job seekers.

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## The Descriptive Language of Acne

- Whiteheads (closed plugged pores) – Closed comedones
- Blackheads (open plugged pores) – Open comedones
- Small red, tender bumps (papules)
- Pimples (pustules) are papules with pus at their tips.



Normal skin pore

Whitehead

Blackhead

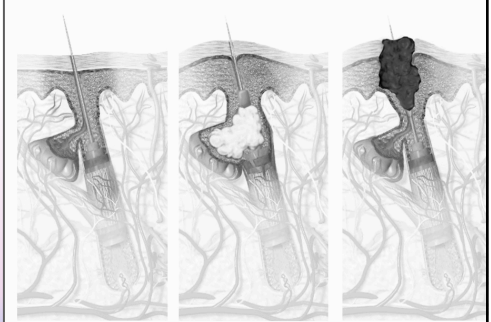
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Image source: Blausen.com staff (2014). "Medical gallery of Blausen Medical 2014". *WikiJournal of Medicine* 1 (2). DOI:10.15347/wjvm/2014.010. ISSN 2002-4436. Acne. (<https://en.wikipedia.org/wiki/Acne>) CC BY 3.0

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## The Descriptive Language of Acne (continued)

- Large, solid, painful lumps under the skin (nodules)
- Painful, pus-filled lumps under the skin (cystic lesions)
- Scars: Fixed, opened follicles
- Keloids: Thickened collagenized papules and patches



Normal skin pore

Whitehead

Blackhead

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Image source: Blausen.com staff (2014). "Medical gallery of Blausen Medical 2014". *WikiJournal of Medicine* 1 (2). DOI:10.15347/wjvm/2014.010. ISSN 2002-4436. Acne. (<https://en.wikipedia.org/wiki/Acne>) CC BY 3.0

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## Learn the Language

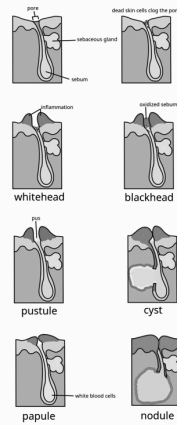


Image source: BedrockPerson. (2017). Acne comedones. (<https://en.wikipedia.org/wiki/Acne>) CC BY-SA 4.0

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## Take a Closer Look:

What are some of the features here?

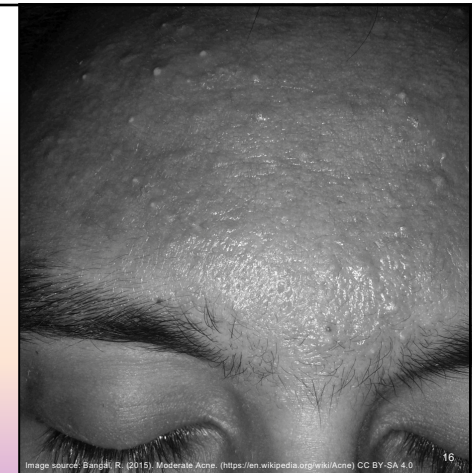



Image source: Bangali, R. (2015). Moderate Acne. (<https://en.wikipedia.org/wiki/Acne>) CC BY-SA 4.0

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**Another Case Study:**  
What are the patient's concerns?

Image source: Heilman, J. (2010). Severe Case of Cystic Acne. (<https://en.wikipedia.org/wiki/Acne>) CC BY-SA 3.0

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### Risk Factors

- **Age:** People of all ages can get acne, but it's most common in adolescents.
- **Hormonal changes:** Puberty, menopause, testosterone/estrogen treatment, or pregnancy
- **Family history:** If both parents had acne, you're also likely to develop acne.
- **Pressure on skin:** Oily places breed acne.
  - Hairstyles, caps, headphones, cellphones, helmets, tight collars and backpacks
- **Diet:** Sugar and dairy are highly inflammatory and promote hormonal androgenetic excess.

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**Acne Follows Distribution of Sebaceous Glands**



Image source: Heilman, J. (2010). Cystic Acne. (<https://en.wikipedia.org/wiki/Acne>) CC BY-SA 3.0

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***C. acnes* thrives in the anaerobic (low oxygen) environment found deep within the follicle. It is a rod shaped, gram-positive bacteria.**

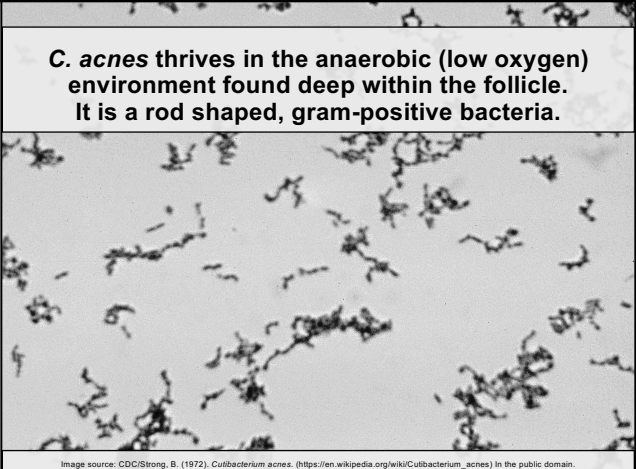


Image source: CDC/Strong, B. (1972). Cutibacterium acnes. ([https://en.wikipedia.org/wiki/Cutibacterium\\_acnes](https://en.wikipedia.org/wiki/Cutibacterium_acnes)) in the public domain.

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### Social Media Recommendations for Acne Treatment: Recommend to Avoid Social Media!

- Do-it-yourself (DIY) “skinfluencers” share expertise with no real credentials except for millions of followers.
- Their main shtick: You can use “natural” products in your pantry or fridge to treat your skin issues, especially acne.
- The Great Toothpaste Hoax
- Band-Aids on Every Pimple Prank
- Salt-water Spritzing Swindle
- The Lemon Juice Scar Treatment Fraud
- Drinking Chlorophyll Water Con
- The Skin Icing Dupe
- The Popular Potato Slice Ruse

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### The Major Treatment Categories for Acne

- Topical: Drying agents and topical antibiotic
- Oral antibiotics
- Hormonal/oral contraceptive
- Anti-inflammatory products
- Isotretinoin
- Combination therapy including diet
- Light and thermal devices

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### Realistic Treatment Goals with Acne

- Improve and control the condition for flares.
- Prevent the development of new lesions and scarring.
- Treat postinflammatory hyperpigmentation, if present.
- Avoid adverse effects from the medication regimen.
- **DO NOT DO MONOTHERAPY TREATMENTS.**

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### Topical Therapy for Acne

- Benzoyl peroxide (BPO) is bactericidal.
- Has never been shown to induce resistance
- More effective than topical clinda- and erythromycin in multiple studies
- Multiple concentrations and combinations in various vehicles, both prescription and OTC
- Can be applied topically to affected areas once a day
- Remind patients that it bleaches clothing!

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## Benzoyl Peroxide: Multiple Vehicles

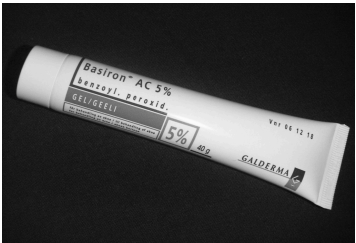


Image source: Obit. (2006). Tube of Basiron. (<https://en.wikipedia.org/wiki/Acne>) CC BY-SA 3.0

- As of 2011, FDA issued final rule that BPO 2.5% to 10%.
  - In Wikipedia Acne. (2023, August, 23). <https://en.wikipedia.org/wiki/Acne>
- % as single agent is “safe and effective” as over-the-counter topical acne drug product

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## Benzoyl Peroxide: Multiple Vehicles (continued)

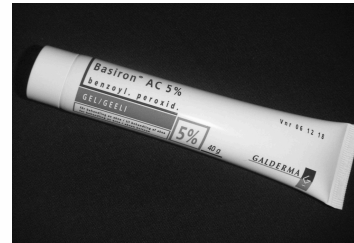


Image source: Obit. (2006). Tube of Basiron. (<https://en.wikipedia.org/wiki/Acne>) CC BY-SA 3.0

- Standard baseline ingredient for treatment of mild to moderate acne
- Bactericidal and sebum drying
- Reminder to always moisturize
- First used in 1958 as Rx

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## Salicylic Acid

- From Latin “salix” or “willow tree”; basic compound of aspirin
- Breaks down oily sebum in clogged pores, effective at 2%
- 10% to 40% will dissolve warts.
- Begin with limited use to assess skin irritation possibilities.
- Considered bacteriostatic



Image source: Obit at English-language Wikipedia. (2006). Salicylic acid. ([https://en.wikipedia.org/wiki/Salicylic\\_acid](https://en.wikipedia.org/wiki/Salicylic_acid)) CC BY-SA 3.0

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## Clindamycin 1% Gel, Foam, Solution, Cream, Lotion

- Often applied to forehead, cheeks, chin, and nose
- Works best when combined with BPO use
- Generic, bacteriostatic effect



Image source: Briannafo0520. (2019). Clindamycin phosphate topical solution ([https://commons.wikimedia.org/wiki/File:Clindamycin\\*.jpg](https://commons.wikimedia.org/wiki/File:Clindamycin*.jpg)) CC BY-SA 4.0

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## Azelaic Acid Foam or Cream



- Azelaic acid both bacteriostatic and bactericidal, no inducement of antibiotic resistance
- Dicarboxylic acid, commonly found in wheat, rye, and barley
- Superior anti-inflammatory properties
- Not studied in pregnancy

Image source: Original book source: Prof. Dr. Otto Wilhelm Thomé Flora von Deutschland, Österreich und der Schweiz 1885, Gera, Germany. (<https://en.wikipedia.org/wiki/Barley>) In the public domain.

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## First-generation Retinoid Tretinoin: Multiple Vehicles

- Tretinoin – Vitamin A derivative for both inflammatory and non-inflammatory acne.
  - Often used in conjunction with other topicals to enhance follicular penetration
- Avoid with pregnant, breast-feeding women
- Photosensitivity is high
- Effective, multiple vehicles and concentrations combined with oral antibiotics

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## First-generation Retinoid Tretinoin: Multiple Vehicles (continued)

- Excellent for photoaging problems and PIHP
- Developed in late 1950s with use on prison inmates in Pennsylvania
  - First prescribed in 1962
- In the “Top 200” of all-time prescriptions

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## Second-generation Retinoid: Tazarotene

- Tazarotene 0.1% and 0.05% in cream, gel and foam bases
- Familiar in psoriasis and photodamage treatment
- Common adverse effects include worsening acne, sun sensitivity, dry skin, itching, redness, drying and cracking of skin.
- Adverse effects generally decrease after first 2–4 weeks of use.

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### Third-generation Retinoid: Adapalene 0.1% OTC and 0.3% Rx

- Synthetic retinoid that limits photosensitivity adverse effect: The tolerable retinoid
- Very helpful in bumpy, sharp keratotic papules
- Enhances topical clindamycin gel/lotion use
- More stable chemical structure allows it to be combined with benzoyl peroxide in same formulation.

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### Fourth-generation Retinoid: Rx 0.005% Trifarotene Cream

- Oral and topical dapsone used for acne since early 1950s.
- A sulfur compound antibiotic with bacteriostatic action, used chiefly in the treatment of leprosy in the past.
- Effective for inflammatory acne
- Minimal absorption, can be used twice a day
- Cannot be combined with BPO, as the skin can turn bright orange
- Controversy in dermatology if first- or second-line therapy
- Common adverse effects include nausea and loss of appetite.

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### Dapsone 5% and 7.5% Cream and Gel

- Indicated for the topical treatment of acne in people ages 9 years and older
- Contraindicated in pregnancy
- Little photosensitivity though still recommend evening application
- Superior results on truncal and facial acne
- Overall, considered quite gentle

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### Androgenetic or Hormonal Therapy for Acne: An Option for Females

- Spironolactone: Potassium-sparing diuretic and aldosterone blocker
- Not FDA-approved for acne
  - Longtime "well-established practice"
- Use for acne considered off-label in dermatology.
- 25 mg and 50 mg; 1 by mouth once or twice a day to begin and can be increased to 100 mg 1 PO qday.
- Also effective in female pattern hair loss, facial hirsutism and of course, at higher doses, blood pressure

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### Androgenetic or Hormonal Therapy for Acne: An Option for Females (continued)

- Common adverse effects include...
  - More energy, tiredness, nipple tenderness, more frequent urination and dry mouth
- Blocks the conversion of testosterone to dihydrotestosterone
  - Responsible for most hair growth alterations and acne

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### Additional Information

There are 4 FDA-approved combined oral contraceptives for treatment of acne. These take time **and** dermatology is leery.

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### Additional Information (continued)

- Newest topical cream: FDA-approved antiandrogen clascoterone 1%, for ages 12 years and older
  - Blocks dihydrotestosterone (DHT) without secondary hormonal issues
  - Good secondary product, being used also in rosacea
  - Does not have drying as its primary action, but sebum reduction and not an antibiotic.
  - Some feel it is more effective in males over females.

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### The Relapsing Female Patient

- Remember that pediatric endocrinology is your friend and an excellent referral option for the patient with suspected polycystic ovarian syndrome (PCOS).
- 17-hydroxylase deficiency should be considered.
- Congenital adrenal hyperplasia?
- Is there increased hirsutism?

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### Controversial: The Use of Oral Prednisone for Treating Acne

- Rapid-acting corticosteroid, very helpful as anti-inflammatory
- Key questions: Amount and time
- 5–10 mg; 1 PO qday for a month concomitantly with antibiotic or isotretinoin reasonable for severe acne
- Beware of rebound effect
- Overall, not a frontline recommendation

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### Oral Antibiotic Therapy in Acne

- Doxycycline and minocycline extended release effective 1 mg/kg/day
- Markedly lower adverse effects
- Use in moderate to severe acne
- Enteric-coated doxycycline results in less GI adverse effects than immediate release formulations.
- Minimum one-month therapy; maximum three months
- Classic adverse effects are nausea, vomiting, diarrhea, dizziness and photosensitivity.
- Tetracycline not used much; new Rx sarecycline oral antibiotic is fourth generation of the -cyclines.

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### How does acne become resistant to antibiotics?

- New resistant strains
- Failure to consider naive colonization
- Inadequate drug potency
- Inadequate treatment duration
- Inadequate patient education and compliance

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### The Acne Vaccine

- Recent promising results in mice and humans
- Avoids topical regimens and improves compliance
- Limits use of antibiotics and subsequent resistance
- What are the results in the human body long-term?
- Should we neutralize a stable community of normal skin bacteria that is known to protect the skin from colonization by more harmful micro-organisms?
- Research continues as should questions.

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**Back to This:  
Severe acne may increase risk for attempted suicide.**



Image sources: Used with permission from Czerkas, V.

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**The Isotretinoin Challenge: Will we practice on the evidence?**

• 2/4/08 (San Antonio) – In the largest study of its kind, more than 9.6 million patient visits "failed to demonstrate an association between isotretinoin use and increased depression or suicide."

• Solid answer to antibiotic resistance

- American Academy of Dermatology 66<sup>th</sup> Annual Meeting
- Developed over 40 years ago, one of the safest and most predictable medications of the 20<sup>th</sup> century

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**The Seminal *New England Journal of Medicine* Study 2005**

- Nearly all patients achieve initial clearing of acne.
- 60% observe complete remission following one course of isotretinoin.
- 30% developed less severe acne.
- 10% relapse to warrant further treatment or an additional course of isotretinoin, without additional newer adverse effects.

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**The Seminal *New England Journal of Medicine* Study 2005  
(continued)**

- Isotretinoin-related depression, in one study, was found as "an idiosyncratic side effect." Often anxiety of potential adverse effects can bring on acne and depression, creating more anxiety.
  - Affects approximately 1% of patients on isotretinoin

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### Isotretinoin is a vitamin A derivative.

- Brand names include Amnesteem®, Roaccutane®, Sotret®, Claravis™, Absorica® and Zenatane™, among others.
- The iPledge program protects patient and provider.
  - Blood work to begin and once later in the 4–5-month course of treatment
- Adverse effects are generally predictable and consistent
  - Dry eyes, nose, lips and skin

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### Isotretinoin is a vitamin A derivative. (continued)

- Severe adverse effects
  - When drinking alcohol, photosensitivity, and birth defects
- Females must have monthly pregnancy test.
  - Can only dispense 30 pills at one time
- Mood improvement often observed.
- Be wary of bipolar, noncompliant, IBS, Crohns, hepatitis and the flippant.
  - Always take with full meal.

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### The iPledge Program, Summarized

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Blood work prior to prescribing for liver and lipid abnormality</li><li>• For females, two negative pregnancy tests and monthly thereafter</li><li>• Two forms of birth control</li><li>• iPledge online accessed monthly</li></ul> | <ul style="list-style-type: none"><li>• Prescribe for 30 days, no refills.</li><li>• Product dispensed and obtained within 7 days of qualification.</li><li>• Patient and parent educated with verbal discussion and written contract of warnings and hazards.</li></ul> |
|---|--|

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### The Skinny on Acne and Diet

- Foods that increase insulin levels magnify male hormone effect
- Dairy products boost insulin and are high in hormones made by pregnant cows that produce milk.
- Avoid dairy and sugar to lessen oil stimulus production.



Image source: Hansen, K. (2009). Cow (https://commons.wikimedia.org/wiki/File:Cow\_(Fleischvieh\_breed)\_Oeschinense\_Slaunger\_2009-07-07.jpg) CC BY-SA 3.0.

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## Are there recommendations for reliable OTC skin maintenance products? Absolutely!

- Consider non-soap cleansers and sulfur-based soaps.
- Combination products with salicylic acid + niacinamide
- Niacinamide 10% with 1% zinc
- Vitamin C + vitamin E serums
  - Combined are more effective.
- Retinoids + ceramides
- Glycolic washes and foams
- Hyaluronic B5 serums
- All combinations should not be used in combination or succession with BPO.

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## Rosacea: An Introduction



Image source: Used with permission from Czarkasi, V.

- Rosacea is an inflammatory condition as opposed to acne, which is primarily a bacterial disease.
- Older dermatology wrongly titled this condition “**acne rosacea**,” though the treatment paradigms are quite different.
- They are both discouraging and require attention to care and detail.

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## Rosacea: An Introduction (continued)

- April is Rosacea Awareness month: Why do you think?
- Affects 16 million Americans
- The goals are control, not cure.
- 76% of rosacea patients experience lowered self-esteem and self-confidence.
- Pt must primarily become educated in daily skin care and trigger control.



Image source: Used with permission from Czarkasi, V.

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## Famous People with Rosacea



Left image source: Defense. (2019). Prince Harry, Duke of Sussex. ([https://en.wikipedia.org/wiki/Prince\\_Harry,\\_Duke\\_of\\_Sussex](https://en.wikipedia.org/wiki/Prince_Harry,_Duke_of_Sussex)) In the public domain.  
Right image source: Skidmore, G. (2016). Bill Clinton. ([https://en.wikipedia.org/wiki/Bill\\_Clinton](https://en.wikipedia.org/wiki/Bill_Clinton)) CC BY-SA 2.0.

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## Famous People with Rosacea



Image source: Gabbot (2019). Renée Zellweger.  
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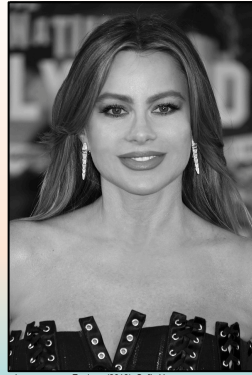


Image source: Toglietti (2019). Sofia Vergara.  
([https://commons.wikimedia.org/wiki/File:Sof%C3%ADa\\_Vergara\\_2019\\_by\\_Glenm\\_Franco.jpg](https://commons.wikimedia.org/wiki/File:Sof%C3%ADa_Vergara_2019_by_Glenm_Franco.jpg)) CC BY-SA 4.0

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**Rosacea is presented on the one place most difficult to hide from the public – The Face.**

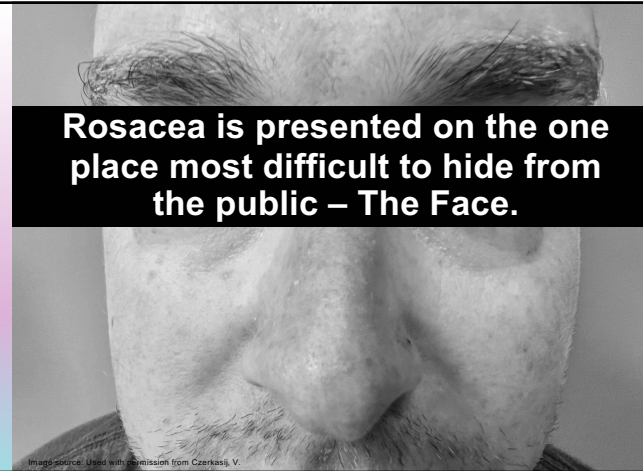


Image source: Udo Wittmann/Emilsson from Czerkasz, V.

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## Rosacea Background

- Rosacea is an inflammatory disease that affects primarily women 8>1 over men.
- Scots/Irish, Dutch/German and Scandinavian peoples ages 40 and older are the target population.
- Worst two triggers: Uncontrolled sunshine and increased stress.
- Other common triggers are...
  - Coffee, chocolate, caffeine, hot foods, spicy foods, acidic foods (i.e., tomatoes, citrus, pineapple and strawberries) and wines
- Hispanic, Asian, and Black populations are not immune and often misdiagnosed, **especially for acne.**

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## Rosacea Types and Variants

- Erythematotelangiectatic rosacea (ETR) has facial redness, flushing and visible blood vessels because of the ongoing inflammation.
- Papulopustular appears as acne in middle-aged women.
- Phymatous rosacea affects many men and thickens the nose.
- Ocular rosacea centers peri-orbitally and feels like grains of sand.

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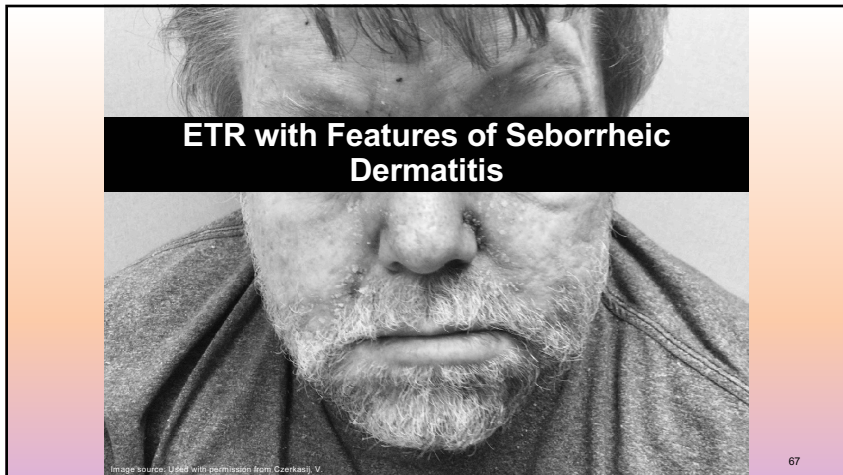




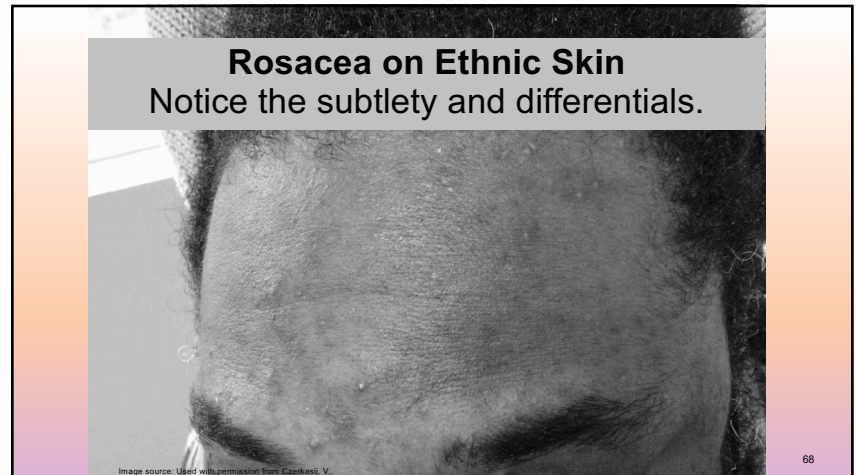
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## Papulopustular Rosacea

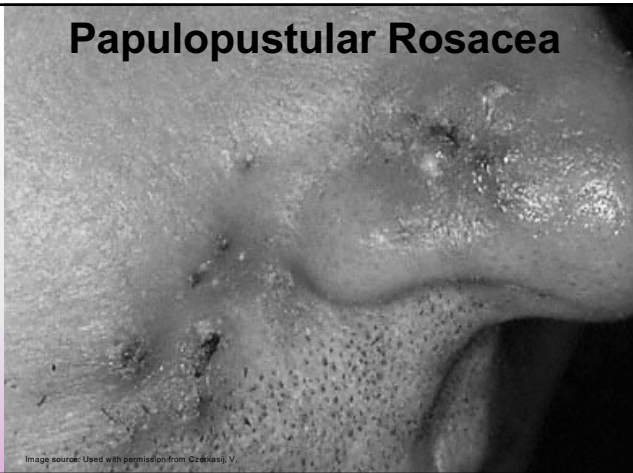


Image source: Used with permission from Czerkasij, V.

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## The Rosacea Challenge

Multiple challenges exist to address...

- Ongoing discussion of cause
- Provider inexperience to diagnose accurately
- Treatment combinations
- Encouraging lifestyle change



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## Ocular Rosacea

- Differentials include contact, perioral or seborrheic dermatitis, **or** true conjunctivitis.
- Itchy, scratchy, gritty eyes with swollen eyelids and tearing.
- 40 mg doxycycline helpful, as is ketoconazole 2% shampoo wash.

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## Ocular Rosacea (continued)


- Can occur prior to skin disease
- Abnormal Schirmer's test in 40% rosacea patients
- Topical corticosteroid eye drops effective for pruritus relief.



Image source: Used with permission from Czerkasij, V.

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## Phymatous Rosacea

- Constant swelling due to untreated rosacea centered on the nose will result in permanent thickening and redness.
- Associated with difficulty breathing and increased snoring

Image source: Hellman, J. (2013). Rhinophyma. (<https://en.wikipedia.org/wiki/Rhinophyma>) CC BY-SA 3.0

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## Phymatous Rosacea

Primarily in men and while unfairly and unkindly referred to as “Gin blossom” or “Rummy nose”, and more recently, “Rhinophyma.”

There is a quick and effective plastic surgery technique available to improve this condition.

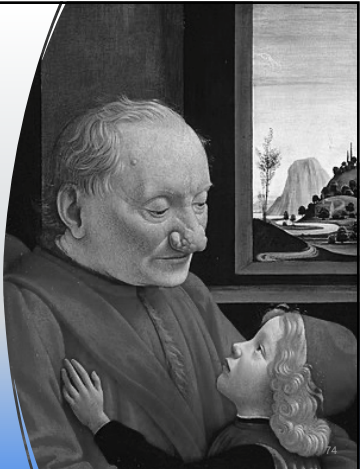


Image source: Web Gallery of Art. Ghislandi's An Old Man and His Grandson, (1490). Rhinophyma. (<https://en.wikipedia.org/wiki/Rhinophyma>) In the public domain.

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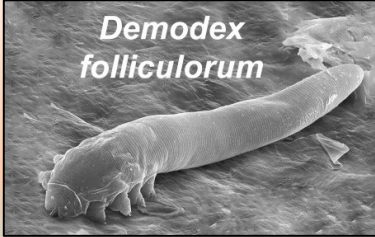
## Rosacea in History: Rembrandt



Image source: Rembrandt's Self Portrait (1657) (left); Rembrandt's The Spectacles-pedlar (right) (1624). ([https://en.wikipedia.org/wiki/List\\_of\\_paintings\\_by\\_Rembrandt](https://en.wikipedia.org/wiki/List_of_paintings_by_Rembrandt)) In the public domain.

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## Demodex mites thrive in some rosacea.



*Demodex folliculorum*

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### Classic Topical Therapies for Rosacea

- Metronidazole 0.75% and 1% cream and gel
  - Applied once or even twice daily
- Prescription brimonidine 0.33% is a topical alpha-adrenergic agonist gel for the treatment of persistent erythema (redness) in rosacea.
  - Applied once daily or as needed
  - Duration of peak effectiveness is three to six hours.

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### Classic Topical Therapies for Rosacea (continued)

- Oxymetazoline 1% cream also reduces flushing by constricting blood vessels.
  - Results occur within 12 hours after use.
  - The effect on the blood vessels is temporary, so the medication needs to be applied regularly to maintain improvements.

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### A Popular Rosacea Addendum Product

- Sulfacetamide sodium/sulfur is a topical Rx medication used to treat rosacea.
  - Effective for acne and seborrheic dermatitis
  - It is available in a variety of preparations including creams, gels and cleansers.
- Also available in several dosages – Most common is 10% sulfacetamide sodium/ 5% sulfur
    - It is applied once or twice daily.
  - Multiple OTC bar soap forms available over the counter.

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### Key Therapies for Rosacea

- Prescription azelaic acid foam and gel 15% and 20%
  - Twice daily and avoid the eyes
  - Decreases redness, swelling and blistering
- Hypopigmentation in darker skin is possible but rare.
  - Look for any product with niacinamide as a co-ingredient.

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### Ivermectin 1% Cream for Rosacea: Why?

- Prescription ivermectin 1% cream can be used daily for rosacea control.
- Marketed originally for its helpful anti-inflammatory effects.
  - The reason for an antiparasitic was not lost on some providers.
- Generally, a very well-tolerated and helpful topical with blister and redness reduction when regularly used.
- Main complaints include drying and irritation.

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### Rx 5% Benzoyl Peroxide Cream for Rosacea

- Although BPO may have previously been thought of as too irritating for rosacea skin, the BPO in this Rx product is formulated differently.
- Visible results as early as 2 weeks with blistering reduced by nearly 70% in 12 weeks.
- Nearly 50% of trial participants had clear or almost clear skin in 12 weeks.
- After 52 weeks of use in clinical trials, most people had mild adverse effects and were able to tolerate the medication daily.

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### Why do we use “-cyclines” for rosacea flares if rosacea is NOT bacterial?

- The anti-inflammatory effect of low-dose doxycycline and minocycline are very helpful for reducing flares.
- Recommend 100 mg 1 PO qday for up ten days for flares.
- Even better, consider sub-microbial 40 mg doxycycline 1 PO qday for one-month.
  - Since 2006, once daily 40 mg extended-release doxycycline has been the only oral treatment approved by the FDA.

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### On the Horizon for Rosacea Treatments

- Topical minocycline foam 4% was here during COVID and then disappeared as the company is restructuring. It may be back.
- The mainstay of daily therapy remains gentle cleansers and careful treatment of the facial skin.
- Stress and anxiety control is necessary for a foundation of maintaining clear skin.
- Sunscreen application of 30 SPF daily is part of the lifestyle.

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## End of Presentation Thank you for your time and attention.

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## Rosacea Resources

- National Rosacea Society has free smart phone app for patients. See [www.rosacea.org](http://www.rosacea.org) or popular app sites
- Rosacea Resource Center for providers at The American Academy of Dermatology Association, <https://www.aad.org/public/diseases/rosacea>

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## References

- Chauhan, P. N., Sharma, A., Rasheed, H., Mathur, H., & Sharma, P. (2023). Treatment Opportunities and Technological Progress Prospective for Acne Vulgaris. *Current drug delivery*, 20(8), 1037–1048. <https://doi.org/10.2174/1567201819666220623154225>
- Dall'Oglio, F., Nasca, M. R., Gerbino, C., & Micali, G. (2022). Advances in pharmacotherapy for rosacea: what is the current state of the art? *Expert opinion on pharmacotherapy*, 23(16), 1845–1854. <https://doi.org/10.1080/14656566.2022.2142907>
- Flores-Balderas, X., Peña-Peña, M., Rada, K. M., Alvarez-Alvarez, Y. Q., Guzmán-Martín, C. A., Sánchez-Gloria, J. L., Huang, F., Ruiz-Ojeda, D., Morán-Ramos, S., Springall, R., & Sánchez-Muñoz, F. (2023). Beneficial Effects of Plant-Based Diets on Skin Health and Inflammatory Skin Diseases. *Nutrients*, 15(13), 2842. <https://doi.org/10.3390/nu15132842>
- Gonzalez, C., Andriessen, A., Antelo, D., Cestari, S., McKeever, C., & Valencia Hernandez, A. L. (2022). Treatment and Maintenance of Cutaneous Rosacea in Latino Skin Types With Prescription Medications and Non-Prescription Cleansers and Moisturizers as Adjuncts: A Review. *Journal of drugs in dermatology : JDD*, 21(10), 1111–1118. <https://doi.org/10.36849/JDD.7010>

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87

## References (continued)

- Gupta, M.A., Gupta, A.K. (1998). Depression and suicidal ideation in dermatology patients with acne. *Br J Dermatol.*, 139:846-850. <https://pubmed.ncbi.nlm.nih.gov/9892952/>
- Kaur, G., Redd, T. K., & Seitzman, G. D. (2022). Practice Patterns and Clinician Opinions for Treatment of Ocular Rosacea. *Cornea*, 10. <https://doi.org/10.1097/ICO.0000000000003157>
- Kutlu, Ö., Karadağ, A. S., & Wollina, U. (2023). Adult acne versus adolescent acne: a narrative review with a focus on epidemiology to treatment. *Anais brasileiros de dermatologia*, 98(1), 75–83. <https://doi.org/10.1016/j.abd.2022.01.006>
- Ly, S., Kamal, K., Manjaly, P., Barbieri, J. S., & Mostaghimi, A. (2023). Treatment of Acne Vulgaris During Pregnancy and Lactation: A Narrative Review. *Dermatology and therapy*, 13(1), 115–130. <https://doi.org/10.1007/s13555-022-00854-3>
- Marson, J., Bhatia, N., Graber, E., Harper, J., Lio, P., Tloughan, B., Nussbaum, D., & Baldwin, H. (2022). Supplement Article: The Role of Epidermal Barrier Dysfunction and Cutaneous Microbiome Dysbiosis in the Pathogenesis and Management of Acne Vulgaris and Rosacea. *Journal of drugs in dermatology: JDD*, 21(9), SF3502915–SF35029114. <https://pubmed.ncbi.nlm.nih.gov/36074515/>

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## References (continued)

Mohsin, N., Hernandez, L. E., Martin, M. R., Does, A. V., & Nouri, K. (2022). Acne treatment review and future perspectives. *Dermatologic therapy*, 35(9), e15719. <https://doi.org/10.1111/dth.15719>

Nickles, M. A., & Lake, E. (2022). Topical dapsone in the treatment of acne: a systematic review. *International journal of dermatology*, 61(11), 1412–1421. <https://doi.org/10.1111/ijd.16074>

Sobkowska, D., Szafarska, A., Pawlaczyk, M., Urbańska, M., Micek, I., Wróblewska-Kończalik, K., Sobkowska, J., Jąłowska, M., & Gornowicz-Porowska, J. (2023). The Role of Cosmetology in an Effective Treatment of Rosacea: A Narrative Review. *Clinical, cosmetic and investigational dermatology*, 16, 1419–1430. <https://doi.org/10.2147/CCID.S412800>

U.S. Department of Health and Human Services, Office of Public Health and Science, Office on Women's Health. (2009). Frequently Asked Questions: Acne. (PDF). <https://web.archive.org/web/20161210141821/https://www.womenshealth.gov/files/assets/docs/fact-sheets/acne.pdf>

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