

Acne Vulgaris

Background

- Follicular plugging due to abnormal keratinization
- Increased sebum production
- Proliferation of *Cutibacterium acnes* within the follicle
- Inflammation
- Acne occurs at puberty because rise in adrenal androgens trigger sebum production and hyperproliferation of keratinocytes



Triggers

- Contact with oils and greasy products such as greasy hair products, oily finger foods, and heavy make up may exacerbate acne due to plugging of hair follicles by oils that contact skin.
- Little evidence for food triggers in acne: Limited evidence that milk may increase risk of acne and low glycemic diet may improve acne.
- Stress.
- Some medications i.e corticosteroids, lithium, barbiturates, androgenic steroids.

→ **Recommend:** Gentle washing with warm water 2-3x/day, no popping pimples, avoid touching skin, avoid greasy products & oily creams. Avoid hats, helmets & headbands.



Types of acne:

- **Comedonal**
 - dilated or widened hair follicles in the skin.
 - Keratinocytes clog the follicles.
 - open (blackheads) or closed by skin (whiteheads)
- **Inflammatory**
 - Papules (small, tender red bumps)
 - Pustules (pus-filled)
 - Nodules (large painful red, deep lumps)
 - Pseudocysts (cystlike fluctuant swellings)
- **Secondary lesions**
 - Excoriations
 - Erythematous-violaceous macules
 - Hyperpigmented macules
 - Scars

Acne Management

Mild Comedonal

→ **Salicylates:** salicylic acid 0.5% (OTC)

Increases sloughing of skin - comedolytic

→ **Retinoids:**

Prevent keratins from blocking pores. May be irritating. Start every few days and increase slowly to every day.

- Tretinoin 0.025%, 0.05%
- Micro tretinoin (less irritation) 0.04%, 0.1%
- Adapalene 0.1%
- Trifarotene 0.005% (for the back)



Mild Inflammatory

→ **Topical Antibiotics**

- Clindamycin or erythromycin. Must use as a combination product to reduce resistance i.e benzaclin or benzamycin
- Benzoyl peroxide (BPO) – Kills bacteria and comedolytic. Comes in wash, soap and creams. OTC and by prescription. Caution: Might bleach clothes. If it is too drying try a lower % or use less often

Mixed acne: combination of retinoid & BPO +/- topical antibiotic

- Biacna™ - tretinoin and clindamycin
- TactuPump™ - BPO and adapalene

Goals of acne management:

Unplug the pore, kill the bacteria, reduce the inflammation, dry up the oil

Treatment choices depend on type of acne (comedonal, inflammatory or mixed) & severity of acne



Moderate acne

Add oral medications to topical creams used in mild acne

- **Antibiotics** (ex. doxycycline)
Caution stomach upset, need to take with food daily. Avoid taking with dairy. Side effects: sun sensitivity, headaches
- **Hormone** (Oral contraceptives or spironolactone - for females only)



Severe acne → Isotretinoin

Works well but more side effects

Common side effects: dry eyes, mouth, lips, skin.

Severe side effects: dyslipidemia, hepatotoxic, depression

Need laboratory testing at baseline & 2 months.

Pregnancy X → must use 2 forms of birth control & get monthly pregnancy test