



# Management of Acne in Primary Health Care: The good, the bad and the ugly

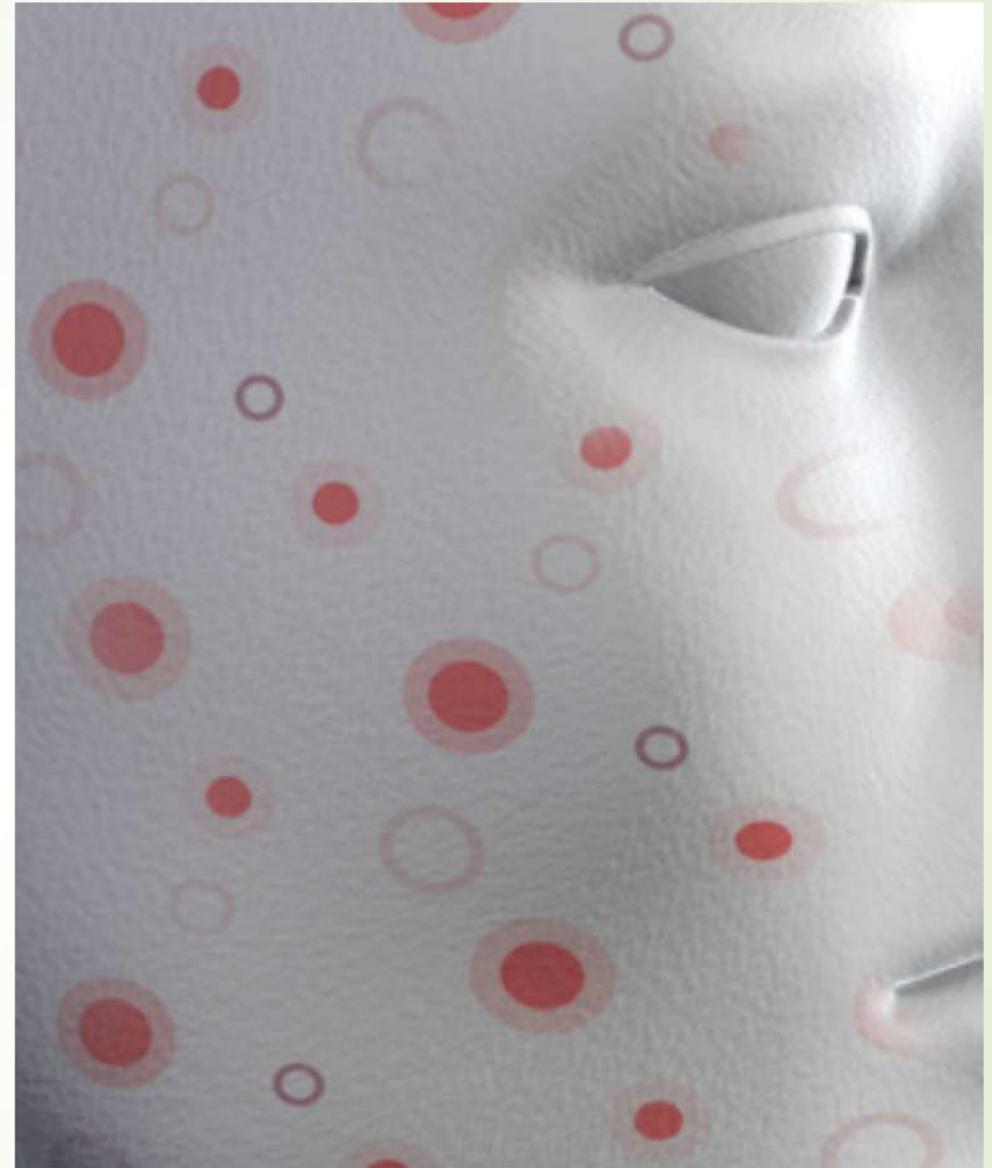
Marie-Lyne Bournival BSc, PG Dip (Health Sc), MN

Nurse Practitioner – Hei Hei Health Centre – Christchurch, New Zealand

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# Agenda

- ▶ A bit of vocabulary
- ▶ Pathophysiology
- ▶ History taking
- ▶ Examination
- ▶ Treatment
- ▶ Tools/Discussion



# ACNE VULGARIS

- ▶ Chronic disorder effecting the hair follicle and sebaceous gland in which there is expansion and blockage of the follicle and inflammation.
- ▶ 80% of the population of 15-30 year olds
- ▶ Many types of acne
  - ▶ Not to be mixed-up with rosacea
- ▶ Causes



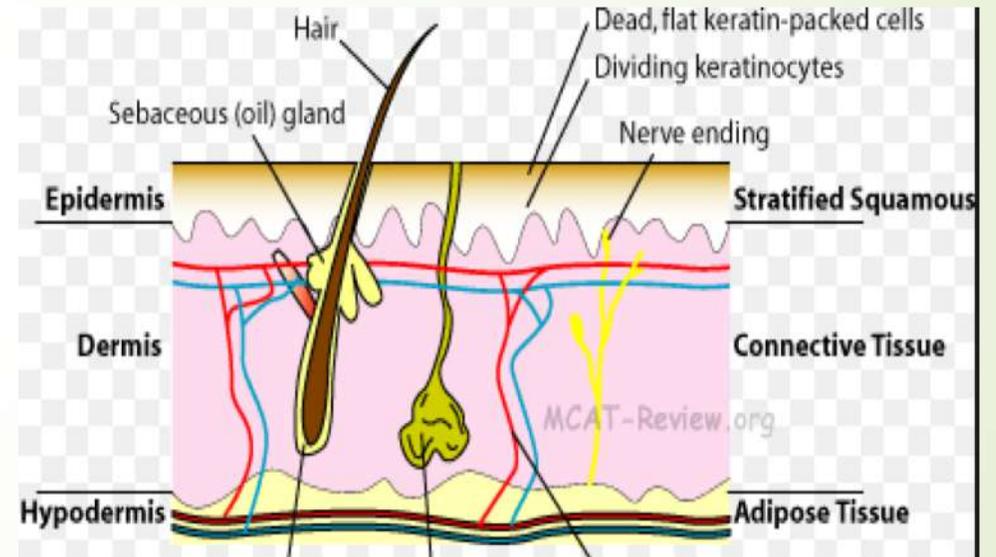
# Useful vocabulary

**Sebum:** Oil produced by sebaceous glands within the hair follicle.

**Keratin:** A protein inside cells mainly in the epidermis.

1. It holds skin cells together to form a barrier.
2. It forms the outermost layer of our skin, that protects us from the environment.

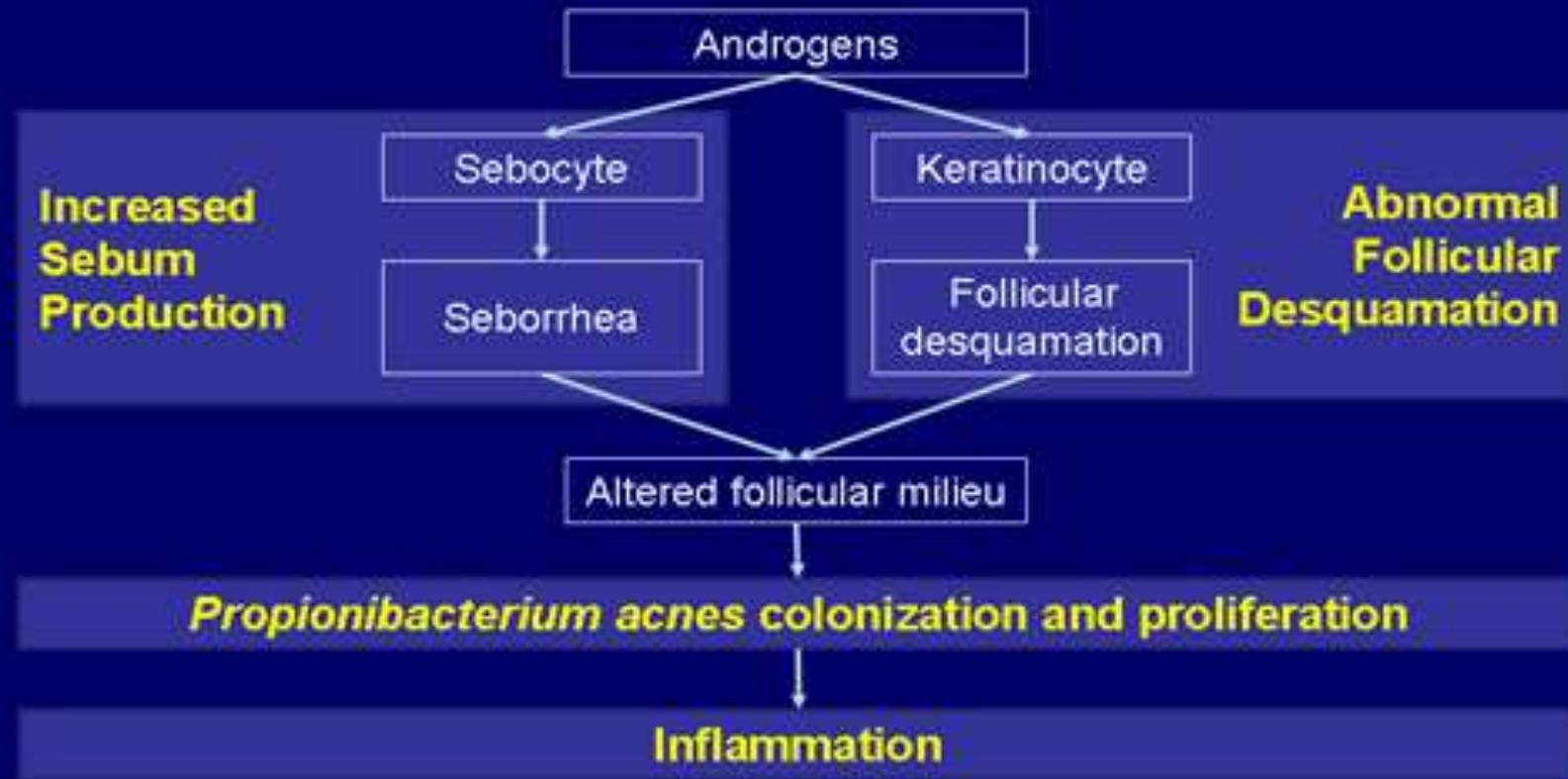
**Keratinisation:** Process by which the cells mature as they move from deep inside the skin up to the surface and produce keratin.



# Useful vocabulary



# Acne Pathogenesis Involves 4 Pathways



Adapted with permission from Gollnick H et al. *J Am Acad Dermatol*. 2003;49(1 suppl):S1-S37.



# History

- ▶ Duration of acne symptoms
- ▶ Possible aggravating factors (cosmetics, sunscreens, skin products)
  - ▶ What have they tried ? How long ? OTC
- ▶ Use of medicines e.g.: lithium, anti-psychotics, contraception, *street drugs*
- ▶ In females: menstruation history ? Differential PCOS
- ▶ Start looking at the effect on them
  - ▶ Psychological
    - ▶ *"It is important to look beyond the physical scarring, for there is no disease that has caused more insecurity and feelings of inferiority than acne" J. Koo*
    - ▶ *HEADSSS assessment - Lifestyle*
    - ▶ *Kessler-10 (Distress and anxiety)*
    - ▶ *Patient Health Questionnaire - 9 (Depression)*
  - ▶ Social (bullying/ Social Media platforms)

# Examination

## Stage 1 MILD

- Minor Pimples
- Blackhead and Milia
- Comedonal (whiteheads)
- No inflammation

## Stage 2 MODERATE

- Greater Blackheads / Milia
- Papules / Pustules
- Slight Inflammation
- Acne breakout may progress from face to other areas

## Stage 3 SEVERE

- Significant Inflammation
- Severe Papules / Pustules
- Cystic Nodules present
- High Risk for Scarring and Post-Inflammatory Hyperpigmentation





# Pre-Pharmacotherapy

- ▶ Step-wise approach
  - ▶ Regardless of severity
    - ▶ Wash face gently with warm water and mild soap or cleanser
    - ▶ Un-medicated soap is fine. Products containing benzoyl peroxide or salicylic acid can be effective
    - ▶ Avoid scrubbing, if dermatitis, avoid soap and anti-acne cleansers
    - ▶ All products should be applied to all areas and not each lesion itself
    - ▶ Inform patients that it can take several months to see significant results
    - ▶ Make sure that their usual facial products do not contribute to their acne e.g.: cosmetics/sunscreen – look for skin care products labelled “NON- COMEDOGENIC”

# Pharmacotherapy

## ► MILD ACNE

- Topical benzoyl peroxide
- Salicylic acid 0.1 – 2% cream is an alternative to benzoyl peroxide, but is generally less effective and may also cause skin dryness. It works by softening and descaling the skin, thereby reducing comedones.
- Topical retinoid
- Topical erythromycin and clindamycin



# Pharmacotherapy



## ► MODERATE ACNE

- Continue topical benzol peroxide or topical retinoid
- Use a tetracycline such as (Doxycycline 50-100mg) daily for 4 to 6 months. Can increase to BD if tolerated. Can do every other day if good response after 2-3 months
- Minocycline(*tetracycline*) is effective but associated with > lupus, hepatitis and hyperpigmentation
- Erythromycin 400mg BD
  - Informed patients with potential side effects of ABs
- COC in females

# Pharmacotherapy

## ➤ SEVERE ACNE

### ➤ Isotretinoin

- If unfamiliar with the drug, discuss with a dermatology NP or CNS or dermatologist
- Retinoid acid (Vit. A)
- Can be used in moderate acne that causes distress or scarring or not responding
- Acts on the 4 pathogenesis of acne
- Teratogenic - Commence treatment day 2 or 3 of menstrual cycle – Bullet proof contraception
- Caution in Breastfeeding
- Hepatic Impairment
- Hyperlipidaemia
- Mental Health





# Isotretinoin

- ▶ Dose according to weight
  - ▶ 500mcg/kg/day (one to two divided doses) for 2 to 4 weeks. Can increase to 1mg/kg/day for 16 to 24 weeks for a maximum cumulative dose of 150mg/kg per course ( NZF)
- ▶ In practice in New Zealand
  - ▶ 10mg per day until the acne has cleared-up and for another three to four months after.
    - ▶ A lower dose of 5mg per day is likely to be effective but in NZ it is not funded. We can't half the capsule!



# Severe acne

- Refer to NP dermatology or dermatologist
  - Take photos
  - Ask for their opinion through PMS
- If fever, arthralgia, bone pain, ulcerated or extensive skin lesions. Organise a blood count and refer urgently



# Technologies

- ▶ Intense-pulsed light therapy (IPL)
  - ▶ Light Therapy
  - ▶ Laser therapy
  - ▶ Photodynamic
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# Pharmacotherapy – Take home messages

Treatment of acne vulgaris	
	<p><b>Comedonal acne</b></p> <ul style="list-style-type: none"><li>• Closed or open comedones on forehead, nose &amp; chin</li><li>• May progress to inflammatory pustules or nodules</li><li>• Treatment: <b>Topical retinoids</b>; salicylic, azelaic, or glycolic acid</li></ul>
	<p><b>Inflammatory acne</b></p> <ul style="list-style-type: none"><li>• Inflamed papules (&lt;5 mm) &amp; pustules; erythema</li><li>• Treatment:<ul style="list-style-type: none"><li>• Mild: Topical retinoids + benzoyl peroxide</li><li>• Moderate: Add topical <b>antibiotics</b> (eg, erythromycin, clindamycin)</li><li>• Severe: Add oral antibiotics</li></ul></li></ul>
	<p><b>Nodular (cystic) acne</b></p> <ul style="list-style-type: none"><li>• Large (&gt;5 mm) nodules that can appear cystic</li><li>• Nodules may merge to form sinus tracts with possible scarring</li><li>• Treatment:<ul style="list-style-type: none"><li>• Moderate: Topical retinoid + benzoyl peroxide + topical antibiotics</li><li>• Severe: Add oral antibiotics</li><li>• Unresponsive severe: <b>Oral isotretinoin</b></li></ul></li></ul>

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# Useful Tools/Discussion

- ▶ <http://www.saferx.co.nz/assets/Documents/isotretinoin.pdf>
- ▶ <https://www.goodfellowunit.org/events/webinar-prescribing-isotretinoin-acne-primary-care>
- ▶ <https://www.goodfellowunit.org/gems/depression-and-isotretinoin-another-reason-low-dose>
- ▶ [https://www.nzgp-webdirectory.co.nz/site/nzgp-webdirectory2/files/pdfs/forms/PHQ-9\\_Depression.pdf](https://www.nzgp-webdirectory.co.nz/site/nzgp-webdirectory2/files/pdfs/forms/PHQ-9_Depression.pdf)
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- ▶ **CONTACT DETAILS**
  - ▶ [marielyne@heihei.pegasus.net.nz](mailto:marielyne@heihei.pegasus.net.nz) or [mlb.networkicn@gmail.com](mailto:mlb.networkicn@gmail.com)