

# QUICK REFERENCE FOR HEALTHCARE PROVIDERS

## MANAGEMENT OF ACNE



Ministry of Health Malaysia



Dermatological Society of Malaysia



Academy of Medicine Malaysia

## KEY MESSAGES

- Acne is a medical disease which requires treatment.
- If left untreated, acne may have a profound psychological and emotional impact.
- Pathogenesis of acne is multifactorial which includes increased sebum production, *Propionibacterium acnes* proliferation, altered follicular keratinisation & inflammation.
- A low glycaemic load diet and high fibre diet should be encouraged for acne patients.
- Aims of acne management are to induce clearance of lesions, maintain remission and prevent relapse, physical and psychological complications.
- Comprehensive Acne Severity Scale (CASS) may be used for grading of acne severity in clinical practice.
- Topical therapy is the mainstay of treatment for mild and moderate acne.
- Oral antibiotics may be used as treatment for moderate to severe acne, but should not be used for more than six months.
- Maintenance treatment should be commenced after an initial successful induction therapy to sustain remission.
- Oral isotretinoin should only be prescribed by dermatologist.

This Quick Reference provides key messages and a summary of the main recommendations in the Clinical Practice Guidelines (CPG) Management of Acne (January 2011).

Details of the evidence supporting these recommendations can be found in the above CPG, available on the following websites:

Ministry of Health Malaysia : <http://www.moh.gov.my>  
Academy of Medicine Malaysia : <http://www.acadmed.org.my>

## COMPREHENSIVE ACNE SEVERITY SCALE (CASS)

A new grading system named Comprehensive Acne Severity Scale – CASS (modification of an Investigator Global Assessment [IGA] of Acne Severity) was validated and simple to use in clinical practice (refer to the following table).

GRADE*		DESCRIPTION
<b>CLEAR</b>	0	No lesions to barely noticeable ones. Very few scattered comedones and papules.
<b>ALMOST CLEAR</b>	1	Hardly visible from 2.5 metre away. A few scattered comedones, few small papules and very few pustules.
<b>MILD</b>	2	Easily recognisable; less than half of the affected area is involved. Many comedones, papules and pustules.
<b>MODERATE</b>	3	More than half of the affected area is involved. Numerous comedones, papules and pustules.
<b>SEVERE</b>	4	Entire area is involved. Covered with comedones, numerous pustules and papules, a few nodules and cyst.
<b>VERY SEVERE</b>	5	Highly inflammatory acne covering the affected area, with nodules and cyst present.

\* Applied to each of the face, chest and back independently.

Inspection is done at a distance of 2.5meters away for acne on face, chest and back.

### **Chest area defined as:**

Anterior torso superiorly defined by suprasternal notch extending laterally to shoulders and inferiorly by a horizontal line defined by the xiphoid process.

### **The back area defined as:**

(Is demarcated by the) superior aspects of the shoulders extending to the neck and inferiorly by the costal margins

## FOOD LIST ACCORDING TO GLYCAEMIC INDEX (GI) CLASSIFICATION

The GI is a numerical system used to classify carbohydrate food based on the impact they produce on the postprandial blood glucose level. The higher the GI values of the food, the greater the blood glucose response. In general, most refined carbohydrate with devoid of fibre is high in GI while intact carbohydrate (whole grains products), legumes, milk (and milk products), fruits and vegetables are low GI foods.

### Categories of GI (based on glucose as the reference)

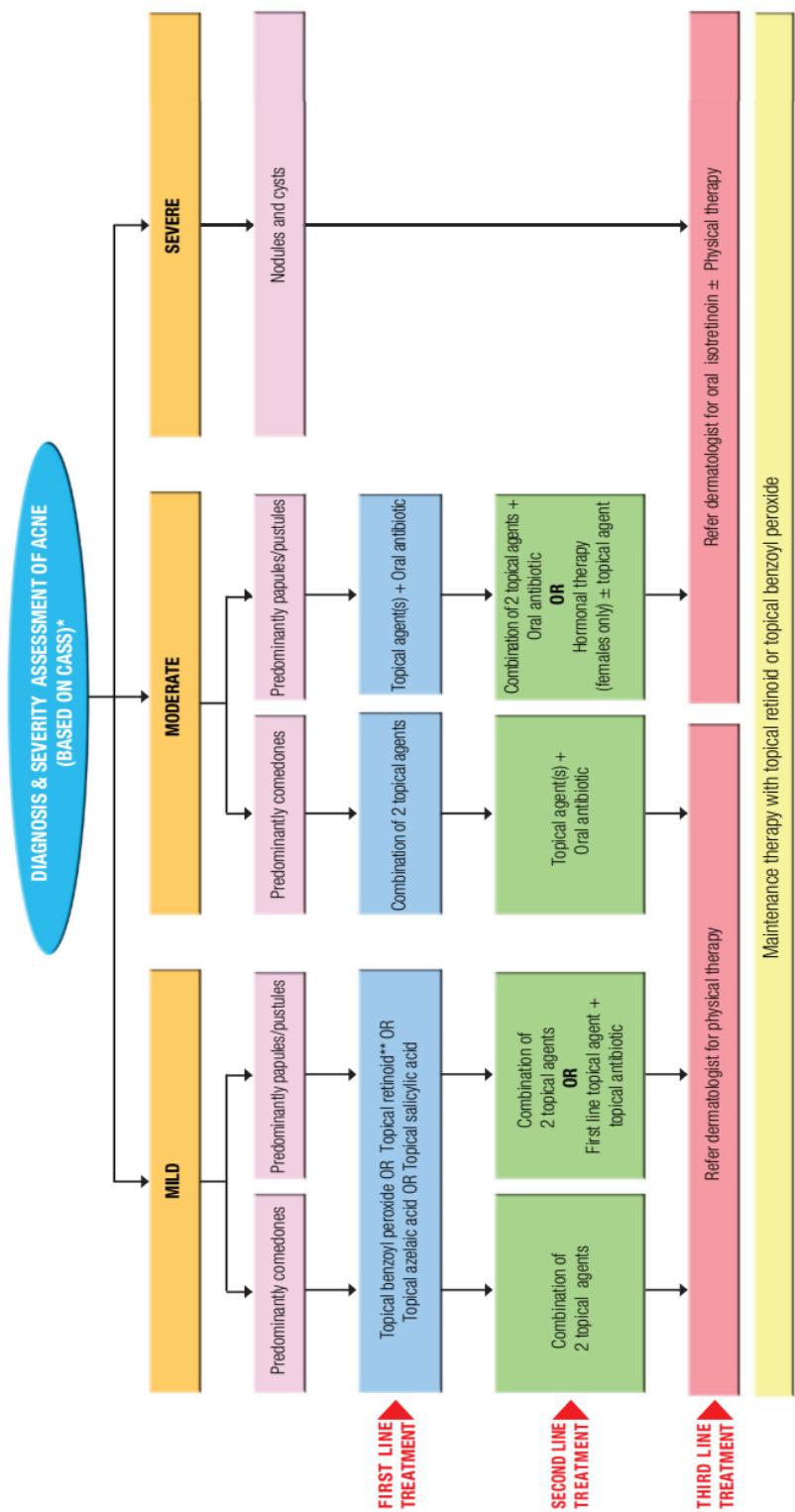
Low : <55

Medium : 55 - 70

High : >70

Foods/Drinks	Low GI		Medium GI		High GI	
	Example	GI	Example	GI	Example	GI
Rice	Rice, parboiled	48	Brown rice, boiled Basmati, white, boiled	68 58	White rice, boiled Glutinous rice, white	73 98
Bread	Whole grain bread Chapatti	51 52	Pita bread	57	Whole meal bread White bread Sardine sandwich	74 75 73
Breakfast cereals	Oat bran, raw	50	Instant porridge, oats	66	Cornflakes Cocoa-flavoured puffed rice	81 77
Pasta and noodles	Spaghetti, whole meal, boiled	37	Rice noodles, dried, boiled	61	Fried mee-hoon Fried macaroni	99 74
Fruits	Apple, raw Orange, raw Banana, raw	38 43 51	Pineapple, raw	59	Watermelon, raw	76
Dairy products and alternatives	Milk, full fat Milk, skim Ice cream, low fat Yogurt Low-fat yogurt, fruit, sugar. Soy milk	27 32 50 36 33 32	Ice cream	61		
Sugars	Fructose	19	Sucrose Honey	68 61	Glucose Teh tarik	99 78

## MANAGEMENT OF ACNE



\*Severity assessment is based on CASS (mild 1 - 2, moderate 3, severe 4 - 5). Quality of life should be taken into consideration. \*\*Topical retinoids are to be avoided in pregnancy.

†If there is no improvement in 3 months, consider the next line of treatment. ‡Oral antibiotic is recommended to be used for 4 - 6 months.

## SUGGESTED MEDICATION DOSAGES AND SIDE EFFECTS

<b>Drug</b>	<b>Recommended Dosage</b>	<b>Common Adverse Effects</b>	<b>Contraindications</b>	<b>Special Precautions</b>
Topical benzoyl peroxide	Apply once to twice daily	Contact dermatitis, dryness, skin discolouration, skin rash, peeling, transient local oedema	Hypersensitivity to benzoyl peroxide	Avoid contact with eyes, eyelids, lips and mucous membranes. May bleach fabrics or hair.
Topical tretinoin	Apply once in the evening before retiring	Initial exacerbation of symptoms, skin irritation, stinging, oedema, blistering, crusting of skin, erythema, scaling, photosensitivity, temporary hypo/hyperpigmentation	Hypersensitivity to tretinoin, pregnancy, lactation, eczema, sunburn conditions	Avoid concomitant use of topical keratolytic agents. Avoid exposure to sunlight or ultraviolet (UV) light. Avoid contact with eyes, mouth, angles of nose, mucous membranes and open wounds. Avoid facial scrub. Avoid use of topical preparations with high concentration of alcohol, menthol, spices or lime.
Topical adapalene	Apply once daily to affected areas after washing in the evening before retiring	Mild skin irritation, scaling, erythema, dryness, stinging, burning, pruritus	Hypersensitivity to adapalene	Avoid contact with eyes, lips, angles of nose and mucous membranes. Avoid cuts, abrasions, eczematous skin or sunburned skin. Minimise exposure to sunlight.
Topical clindamycin	Apply twice daily	Irritation, dryness, stinging, erythema, contact dermatitis	Hypersensitivity to clindamycin or lincomycin, ulcerative colitis, antibiotic-related colitis	Alcohol base solution may cause burning and irritation of the eyes especially in atopic individuals.
Topical erythromycin	Apply twice daily	Dryness, erythema, burning, pruritus	Hypersensitivity to erythromycin	Avoid contact with eyes and other mucous membranes.
Topical salicylic acid	Apply once to thrice daily	Irritation, sensitivity, excessive dryness	Hypersensitivity to salicylic acid	Avoid prolonged use in high concentrations and over large areas of the body. Avoid broken skin, mouth, eyes and mucous membranes.

<b>Drug</b>	<b>Recommended Dosage</b>	<b>Common Adverse Effects</b>	<b>Contraindications</b>	<b>Special Precautions</b>
Topical sulfur and its combinations	Apply once to twice daily. Initiate with once daily, then increase gradually.	Skin irritation, dermatitis	Hypersensitivity to sulfur, children less than 2 years old	Avoid contact with eyes, mouth and other mucous membranes. May stain the skin black and emit foul smell when applied concomitantly with mercurial compounds.
Topical azelaic acid	Apply twice daily	Skin irritation, mostly burning or itching, occasionally erythema and scaling	Hypersensitivity to propylene glycol	Avoid broken skin, mouth, eyes and mucous membranes.
Oral tetracycline	500 mg - 1 g daily in 2 divided doses	Gastrointestinal disturbances, discolouration of teeth and nails, photosensitivity, visual disturbances	Hypersensitivity to tetracyclines, children ≤8 years old, pregnancy, lactation	Should be administered with plenty of water, while sitting or standing, 1 hour before or 2 hours after meals to avoid oesophageal ulceration. Absorption is impaired by food, milk, dairy products, iron salts and antacids.
Oral doxycycline	50 - 100 mg once to twice daily	Gastrointestinal disturbances, photosensitivity, hypersensitivity, permanent staining of teeth, rash	Hypersensitivity to tetracyclines, children ≤8 years old, pregnancy, lactation	Should be administered with plenty of water, while sitting or standing, 1 hour before or 2 hours after meals to avoid oesophageal ulceration.
Oral erythromycin	Erythromycin Ethyl Succinate (EES): 400 - 800 mg twice daily Erythromycin Stearate: 250 - 500 mg twice daily	Gastrointestinal disturbances, rash, urticaria, headache, dizziness	Hypersensitivity to erythromycin	Hepatic and renal impairment, prolonged QT interval, concomitant therapy with colchicine (toxicity) and lovastatin (rhabdomyolysis)

**Disclaimer:**

- The outline of drug dosage and administration is intended as a general guide to therapy.
- The adverse effects listed are not exhaustive.
- Caution is advised when prescribing for patients with other medical problems or on multiple drugs.

## **REFERRAL**

The urgency for referral is divided into the following categories:

Urgent : Within 24 hours

Seen Early : Within one week to four weeks

Non-urgent : Based on available appointment date

### **i. Urgent referral (to a psychiatrist)**

Major depression or any suicidal behaviour

### **ii. Seen Early**

- a. Severe acne or nodulocystic acne that may need isotretinoin
- b. Severe social or psychological problems including a morbid fear of deformity (dysmorphophobia) and depression

### **iii. Non-urgent**

#### a. For diagnosis

- Suspected rosacea
- Suspected drug-induced acne
- Acne beginning or persisting outside the normal age range for the condition or late onset acne
- Suspected occupational causes
- Suspected underlying endocrinological cause (such as Polycystic Ovarian Syndrome) requiring further assessment
- Rare variants of acne such as acne excoriae, chloracne and acne fulminans
- Suspected Demodex folliculitis
- Pityrosporum folliculitis
- Gram negative folliculitis

#### b. Specialist services

- Resistance or intolerance to current treatment
- Moderate or severe acne
- Possible scarring or failure to achieve adequate response
- Failed oral antibiotic therapy
- Pregnancy with moderate and severe acne
- Acne requiring surgery (such as incision and drainage of cysts)
- For specialised physical treatment

### **CLINICAL PRACTICE GUIDELINES SECRETARIAT**

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