



ACNE

Top tips for MURs

- Check adherence to acne regime
- Dispel 'acne myths' and advise patients that acne is not related to poor hygiene and is not improved by rigorous cleaning
- Advise patient that most acne treatments take 2-4 months to produce their maximum effect and may irritate skin at the start¹
- Advise patients using topical treatments to wash the face and leave to dry 20 minutes before applying treatments and to use treatments sparingly (a pea sized amount is sufficient to treat the face). Advise to apply to the whole area of the face (not just the spots²)
- Advise if using two separate topical drugs, to use one in the morning and one at night
- Advise patients taking oral antibiotics on food status. Tetracycline and oxytetracycline should be taken on an empty stomach (milk and antacids should be avoided)
- Advise patients that tetracyclines can be associated with photosensitivity reactions especially in hypersensitive individuals – sunscreen should be worn (minimum SPF 30) and sunlamps avoided
- Check that patients given oral antibiotics have been prescribed a topical treatment as well (either benzoyl peroxide or topical retinoids - topical antibiotics should not be used as an adjunct²)
- Advise patients that isotretinoin should be taken with or after food
- Ensure women of childbearing age on isotretinoin are registered in a pregnancy prevention programme
- Ensure patients taking isotretinoin are being monitored throughout therapy (hepatic function and lipids)
- Check duration of treatment: topical antibiotics should not be used for more than 12 weeks, and oral antibiotics should be used for the shortest possible period and discontinued when further improvement is unlikely¹ (normally used for at least 2 months and continued for 6 months after improvements seen). Co-cyprindiol (Dianette®) should not be used for more than 3-4 menstrual cycles after acne has resolved
- Counsel patients on signs/symptoms that need referral and common side effects (**see overleaf**)
- Report any relevant adverse drug reactions to the Yellow Card Scheme

Pathophysiology of Acne^{1,2}

Acne is a common skin condition usually occurring around puberty, in which blockage or inflammation of hair follicles or sebaceous glands produces lesions, commonly affecting the face, back and chest areas. Acne is caused by an overproduction of oil by the sebaceous glands which allow the acne bacterium *Propionibacterium acnes* and *P. grabulosum* to multiply, producing inflammatory lesions consisting of papules (inflamed lesions), pustules (pus filled lesions) and in severe cases nodules or cysts. The combination of excess oil and dead skin cells can also contribute to the blocking of pores producing non-inflammatory lesions known as comedones (blackheads/whiteheads).

How do drugs used to treat acne work^{1?}

Topical benzoyl peroxide	Potent bactericide – reduces populations of <i>Propionibacterium acnes</i> (reduces inflammatory and non-inflammatory lesions). ¹
Oral / topical antibiotics	Reduce colonization of sebaceous follicles by <i>Propionibacterium acnes</i> and reduces inflammation. ¹
Topical retinoids	Normalise follicular keratinization, promoting the drainage of comedones and a reduction in comedone formation. ¹
Isotretinoin	Exact mechanism not established; sebaceous gland size and activity is reduced. ³
Co-cyprindiol (Dianette®)	Anti-androgenic activity; reduction in sebum production. ³

Lifestyle issues

- Counsel patient on reducing alcohol intake to within safe limits (up to 14 units a week, spread evenly over 3 or more days)
- Counsel patient on healthy eating, exercise & weight loss (if BMI > 25kg/m²) – reduce saturated fat and salt intake, avoid salt substitutes, increase oily fish intake, complete 30 minutes of aerobic exercise three to five times a week, reduce caffeine intake to no more than 5 cups a day and recommend 5 portions of fruit and vegetables a day
- Advise patients who smoke of the benefits of stopping smoking and how to access pharmacy smoking cessation services or Stop Smoking Wales



Self-care advice

Advise patients with acne:

- To wash with a mild soap or cleanser (or oil free soap substitute) and luke warm water
- To avoid washing more than twice a day and to avoid vigorous scrubbing
- To avoid picking or squeezing spots as this may cause scarring
- To ensure that make up is oil-free and water based – (labelled as non-comedogenic or non-acnegenic)
- To remove make-up every evening
- That there is little evidence that avoiding certain foods e.g. chocolate / fast food affects acne. However it is always advisable to eat a balanced diet
- There is no evidence to suggest sunbathing or UV light treatment has any benefit

What are the common side effects to look out for?

Common side effects	Recommendation
Skin irritation (erythema, dryness) commonly seen with Benzoyl peroxide, topical retinoids, isotretinoin)	Apply sparingly once a day, or every other day, at the lowest effective strength. Use a fragrance free water based emollient and lip moisturiser if skin becomes dry. Minor irritation can be due to the vehicle used – consider referral for a change in formulation.
Photosensitivity (rarely seen with adapalene, tetracyclines, isotretinoin)	Avoid exposure to UV light (sun and sunlamps) and use sunscreen (minimum SPF 30).
Increased risk of venous thromboembolism (VTE), breast tenderness, mood changes, weight gain. (seen with combined oral contraceptives, highest risk with co-cyprindiol (Dianette®))	Ensure patient is not high risk for VTE and knows the signs and symptoms of VTE e.g. pain, swelling in legs, stabbing pains when breathing or coughing, pain and tightness in the chest.
Nausea, diarrhoea, vomiting, yeast infections (seen with oral antibiotics) oesophagitis (seen with tetracycline)	Certain preparations e.g. doxycycline/ lymecycline can be taken with food or milk which may improve tolerance. Tetracycline should be swallowed whole in upright position with plenty of water.
Depression, anxiety, suicidal thoughts (seen with isotretinoin)	Refer to prescriber immediately for cessation of treatment.
Myalgia and muscle aches (seen with isotretinoin)	Refer to prescriber. Advise patient to take care when playing contact sports.

Potential serious drug interactions?

See BNF Appendix1: Interactions for more details

Isotretinoin interacts with vitamin A (risk of hypervitaminosis) – patient should be asked about over the counter purchase of vitamins. Isotretinoin and tetracyclines should not be used together (risk of intracranial hypertension). Isotretinoin and tetracycline also interact with other medications e.g. anticoagulants. Co-cyprindiol (Dianette®) can interact with other medications, e.g. anticoagulants, antiepileptics and oral tetracyclines. Co-cyprindiol (Dianette®) should not be used with other hormonal contraceptives.

Red flags that need referral

- Accompanying symptoms for example hair thinning, excessive facial or body hair and irregular periods in women
- Patients with severe psychosocial problems and body dysmorphia
- Patients who have developed scarring
- Treatment failure
- Sudden onset of severe acne²
- Patients on oral contraceptives with signs of VTE e.g. pain, swelling in legs, stabbing pains when breathing or coughing, pain and tightness in the chest.
- Women of childbearing age taking isotretinoin
- Patients taking Isotretinoin with signs of depression or suicidal thoughts
- Patients taking tetracycline who develop headache and visual disturbances

Where can you find more information?

1. NICE Clinical Knowledge Summary; Acne Vulgaris <http://cks.nice.org.uk/acne-vulgaris>
2. British Association of Dermatologists; Acne patient information leaflet
3. Summary of product characteristics: Dianette®, Isotretinoin 10mg capsules
4. BNF 13.7.1 Rosacea and acne

