

## Acne

### What is acne?

Acne is a common chronic disorder affecting the hair follicle and sebaceous gland, in which there is blockage of the follicle and inflammation. There are several variants.

### Who gets acne?

Acne affects males and females of all races and ethnicities. It is prevalent in adolescents and young adults, with 85% of 16-18 year olds affected. However, it may sometimes occur in children and adults of all ages.

### What causes acne?

Acne is due to a combination of factors:

- Familial tendency
- Endogenous and exogenous androgenic hormones
- Acne bacteria
- Innate immune activation with inflammatory mediators
- Distension and occlusion of the hair follicles

Flares of acne can be provoked by:

- Polycystic ovarian disease
- Drugs: steroids, hormones, anticonvulsants, epidermal growth factor receptor inhibitors and others
- Application of occlusive cosmetics
- High environmental humidity
- Diet high in dairy products and high glycaemic foods

### What are the clinical features of acne?

Acne is often confined to the face but it may involve neck, chest and back.

It is characterised by:

- Open and closed uninfamed comedones (blackheads and whiteheads)
- Inflamed papules and pustules
- In severe acne, nodules and pseudocysts
- Post-inflammatory erythematous or pigmented macules and scars
- Adverse social and psychological effects

Severity is classified as mild, moderate or severe.

- Mild acne: total lesion count <30
- Moderate acne: total lesion count 30–125
- Severe acne: total lesion count >125

### **What tests are necessary in acne?**

- In most cases, tests are unnecessary. If features are atypical consider:
  - Skin swabs for microscopy and culture
  - Hormonal tests in females

### **What is the treatment for acne?**

#### **Mild acne**

- Topical antiacne agents, such as benzoyl peroxide and/or tretinoin or adapalene gel.
- Low-dose combined oral contraceptive
- Antiseptic or keratolytic washes containing salicylic acid
- Light / laser therapy

#### **Moderate acne**

- As for mild acne plus a tetracycline such as doxycycline 50–200 mg daily for 6 months or so
- Erythromycin or trimethoprim if doxycycline intolerant
- Antiandrogen therapy with long-term cyproterone acetate + ethinylestradiol and/or spironolactone, may be considered in women not responding to low dose combined oral contraceptive, particularly for women with polycystic ovaries
- Isotretinoin is often used if acne is persistent or treatment resistant.

#### **Severe acne**

- Referral to a dermatologist
- If fever, arthralgia, bone pain, ulcerated or extensive skin lesions, blood count should be arranged and referral is urgent

- Oral antibiotics are often used in higher doses than normal
- Oral isotretinoin is usually recommended in suitable patient

**What is the outlook for acne?**

- Acne tends to improve after the age of 25 years but may persist, especially in females.
- Treatment with isotretinoin can lead to long-term remission in many patients.