Skin Conditions

Eczema/dermatitis

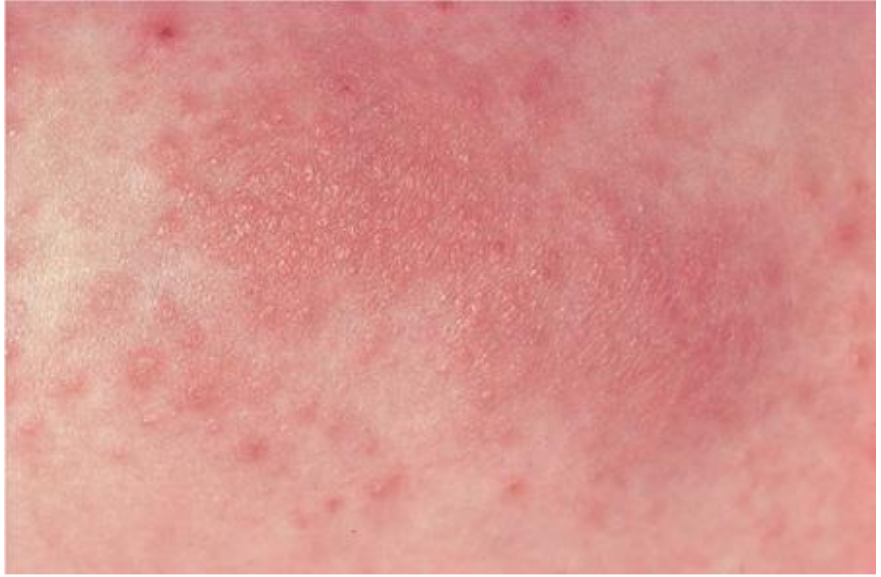
Acne

- Eczema is a term used synonymously with dermatitis.
- The latter is more commonly used when an external precipitating factor is present (contact dermatitis).
- The rashes produced have similar features but the distribution on the body varies and can be diagnostic.

- Atopic eczema affects up to 20% of children, in many of whom it disappears or greatly improves with age such that 2–10% of adults are affected.

- Atopy refers to the genetic tendency to develop allergic diseases such as **allergic rhinitis**, **asthma** and **atopic dermatitis** (eczema). (AAAAI definition)

- Atopy is typically associated with heightened immune responses to common allergens, especially inhaled allergens and food allergens.



- The rash of eczema typically presents as dry flaky skin that may be inflamed and have small red spots.
- The skin may be cracked and weepy and sometimes becomes thickened.
- The rash is irritating and can be extremely itchy. Many cases of mild-to-moderate eczema can be managed by the patient with support from the pharmacist.

What you need to know

Age

Distribution of rash

Occupation/contact

Previous history

History of hay fever/asthma

Aggravating factors

Medication

Age/distribution

- The distribution of the rash tends to vary with age.

- In infants, it is usually present
- around the nappy area,
- neck,
- back of scalp,
- face,
- limb creases and
- backs of the wrists

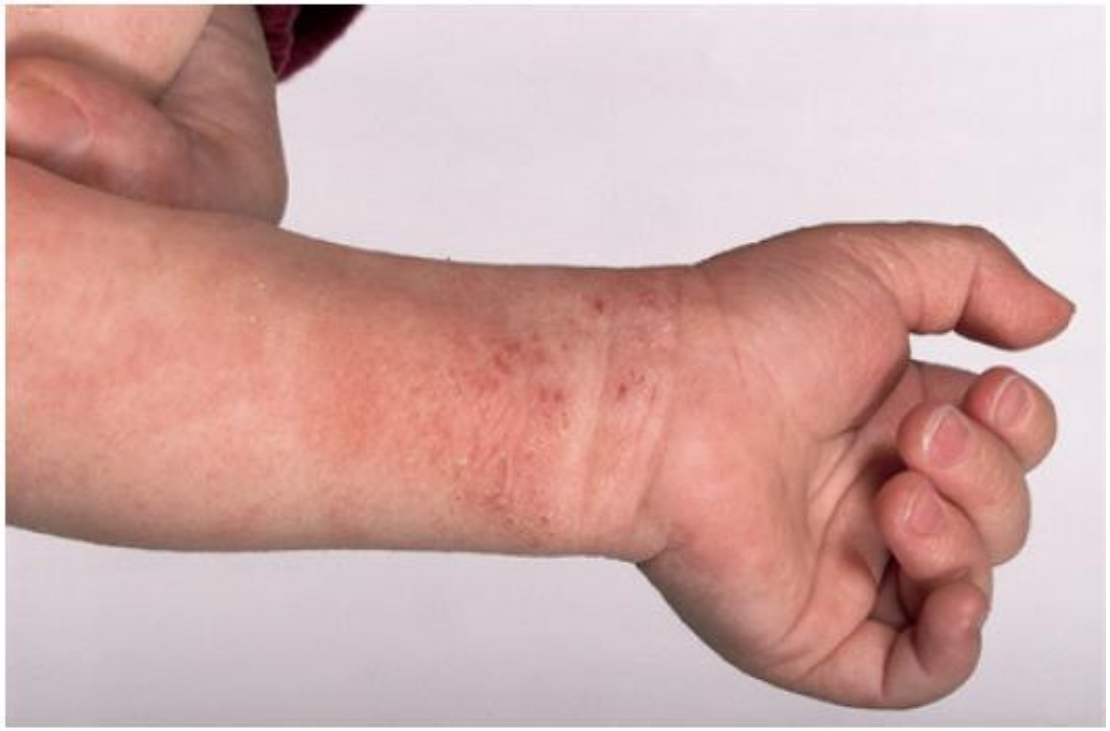


Plate 2 Atopic eczema.

- In white children, the rash is most marked in the flexures:
  - behind the knees,
  - on the inside of the elbow joints,
  - around the wrists, as well as the hands, ankles, neck and around the eyes.

- In black and Asian children, the rash is often on the extensor surface of the joints and may have a more follicular appearance.

- In adults, the
  - neck,
  - the backs of the hands,
  - the groin,
  - around the anus,
  - the ankles and the
  - feet
- are the most common sites.

- The rash of intertrigo is caused by a fungal infection and is found in skinfolds or occluded areas such as
    - under the breasts in women
    - in the groin
    - armpits.

Occupation/contact

- Contact dermatitis may be caused by substances that irritate the skin or spark off an allergic reaction.
- Irritant contact dermatitis is most commonly caused by prolonged exposure to water (wet work).
- Typical occupations include cleaning, hairdressing, food processing, fishing and metal engineering.

- Substances that can irritate the skin include:
  - alkaline cleansing agents,
  - degreasing agents,
  - solvents and oils.

- Such substances either cause direct and rapid damage to the skin or, in the case of weaker irritants, exert their irritant effect after continued exposure.

- Nappy rash (napkin dermatitis) is an example of irritant dermatitis and can be complicated by infection, for example, thrush.

- In other cases, the contact dermatitis is caused by an allergic response to substances which include
  - chromates (present in cement and rust-preventive paint),
  - nickel (present in costume jewellery and as plating on scissors),
  - rubber and resins (two-part glues and the resin colophony in adhesive plasters),
  - dyes,
  - certain plants (e.g. primula),
  - oxidizing and reducing agents (as used by hairdressers when perming hair) and
  - medications (including *topical corticosteroids, lanolin, neomycin* and *cetyl stearyl alcohol*).
  - Eye make-up can also cause allergic contact dermatitis.

- Clues as to whether or not a contact problem is present can be gleaned from knowledge of site of rash, details of job and hobbies, onset of rash and agents handled and improvement of rash when away from work or on holiday.

Previous history

- Patients may ask the pharmacist to recommend treatment for eczema, which has been diagnosed by the doctor.
- In cases of mild-to-moderate eczema, it would be reasonable for the pharmacist to recommend the use of emollients and to advise on skin care.
- *Topical hydrocortisone, clobetasone* and *alclometasone* preparations can be recommended for the treatment of mild-to-moderate eczema.
- However, where severe or infected exacerbations of eczema have occurred, the patient is best referred to the doctor.

History of hay fever/asthma

- Many eczema sufferers have associated hay fever and/or asthma.
- There is often a family history (in about 80% of cases) of eczema, hay fever or asthma.
- Eczema occurring in such situations is called atopic eczema.
- The pharmacist can enquire about the family history of these conditions.

Aggravating factors

- Atopic eczema may be worsened during the hay fever season and by house dust or animal danders.
- Factors that dry the skin such as soaps or detergents and cold wind can aggravate the condition.
- Certain clothing such as woollen material can irritate the skin.

- In a small minority of sufferers (less than 5%), cow's milk, eggs and food colouring (tartrazine) have been implicated.

- Emotional factors, stress and worry can sometimes exacerbate eczema.

- Antiseptic solutions applied directly to the skin or added to the bathwater can irritate the skin.

Medication

- Contact dermatitis may be caused or made worse by sensitisation to topical medicaments.
- The pharmacist should ask which treatments have already been used.
- Topically applied local anaesthetics, antihistamines, antibiotics and antiseptics can all provoke allergic dermatitis.
- Some preservatives may cause sensitisation.

When to refer

Evidence of infection (weeping, crusting, spreading)

Severe condition: badly fissured/cracked skin, bleeding

Failed medication

No identifiable cause (unless previously diagnosed as eczema)

Duration of longer than 2 weeks

Treatment timescale

- Most cases of mild-to-moderate atopic eczema, irritant and allergic dermatitis should respond to skin care and treatment with OTC products.

- If no improvement has been noted after 1 week, referral to the doctor is advisable.

Management

- Pharmacists are most likely to be involved when the diagnosis has already been made or when the condition first presents but is very mild.

- Where the pharmacist is able to identify a cause of irritant or allergic dermatitis, an OTC topical steroid may be recommended.

Emollients

- Emollients are the key to managing eczema and are medically inert creams and ointments which can be used to
  - soothe the skin,
  - reduce irritation,
  - prevent the skin from drying,
  - act as a protective layer and
  - be used as a soap substitute.

- They may be applied directly to the skin or added to the bathwater.

- There are many different types of emollient preparations that vary in their degree of greasiness.
- The greasy preparations such as white soft paraffin are often the most effective, especially with very dry skin, but have the disadvantage of being messy and unpleasant to use.
- Patient preference is very important and plays a major part in compliance with emollient treatments.
- Patients will understandably not use a preparation they find unacceptable.

- Patients may need to try several different emollients before they find one that suits them, and they may need to have several different products (e.g. for use as a moisturiser, for use in the bath and for use as a soap substitute when washing or showering).

- Emollient preparations should be used as often as needed to keep the skin hydrated and moist.

- Several and frequent applications each day may be required to achieve this.

- Standard soaps have a drying effect on the skin and can make eczema worse.
- Aqueous cream can be used as a soap substitute.
- It should be applied to dry skin and rinsed off with water.
- Proprietary skin washes are also available.

- Adding emulsifying ointment or a proprietary bath oil to the bath is helpful.

- Emulsifying ointment should first be mixed with water (one or two tablespoonfuls of ointment in a bowl of hot water) before being added to the bath to ensure distribution in the bathwater.

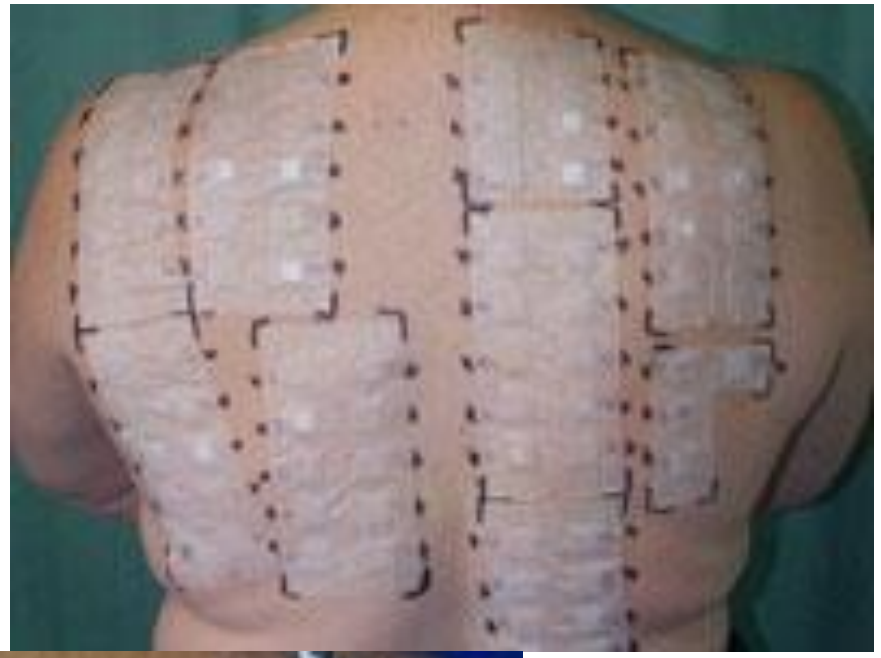
- Some patients with eczema believe, incorrectly, that bathing will make their eczema worse.

- This is not the case, provided appropriate emollient products are used and standard soaps and perfumed bath products are avoided, and in fact, bathing to remove skin debris and crusts is beneficial.

Advice

- This could include the identification of possible aggravating or precipitating factors.
- If the history is suggestive of an occupationally associated contact dermatitis, then referral is advisable.
- The doctor may in turn feel that referral to a dermatologist is appropriate.
- Further advice could be given regarding the use of ordinary soaps that tend to dry the skin and their alternatives (soap substitutes).

- It is sometimes necessary for a specialist to perform patch testing to identify the cause of contact dermatitis.



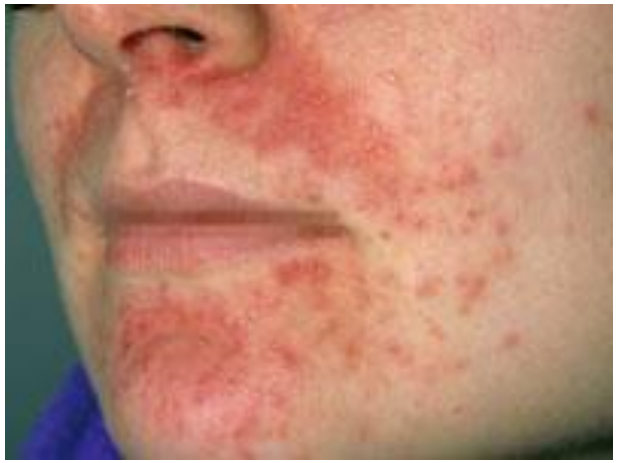
Topical corticosteroids

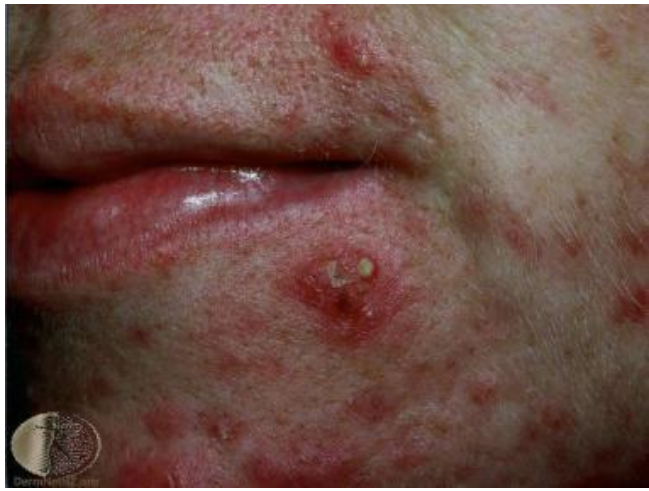
- *Hydrocortisone* cream and ointment, *alclometasone* 0.05% and *clobetasone* 0.05% can be sold OTC for a limited range of indications.
- Their steroid potency is classed as mild (*hydrocortisone*) and moderate (*alcometasone and clobetasone*).
- *Topical hydrocortisone* OTC is licensed for the treatment of irritant and allergic dermatitis, insect bites and mild-to-moderate eczema.
- OTC *hydrocortisone* is contraindicated where the skin is infected (e.g. athlete's foot or cold sores, in acne and on the face and anogenital areas).
- Children aged over 10 years and adults can be treated, and any course must not be longer than 1 week.

- *Topical alclometasone* 0.05% and *clobetasone* 0.05% can be used for the short-term treatment and control of patches of eczema and dermatitis in people aged 12 years and over.

- The indications include
  - atopic eczema and primary irritant or allergic dermatitis.

- OTC topical corticosteroids should not be used
  - on the groin,
  - breastfold,
  - genitals or
  - between the toes
- because these are common sites of fungal infections,
  - or on the face as they can cause
    - perioral dermatitis and
    - acneiform pustules.

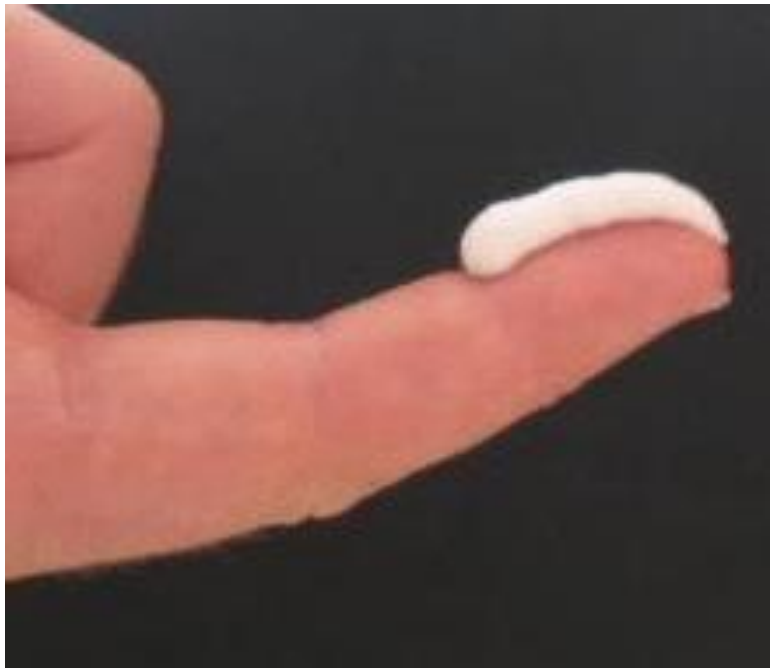




- All should be used sparingly and explaining patients the use of fingertip units is helpful.

- A fingertip unit is the amount of cream you can squeeze on to your fingertip from the tip to the first crease.

- Half a fingertip unit will cover a patch of skin the same size as the palm of the hand.



Antipruritics

- Antipruritic preparations are sometimes useful, although evidence of effectiveness is lacking.
- The itch of eczema is not histamine related, so the use of antihistamines other than that of sedation at night is not indicated.
- *Calamine* or *crotamiton* can be used in cream or lotion.
- A combination product containing *crotamiton* with *hydrocortisone* is available.
- Indications for use are the same as those for *topical hydrocortisone* for contact dermatitis (irritant or allergic), insect bites or stings and mild-to-moderate eczema.

Case 1

- Samixa Shah asks your advice about her 4-year-old daughter Aisha
- whose eczema has worsened recently. She tells you that she has been using Chinese herbs, which have proved very helpful until the last week or so. The eczema has flared up especially on her arms and legs. She would like to use a safe cream but not a steroid cream as she has heard about its side effects. Aisha is not with her mother.

Case 2

- Ray Timpson is a local man in his mid-30s and a regular customer.
- Today, he wants to buy some *clobetasone* cream for his eczema, which
- has worsened. He has had eczema for many years and usually obtains
- his cream on a repeat prescription from his doctor. As a child, Mr
- Timpson was asthmatic, and both asthma and hay fever are present in
- some members of his family. He has just seen an advert for *clobetasone*
- and says he would prefer to buy his supplies from you in the future
- to save both himself and the doctor some time. The eczema affects his
- ankles, shins and hands; the skin on his hands is cracked and weeping.

Case 3

- Romiz Miah, a young adult, asks your advice about his hands, which
- are sore and dry. The skin is flaky but not broken and there is no sign
- of secondary infection such as weeping or pus. He says the problem is
- spreading and now affecting his arms as well. He has occasionally had
- the problem before, but not as severely. On further questioning, you
- discover that he has recently started working in his family’s restaurant
- and has been doing a lot of washing up and cleaning.

Case 4

- You are asked to speak to a patient on the phone about some cream she purchased at your pharmacy earlier today. The patient says she bought some *clobetasone* eczema and dermatitis cream for a rash caused by
- a new deodorant. However, when she got back home and read the
- patient information leaflet (PIL), she discovered that it should not be
- used by breastfeeding mothers without medical advice. She had her
- first baby 4 months ago and is breastfeeding.

Acne

Acne

- The incidence of acne in teenagers is extremely high and it has been estimated that over half of all adolescents will experience some degree of acne.
- Most acne sufferers resort, at least initially, to self-treatment.
- Mild acne often responds well to correctly used OTC treatments.

- Acne has profound effects on patients, and pharmacists should remember that even mild acne is seen as stigmatizing for teenagers and moderateto-severe acne can be a major problem and a source of depression for some.

- A sympathetic response to requests for help, together with an invitation to return and report progress, can be as important as the treatment selected.

What you need to know

Age

Severity

Mild, moderate, severe

Affected areas

Duration

Medication

Age

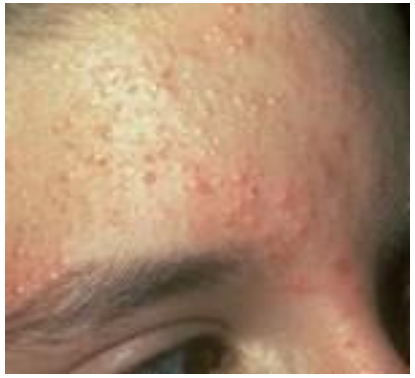
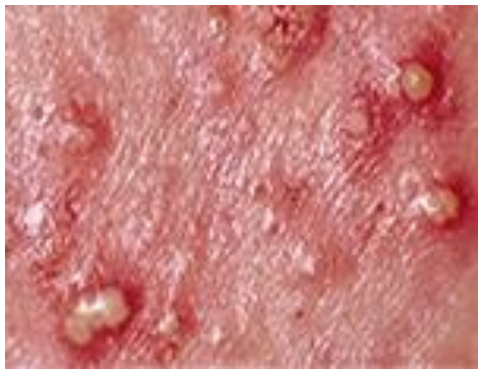
- Acne commonly occurs during the teenage years and its onset is most common at puberty, although it may start to appear a year or so earlier.

- Acne can persist for anything from a few months to several years; with onset at puberty, acne may continue until the late teens or even early 20s.

- The hormonal changes that occur during puberty, especially the production of androgens, are thought to be involved in the causation of acne.

- Increased keratin and sebum production during adolescence are thought to be important contributory factors; the increased amount of keratin leads to blockages of the follicles and the formation of microcomedones.

- A microcomedone can develop into a
  - non-inflammatory lesion (comedone), which may be
    - open (blackhead) or
    - closed (whitehead),
  - or into an inflammatory lesion (papule, pustule or nodule).


- Excess sebum encourages the growth of bacteria, particularly *Propionibacterium acnes, which are involved in the development* of inflammatory lesions.

- Acne can thus be non-inflammatory or inflammatory in nature.

- *Very young*
- Acne is extremely rare in young children and babies and any such cases should be referred to the doctor for investigation since an androgen secreting (hormone-producing) tumour may be responsible.

- *Older*
- For patients in whom acne begins later than the teenage years, other causes should be considered, including
  - drug therapy (discussed below) and
  - occupational factors.

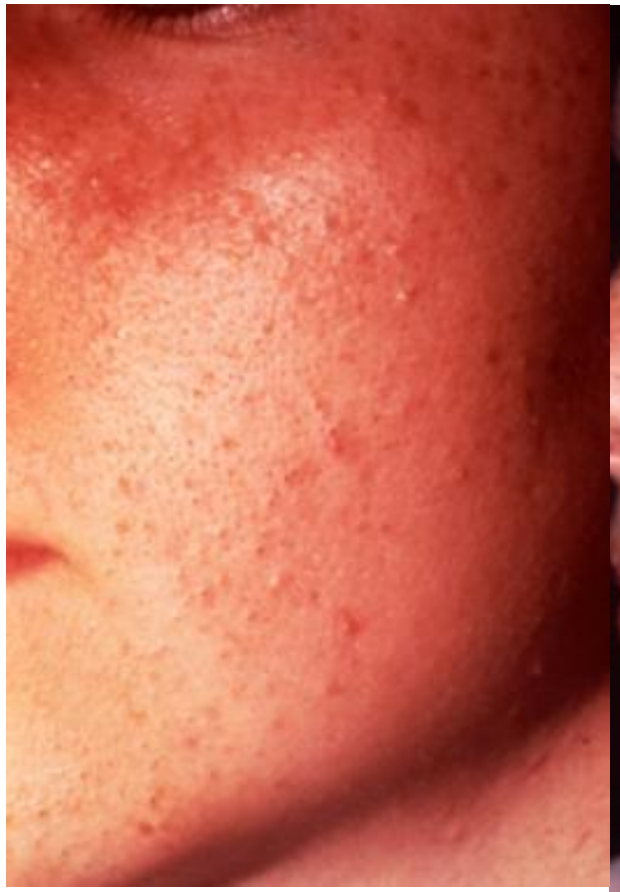
- Oils and greases used at work can precipitate acne and it would be worth asking whether the patient comes into contact with such agents.

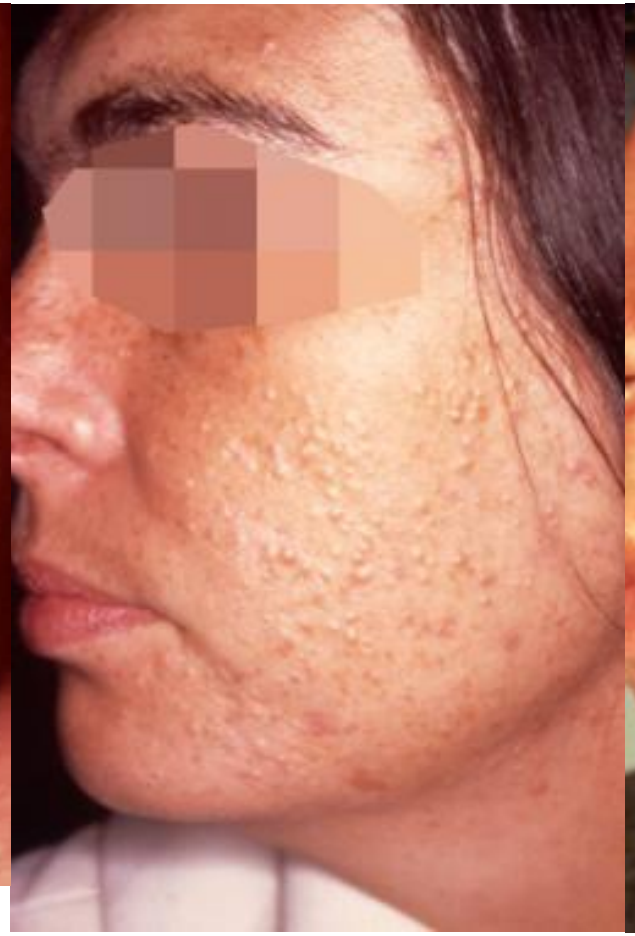
- Acne worsens just before or during menstruation in some women; this is thought to be due to changes in progesterone levels.

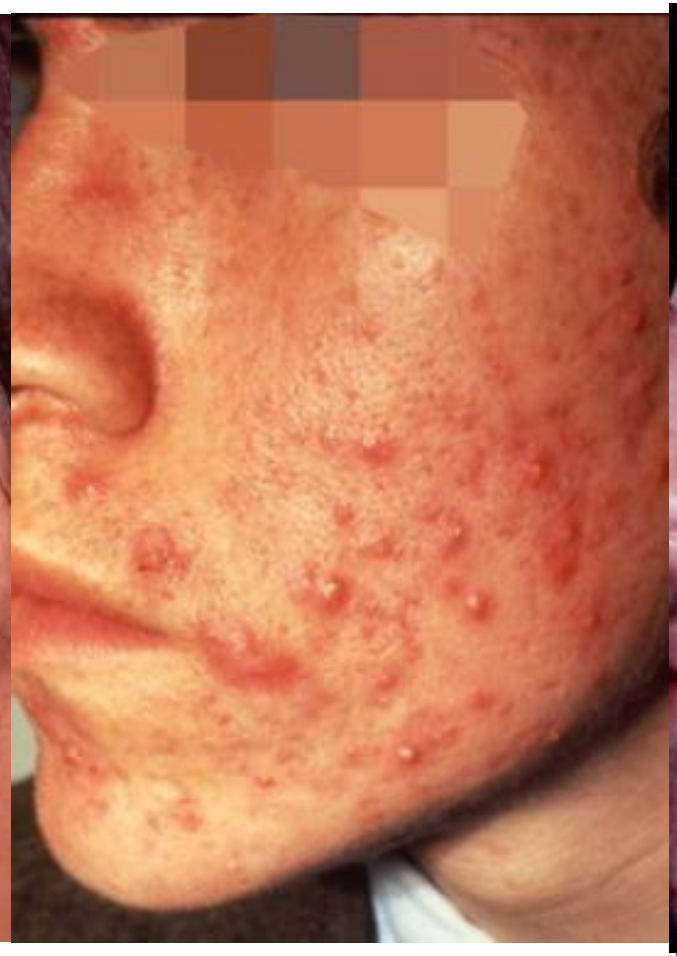
Severity

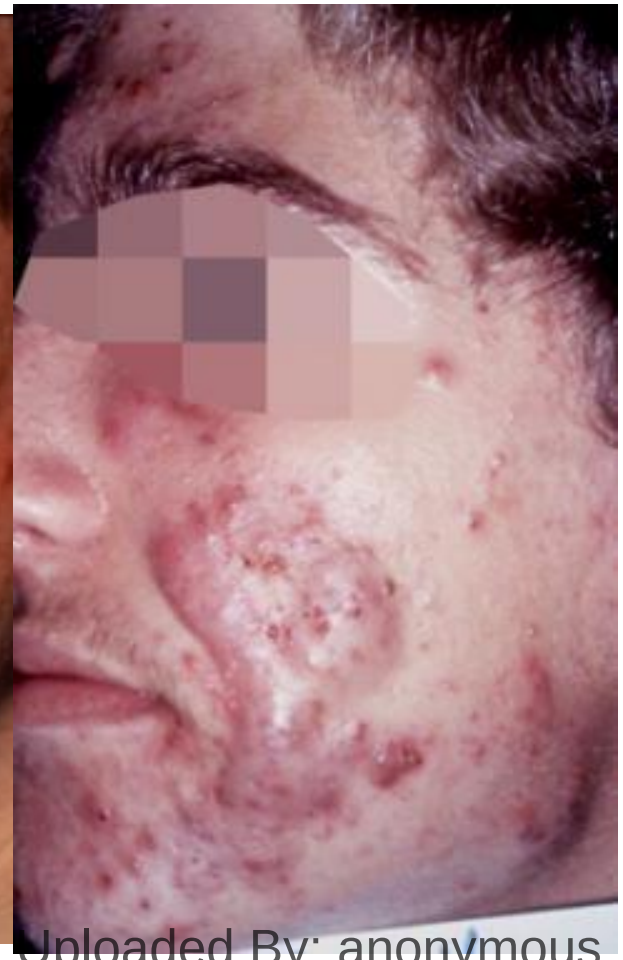
- OTC treatment may be recommended for mild acne.
- Comedones may be open or closed; the sebum in closed comedones cannot reach the surface of the skin.
- The plug of keratin, which is at the entrance to the follicle in a comedone, is initially white (a whitehead), later becoming darker coloured because of the accumulation of melanin (a blackhead).
- However, sebum is still produced, so swelling occurs and the comedone eventually ruptures, discharging its contents under the skin's surface.
- The released sebum causes an inflammatory response; if the response is not severe, small red papules appear.
- In more severe acne, angrylooking red pustules are seen and referral to the doctor for alternative forms of treatment such as topical or systemic antibiotics is needed.

Grade I, II (mild) III moderate IV (severe)



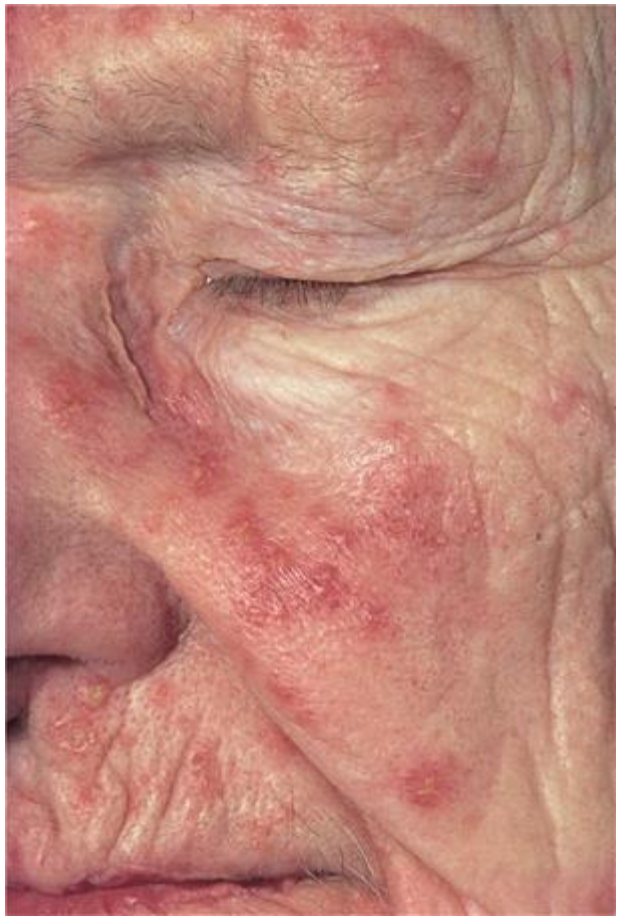






Affected areas

- In acne, affected areas may include the face, neck, centre of the chest, upper back and shoulders, that is, all areas with large numbers of sebaceous glands.
- Rosacea is a skin condition that is sometimes confused with acne.
- Occurring in young and middle-aged adults, rosacea has characteristic features of reddening, papules and pustules.
- Only the face is affected.



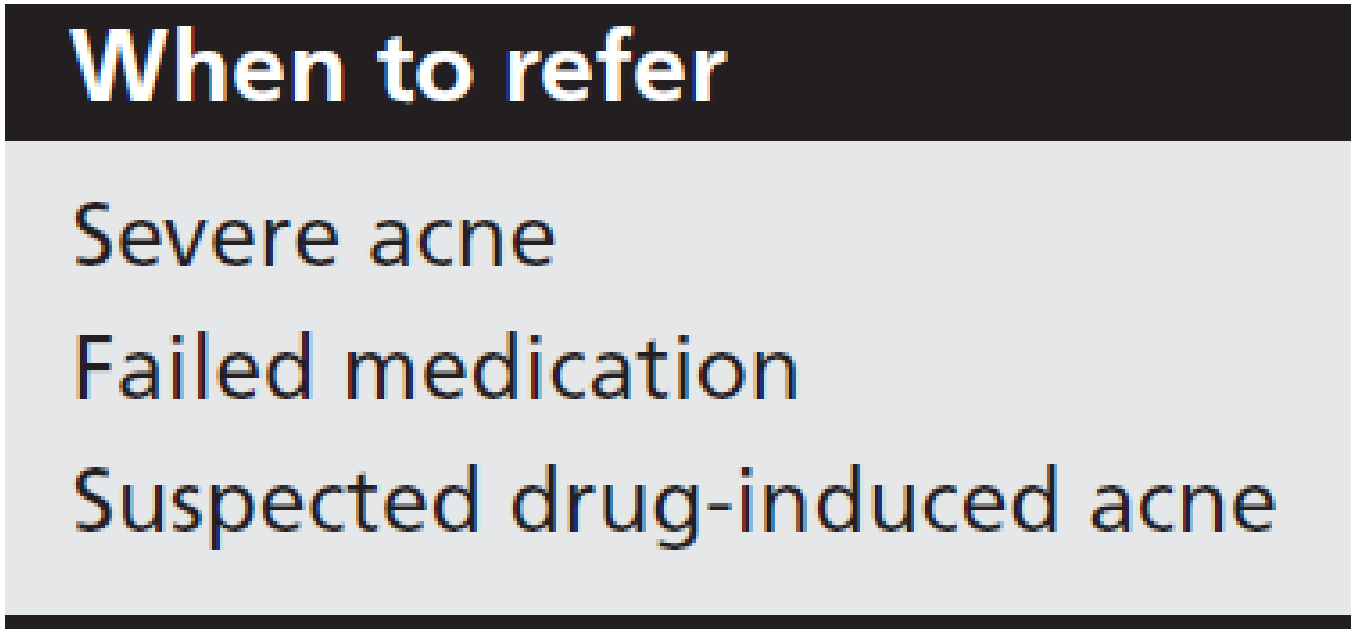
Duration

- The information gained here should be considered in conjunction with facts about medication (prescribed or OTC) tried already and other medicines being taken.

- Acne of long duration where several OTC preparations have been correctly used without success indicates referral to the doctor.

Medication

- The pharmacist should establish the identity of any treatment tried already and its method of use.
- Inappropriate use of medication, for example, infrequent application, could affect the chances of success.
- Information about current therapy is important, since acne can sometimes be drug induced.
- *Lithium*, *phenytoin* *and the* *progestogens*, levonorgestrel and norethisterone (e.g. in the combined oral contraceptive pill), may be culprits.
- If acne is suspected as a result of drug therapy, patients should be advised to discuss this with their doctor.



Treatment timescale

A patient with mild acne which has not responded to treatment within 8 weeks should be referred to the doctor.

Management

- Dozens of products are marketed for the treatment of acne.
- The pharmacist can make a logical selection based on knowledge of likely efficacy.
- The general aims of therapy are to remove follicular plugs so that sebum is able to flow freely and to reduce the number of bacteria on the skin.
- Treatment should therefore reduce comedone formation.

- The most useful formulations are lotions, creams and gels.
- Gels with an alcoholic base dry quickly but can be irritating.
- Those with an aqueous base dry slower but are less likely to irritate the skin.
- A noncomedogenic moisturiser can help if the skin becomes dry as a result of treatment.

Benzoyl peroxide

- *Benzoyl peroxide* has both antibacterial and anticomedogenic actions and is the first-line OTC treatment for inflammatory and noninflammatory acne.
- Anti-inflammatory action occurs at all strengths.
- Anticomedogenic action is low and has the greatest effect at higher strengths.
- It has a keratolytic action, which increases the turnover of skin cells, helping the skin to peel.
- Regular application can result in improvement of mild acne.

- At first, *benzoyl peroxide* is very likely to produce reddening and soreness of the skin, and patients should be warned of this .

- Treatment should start with a 2.5% or 5% product, moving gradually to the 10% strength if needed.

- Gels can be helpful for people with oily skin and creams for those with dry skin.

- Washing the skin with a mild soap or cleansing product rinsed off with water before applying *benzoyl peroxide* can help by reducing the amount of sebum on the skin.

- *Benzoyl peroxide* prevents new lesions forming rather than shrinking existing ones.

- Therefore, it needs to be applied to the whole of the affected area, not just to individual comedones, and is best applied to skin following washing.

- During the first few days of use, the skin is likely to redden and may feel slightly sore. Stinging, drying and peeling are likely.

- Warning should be given that such an irritant effect is likely to occur; otherwise treatment may be abandoned inappropriately.

- One approach to minimise reddening and skin soreness is to begin with the lowest strength preparation and to apply the cream, lotion or gel sparingly and infrequently during the first week of treatment.

- Application once daily or on alternate days could be tried for a week and then frequency of use increased to twice daily.

- After 2 or 3 weeks, a higher strength preparation may be introduced. If irritant effects do not improve after 1 week or are severe, use of the product should be discontinued.

- *Bleaching*
- Warning should be given that *benzoyl peroxide* can bleach clothing and bedding.

- If it is applied at night, white sheets and pillowcases are best used and patients can be advised to wear an old T-shirt or shirt to minimise damage to good clothes.

- Contact between *benzoyl peroxide* and the eyes, mouth and other mucous membranes should be avoided.

Other keratolytics

- Other keratolytics include *potassium hydroxyquinoline sulphate* and *salicylic acid.*

- They are second-line treatments.

Nicotinamide

- Topical nicotinamide has a mild anti-inflammatory action and is applied twice daily.
- There is limited evidence of effectiveness.
- Side effects may include skin dryness and/or irritation. Several weeks' treatment may be needed to see the full effects.

Antibacterials

- Skin washes and soaps containing antiseptic agents such as chlorhexidine are available.
- Such products may be useful in acne by degreasing the skin and reducing the skin flora.
- There is limited evidence of effectiveness.

Practical points

- *Diet*
- There is no evidence to link diet with acne, despite a common belief that chocolate and fatty foods cause acne or make it worse.
- *Sunlight*
- It is commonly believed that there are beneficial effects of sunlight on acne, thought to be due to its peeling effect, which helps to unblock follicles, and its drying or degreasing effect. A systematic review found that ‘convincing direct evidence for a positive effect of sunlight exposure on acne is lacking’.

Antibiotics

- The resistance of *P. acnes* to antibiotics is increasing.

- Oral antibiotic therapy usually consists of tetracyclines (*minocycline* is more commonly used as there is less resistance, better absorption and it needs a dose only once daily) and patients should be reminded not to eat or drink dairy products up to 1 h before or after taking the antibiotic.

- The same rule applies to antacid or iron preparations.

- *Erythromycin* is also used in acne.
- Bacterial resistance to *erythromycin* is now high, so it may not be effective.
- Topical antibiotics are used as an alternative to oral antibiotics but are not as effective.
- They are useful in inflammatory acne.
- Topical *erythromycin* combined with *benzoyl peroxide* or *zinc* may induce less bacterial resistance than oral therapy alone.

Continuous treatment

- Acne is notoriously slow to respond to treatment and a period of up to 6 months may be required for maximum benefit.

- It is generally agreed that keratolytics such as *benzoyl peroxide* require a minimum of 6– 8 weeks' treatment for benefit to be shown.

- Patients should therefore be encouraged to persevere with treatment, whether with OTC or prescription products, and told not to feel discouraged if results are not immediate.

- Research has shown that many teenagers have unrealistic expectations of the time needed for improvement to be seen, perhaps created by the advertising for some treatments.

- The patient also needs to understand that acne is a chronic condition and continuous treatment is needed to keep the problem under control.

Skin hygiene

- Acne is not caused by poor hygiene or failure to wash the skin sufficiently often.

- Regular washing of the skin with soap and warm water or with an antibacterial soap or skin wash can be helpful as it degreases the skin and reduces the number of bacteria present.

- However the evidence for face cleansing in the management of acne is mostly from poor-quality studies.

- Since personal hygiene is a sensitive area, an initial enquiry about the kind of soap or wash currently being used might be a tactful way to introduce the subject.

- Dermabrasion with facial scrubs removes the outer layer of dead skin and must be done gently.

- There is no evidence of effectiveness of this approach in acne.

OTC topical corticosteroids and acne

- The use of *topical hydrocortisone, alclometasone or clobetasone* is contraindicated in acne because steroids can potentiate the effects of androgenic hormones on the sebaceous glands, hence making acne worse.

Make-up

- Heavy, greasy make-up can only exacerbate acne.

- If make-up is to be worn, water-based rather than oily foundations are best, and they should be removed thoroughly at the end of the day.