Pharmacy care in common skin conditions

CLINICAL PHARMACY

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Pharmacy care in skin conditions

- Common skin conditions:
  - Acne
  - Eczema/dermatitis
  - Psoriasis
  - Hair loss
  - Scabies
  - Athlete's foot
  - Dandruff

Acne

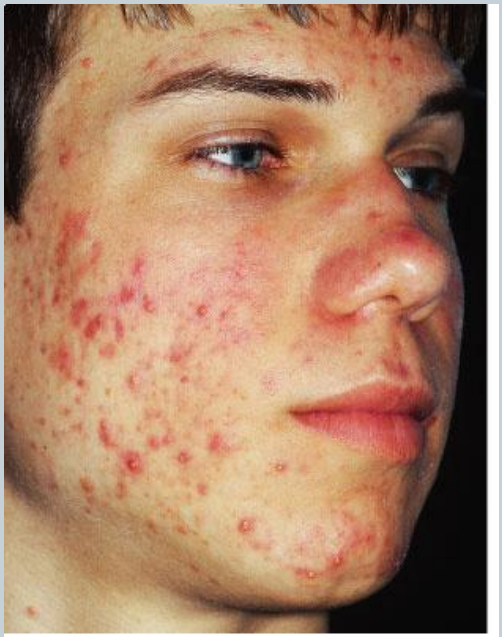
- The incidence of acne in teenagers is extremely high and it has been estimated that over half of all adolescents will experience some degree of acne. Most acne sufferers resort, at least initially, to self-treatment. Mild acne often responds well to correctly used OTC treatments.
- Acne has profound effects on patients, and pharmacists should remember that even mild acne is seen as stigmatising for teenagers and moderate to 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

When to refer

- Severe acne
- Failed medication
- Suspected drug-induced acne



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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 non-comedogenic 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 non-inflammatory 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 turn-over of skin cells, helping the skin to peel.
- 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

- 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.

Other keratolytics

- Other keratolytics include *potassium hydroxyquinoline sulphate, sulphur, resorcinol and salicylic acid*. They are second-line treatments.
- *Potassium hydroxyquinoline sulphate* also has antibacterial activity.
- *Sulphur* has some antiseptic activity in addition to its keratolytic effect. There seems to be evidence that sulphur can itself be comedogenic, i.e. it can lead to comedone formation, so it would not be considered a first-line treatment.
- Prolonged application of *resorcinol* can affect thyroid function, so continued use of products containing resorcinol is not advisable. The use of resorcinol in black-skinned patients is not advisable because it may lead to skin discoloration.
- *Salicylic acid* may be helpful for some patients with comedonal acne. It has some antibacterial and antifungal actions.

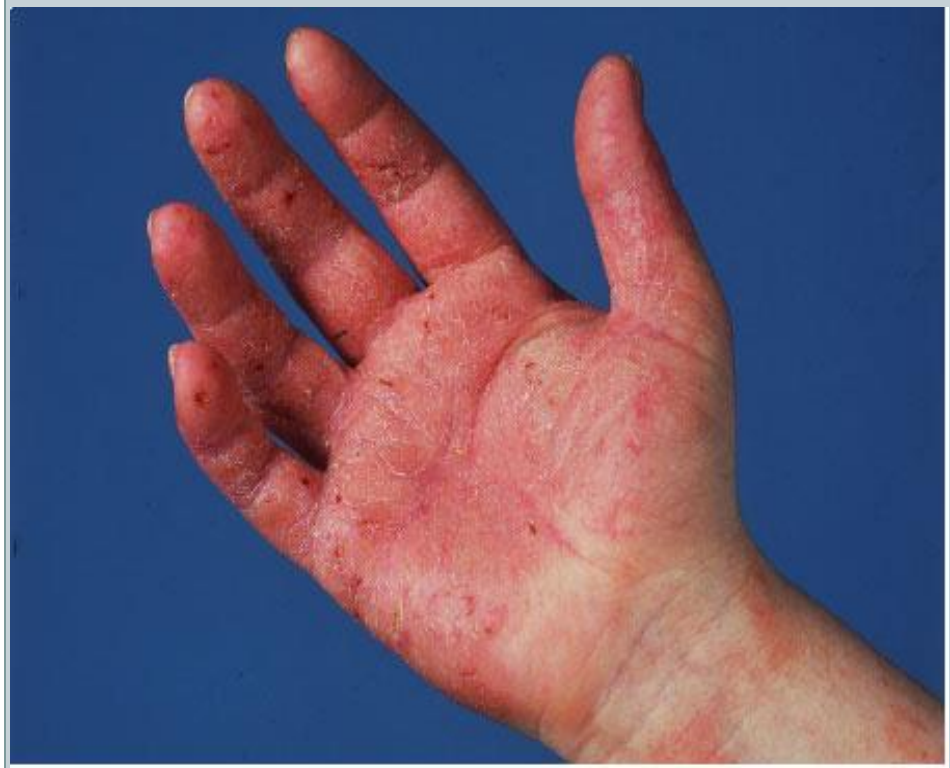
Antibacterials

- Skin washes and soaps containing antiseptic agents such as chlorhexidine are available. Such products can be useful in acne by degreasing the skin and reducing the skin flora.
- One combination product is available containing benzoyl peroxide together with miconazole, an antifungal agent with antibacterial activity. Such a combination will unblock follicular plugs and reduce the number of bacteria on the skin.
- Another treatment is the use of Clindamycine lotion.

Eczema/dermatitis

- 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 is a term that has been used to describe a group of diseases, e.g. eczema, asthma and hay fever, which run in families.
- 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.

Eczema/dermatitis



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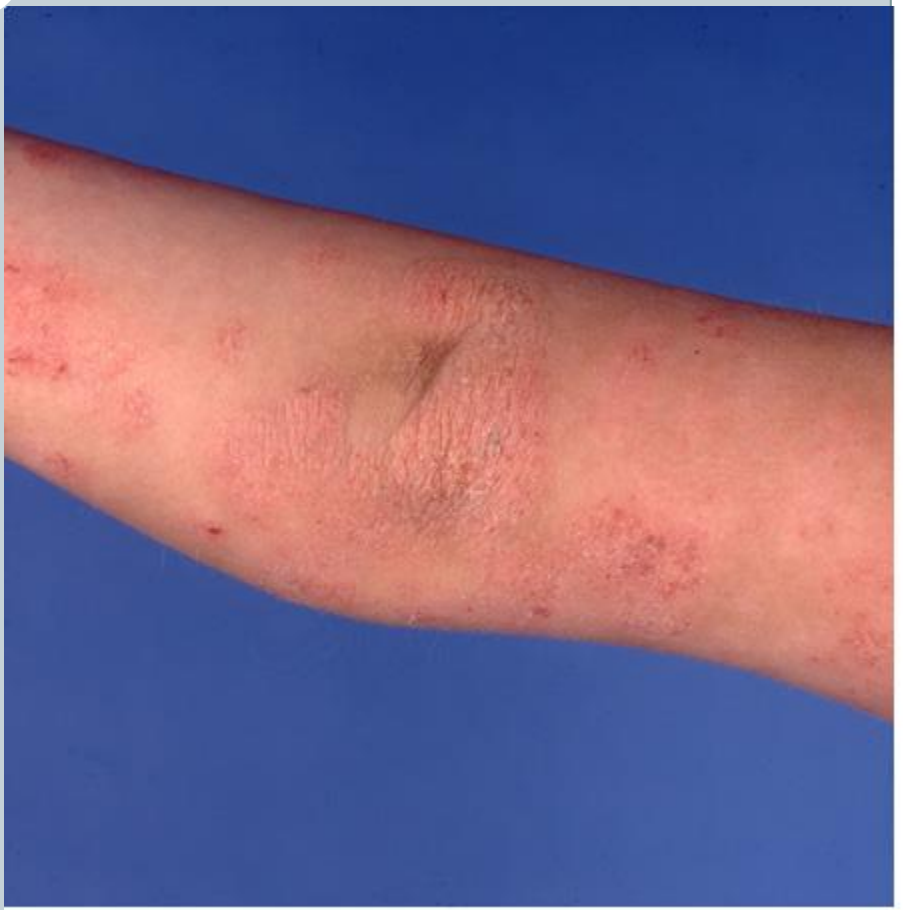

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What you need to know

- Age
- Distribution of rash
- Occupation/contact
- Previous history
- History of hay fever/asthma
- Aggravating factors
- Medication

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 2weeks

Management

- Skin rashes tend quite understandably to cause much anxiety. There is also a social stigma associated with skin disease. Many patients will therefore have been seen by their doctor. Pharmacists are most likely to be involved when the diagnosis has already been made or when the condition first presents but is very mild.
- However, with increasing recognition that patients can manage mild to moderate eczema, and as much of the management involves advice and the use of emollients, the pharmacist is in a good position to help, with short-term use of OTC topical steroids where needed.
- Where the pharmacist is able to identify a cause of irritant or allergic dermatitis, topical hydrocortisone or clobetasone 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.

Topical corticosteroids

- Hydrocortisone cream and ointment and clobetasone 0.05% can be sold OTC for a limited range of indications.
- 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, on the face and anogenital areas. Children aged over 10 and adults can be treated, and any course must not be longer than 1 week. Only proprietary OTC brands of topical hydrocortisone can be used; dispensing packs may not be sold.
- Topical clobetasone 0.05% is a P medicine for the short-term treatment and control of patches of eczema and dermatitis in people aged 12 and over.

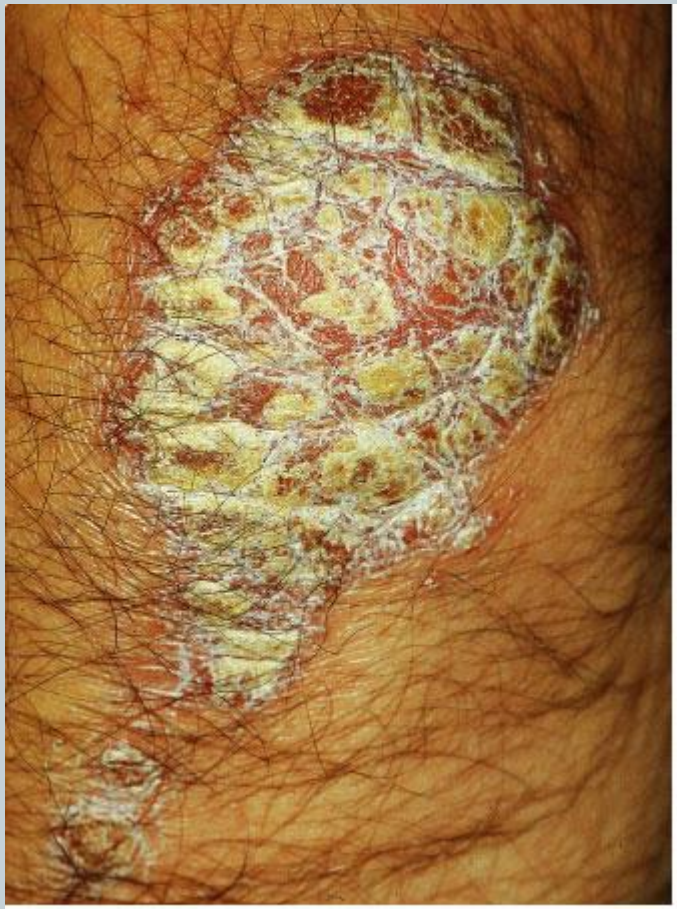
Antipruritics

- 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.
- Aqueous calamine cream can be used and adding 1% menthol gives additional antipruritic and cooling actions.
- Crotamiton can reduce the discomfort of itchy skin and is available in cream and lotion forms.
- A combination product containing crotamiton with hydrocortisone is available. Indications for use are the same as for topical hydrocortisone for contact dermatitis (irritant or allergic), insect bites or stings, and mild to moderate eczema.

Psoriasis

- People with psoriasis usually present to the doctor rather than the pharmacist. At the time of first presentation, the doctor is the most appropriate first line of help and pharmacists should always refer cases of suspected but undiagnosed psoriasis.
- The diagnosis is not always easy and needs confirming. In the situation of a confirmed diagnosis in a relatively chronic situation, the pharmacist can offer continuation of the treatment where the products are available OTC.
- This is a condition where continued management and monitoring by the pharmacist is reasonable, with referral back to the doctor when there is an exacerbation or for periodic review.

Psoriasis



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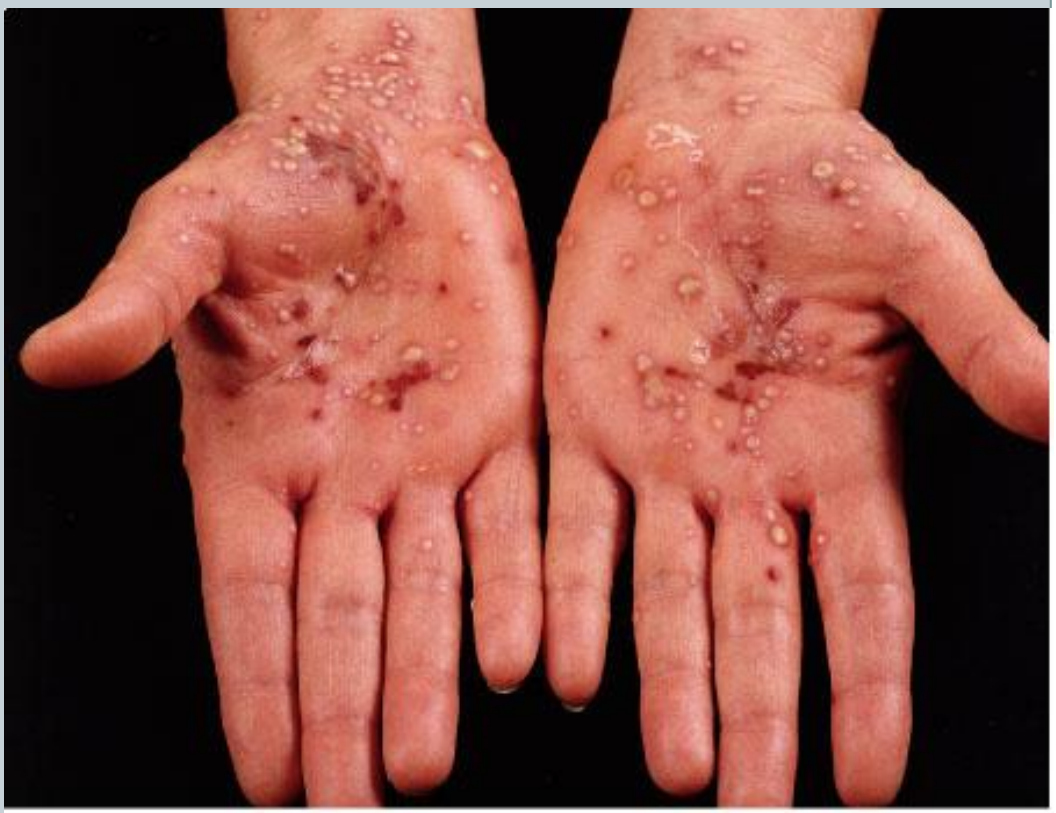

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What you need to know

- Appearance
- Psychological factors
- Diagnosis
- Medication

Management

- Management is dependent on many factors, e.g. nature and severity of psoriasis, understanding the aims of the treatment, ability to apply creams and whether the person is pregnant (some treatments are teratogenic).
- As always, it is particularly important for the doctor to deal with the person's ideas, concerns and expectations, to appreciate how that person's life is affected by the condition, to give a relevant, understandable explanation and to mutually agree whether to treat or not, and, if so, how.

Topical treatments

- *Dithranol*
- *Calcipotriol or tacalcitol*
- *Topical steroids*

Dithranol

- Dithranol has been a traditional, effective and safe treatment for psoriasis, and in the past was often made up in Lassar's paste, which was effective but messy, with staining and local irritation. Proprietary creams (0.1–2%) are more acceptable, especially when used for one short contact (30 min) period each day and removed using an emollient.
- Some people are very sensitive to dithranol as it can cause quite severe skin irritation. It is usual to start with the lowest concentration and build up slowly to the strongest that can be tolerated. Users should wash their hands after application. It should not be applied to the face, flexures or genitalia. There are some people who are unable to tolerate it at all.

Calcipotriol or tacalcitol

- Vitamin D derivatives are available as calcipotriol or tacalcitol. This does not smell or stain and has been widely used in the treatment of mild to moderate psoriasis.
- A systematic review has shown it to be as beneficial in efficacy as dithranol. If overused, there is a risk of causing hypercalcaemia.
- It is available as a scalp application as well as an ointment.

Topical steroids

- Topical steroids should generally be restricted to use in the flexures or on the scalp.
- Although effective in suppressing skin plaques on the body, large amounts are required over time as the condition is a chronic one, resulting in severe steroid side-effects (striae, skin atrophy, adrenocortical suppression).
- Also, stopping steroid preparations can result in a severe flare-up of the psoriasis.

Second-line treatment

- Referral by a doctor to a dermatologist may be necessary when there is diagnostic uncertainty, when the doctor's treatment fails or in severe cases.
- Second-line treatment may include phototherapy or systemic therapy with methotrexate, etretinate or ciclosporin (cyclosporin).
- Unfortunately, all of these have potentially serious side-effects.
- Methotrexate has been shown to be effective in non-randomised trials but relapse usually occurs within 6 months of discontinuation. Long-term methotrexate treatment carries the risk of liver damage.

Hair loss

- The two major types of hair loss are diffuse hair loss and alopecia areata.
- Alopecia androgenetica (male pattern baldness, sometimes known as common baldness because it can affect women) is the most common cause of diffuse hair loss.
- Other causes of diffuse hair loss include telogen effluvium, hypothyroidism, severe iron deficiency and protein deficiency.
- Occasionally, diffuse hair loss is seen after pregnancy, in chronic renal failure and with certain drugs and chemical agents.

What you need to know

- Male or female
- History and duration of hair loss
- Location and size of affected areas
- Other symptoms
- Influencing factors
- Medication

When to refer

- Alopecia areata
- Suspected drug-induced hair loss
- Suspected hypothyroidism
- Menstrual disorders
- Suspected anaemia

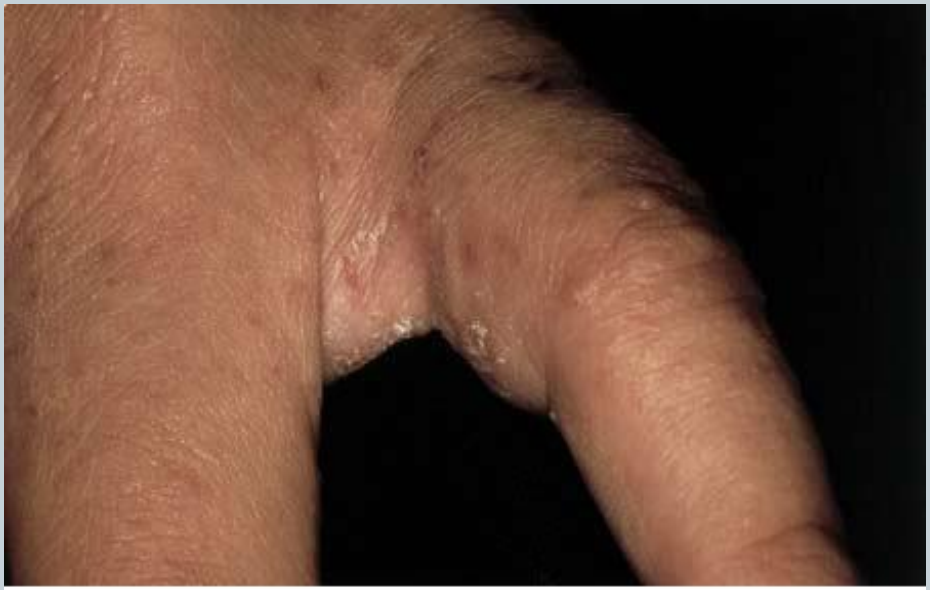
Management

- **Minoxidil**
- The only treatment licensed for use in hair loss is minoxidil, available as a 2% or 5% lotion with the drug dissolved in an aqueous alcohol solution. Propylene glycol is included to enhance absorption.
- The mechanism of action of minoxidil in baldness is unknown.
- The earlier minoxidil is used in balding, the more likely it is to be successful.
- Treatment is most likely to work where the bald area is less than 10 cm in diameter, where there is still some hair present and where the person has been losing hair for less than 10 years.
- The manufacturers of minoxidil say that the product works best in men with hair loss or thinning at the top of the scalp and in women in a generalised thinning over the whole scalp – both manifestations of alopecia androgenetica.
- Up to one in three users in such circumstances report hair regrowth of non-vellus (normal) hair and stabilisation of hair loss. A further one in three are likely to report some growth of vellus (fine, downy) hair. The final third will not see any improvement

Scabies

- Infestation by the scabies mite, Sarcoptes scabei, causes a characteristically intense itching, which is worse during the night.
- The itch of scabies can be severe and scratching can lead to changes in the appearance of the skin. It is therefore necessary to take a careful history.
- Scabies goes through peaks and troughs of prevalence, with a peak occurring every 15–20 years, and pharmacists need to be aware when a peak is occurring.

Scabies



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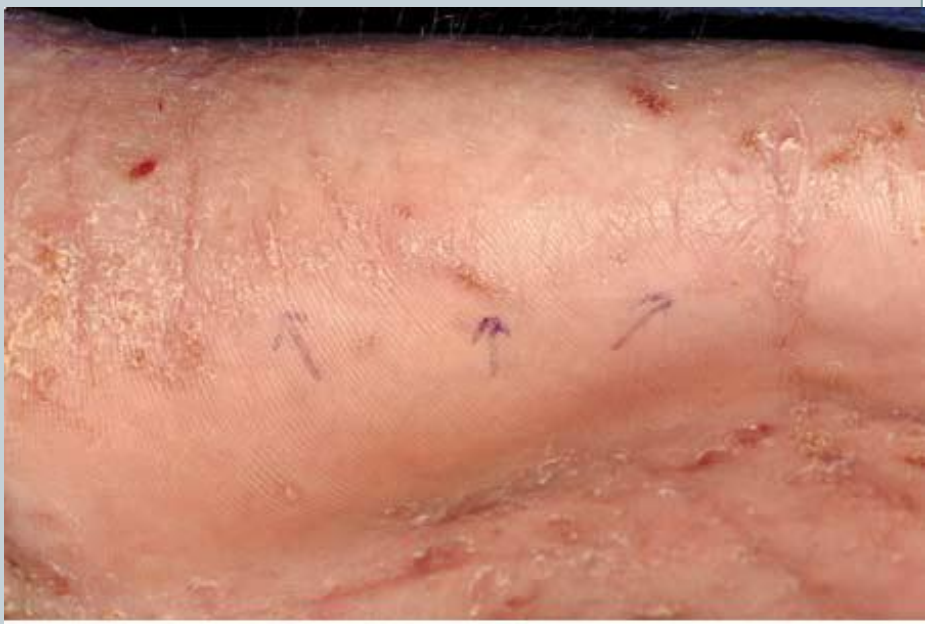

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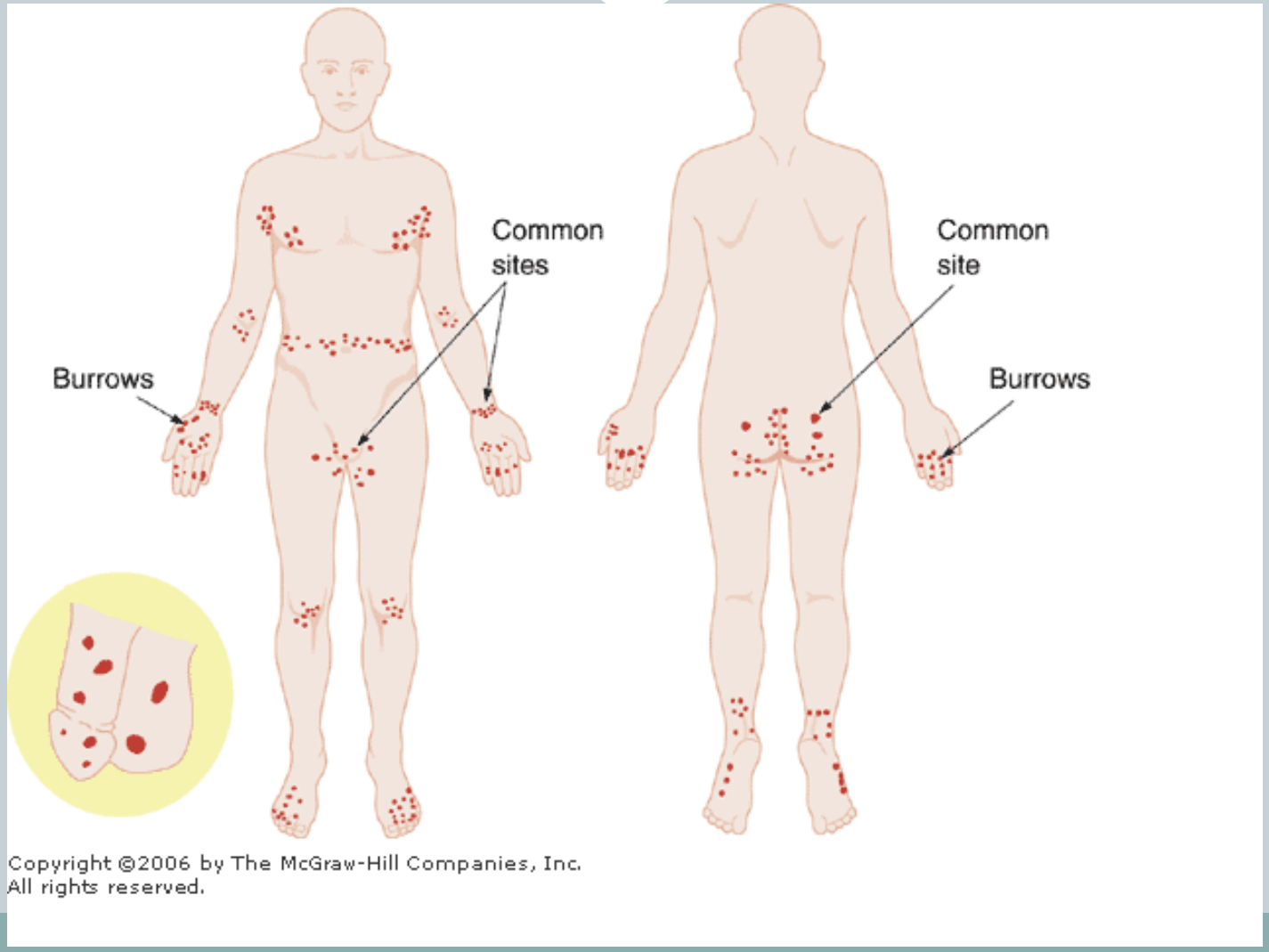
Scabies: Predilection sites



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What you need to know

- Age
  - Infant, child, adult
- Symptoms
  - Itching, rash
- Presence of burrows
- History
- Signs of infection
- Medication

Management

- There is relatively little evidence from randomised controlled trials (RCTs) of scabies treatment.
- Permethrin cream is an effective scabicide (acaricide) and malathion can be used where permethrin is not suitable.
- Two treatments are recommended, 7 days apart.
- Aqueous lotions are used in preference to alcoholic versions because the latter sting and irritate excoriated skin.
- Benzyl benzoate application is less effective than permethrin and malathion and is rarely used these days because of its particularly irritant effect.
- Medical supervision is required for the treatment of scabies in children under 2.

Management

- The treatment is applied to the entire body, from the neck downwards but not the neck, face and scalp in adults.
- However, in children under 2 and the elderly, the advice now is to include the scalp, neck, face (avoiding eyes and mouth) and ears in the application unless the product packaging contraindicates this.
- This recommendation is because treatment failure has occurred as the head, neck and scalp were not treated.

Malathion

- Malathion is effective for the treatment of scabies and pediculosis (head lice). For one application in an adult, 100 ml of lotion should be sufficient.
- The aqueous lotion should be used in scabies. The lotion is applied to the whole body omitting the head and neck. The lotion should be left on for 24 h, without bathing, after which it is washed off.
- If the hands are washed with soap and water during the 24 h, malathion should be reapplied to the hands. Skin irritation may sometimes occur.
- Medical supervision is needed for children under 6 months.

Permethrin

- The cream formulation is used in the treatment of scabies. For a single application in an adult, 30–60 g of cream (one to two 30 g tubes) is needed.
- The cream is applied to the whole body and left on for 8–12 h before being washed off. If the hands are washed with soap and water within 8 h of application, cream should be reapplied to the hands.
- Permethrin can be used for children aged 2 months upwards; medical supervision is required for its use in children under 2 and in elderly patients (aged 70 and over).
- Permethrin can itself cause itching and reddening of the skin.

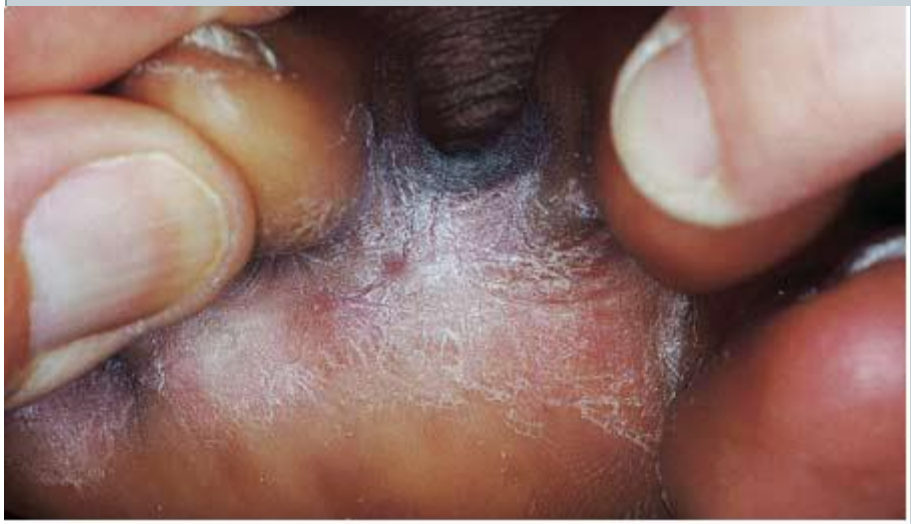
Benzyl benzoate

- This preparation is a 25% strength application, which is used solely in the treatment of scabies. The cure rate from studies is about 50% but resistance is common.
- Benzyl benzoate itself is irritant in nature and can cause stinging, itching and burning of the skin as well as skin rashes in about 25% of people treated.
- For this reason, it is not recommended for babies or children and should not be used for patients with eczema or scratched and broken skin, in whom severe stinging may occur.

Athlete's foot

- The incidence of athlete's foot (tinea pedis) is not, as its name might suggest, limited to those of an athletic disposition.
- The fungus that causes the disease thrives in warm, moist conditions.
- The spaces between the toes can provide a good growth environment and the infection therefore has a high incidence.
- The problem is more common in men than in women and responds well to OTC treatment.

Athlete's foot



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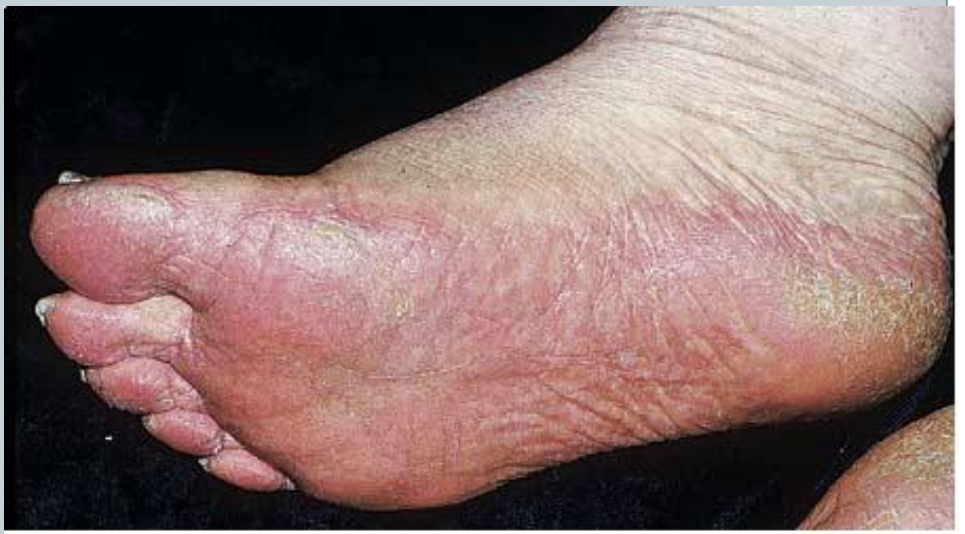

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What you need to know

- Duration
- Appearance
- Severity
- Broken skin
- Soreness
- Secondary infection
- Location
- Previous history
- Medication

When to refer

- Severe, affecting other parts of the foot
- Signs of bacterial infection
- Unresponsive to appropriate treatment within 2 weeks
- Diabetic patients
- Involvement of toenails

Management

- Many preparations are available for the treatment of athlete's foot.
- Formulations include creams, powders, solutions, sprays and paints.
- A systematic review of clinical evidence compared topical allylamines (e.g. terbinafine), azoles (e.g. clotrimazole, miconazole, ketoconazole), undecenoic acid and tolnaftate. All are more effective than placebo.
- Topical allylamines have been tested against topical azoles; cure rates were the same.
- However, terbinafine was more effective in preventing recurrence. Terbinafine and ketoconazole have a 1-week treatment period, which some patients may prefer.

Azoles

- Azoles (e.g. clotrimazole, ketoconazole, miconazole)
- Topical azoles can be used to treat many topical fungal infections, including athlete's foot.
- They have a wide spectrum of action and have been shown to have both antifungal and antibacterial activity (the latter is useful as secondary infection can occur).
- The treatment should be applied two or three times daily.
- Formulations include creams, powders and sprays.
- Miconazole, clotrimazole and ketoconazole have occasionally been reported to cause mild irritation of the skin.
- Ketoconazole has a 1-week treatment period.

Other Treatments

- Terbinafine is available as cream and spray formulations. The cream is licensed for treatment of athlete's foot.
- Tolnaftate is available in powder, cream, aerosol and solution formulations and is effective against athlete's foot.
- Undecenoic acid is an antifungal agent, sometimes formulated with zinc salt to give additional astringent properties.

Dandruff

- Dandruff is a chronic relapsing condition of the scalp, which responds to treatment but returns when treatment is stopped. The condition usually appears during puberty and reaches a peak in early adulthood.
- Dandruff has been estimated to affect one in two people aged between 20 and 30 and up to four in 10 of those aged between 30 and 40.
- Dandruff is considered to be a mild form of seborrhoeic dermatitis, associated with the yeast Malassezia furfur. Diagnosis is straightforward and effective treatments are available OTC.

What you need to know

- Appearance
- Presence of scales
- Colour and texture of scales
- Location: scalp; eyebrows; paranasal clefts; others
- Severity
- Previous history
- Psoriasis
- Seborrhoeic dermatitis
- Aggravating factors
- Medication

When to refer

- Suspected psoriasis
- Signs of infection
- Unresponsive to appropriate treatment

Management

- The aim of treatment is to reduce the level of Malassezia furfur on the scalp; therefore agents with antifungal action are effective.
- ***Ketoconazole, selenium sulphide, zinc pyrithione*** and ***coal tar*** are effective.
- The results from studies suggest that ketoconazole is the most and coal tar is the least effective.
- All treatments need to be left on the scalp for 3–5 min for full effect.