Skin Conditions

Scabies

Dandruff

Psoriasis

Scabies

- Infestation by the scabies mite, *Sarcoptes scabiei,* 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.

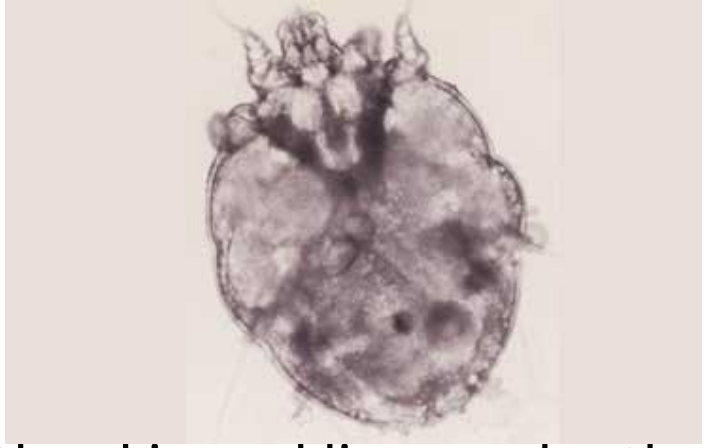
- Scabies goes through peaks and troughs of prevalence, with a peak
- occurring every 15–20 years, and pharmacists need to be aware when
- a peak is occurring.

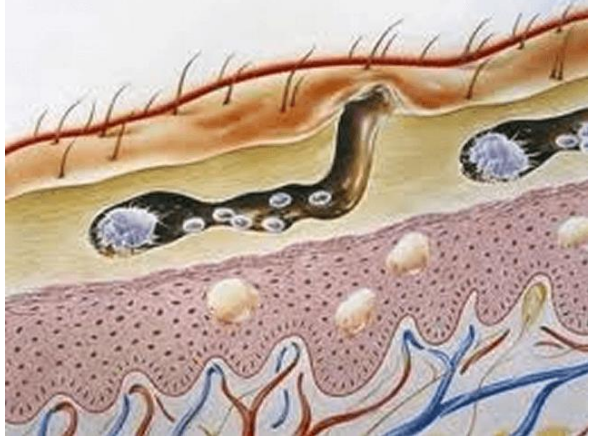
What you need to know
Age
Infant, child, adult
Symptoms
Itching, rash
Presence of burrows
History
Signs of infection
Medication

Age

- Scabies infestation can occur at any age from infancy onwards.
- The pharmacist may feel it best to refer infants and young children to the doctor if scabies is suspected.

Symptoms





- The scabies mite burrows down into the skin and lives under the surface.
- The presence of the mites sets up an allergic reaction, thought to be due to the insect’s coat and exudates, resulting in intense itching.
- A characteristic feature of scabies is that itching is worse at night and can lead to loss of sleep.
- Burrows can sometimes be seen as small thread-like grey lines.
- The lines are raised, wavy and about 5–10 mm long.

Commonly infested sites

- web space of the fingers and toes,
- wrists,
- armpits,
- buttocks
- genital area

- Patients may have a rash that does not always correspond to the areas of infestation.

- The rash may be patchy and diffuse or dense and erythematous.

- It is more commonly found around the midriff, underarms, buttocks, inside the thighs and around the ankles.

- In adults, scabies rarely affects the scalp and face, but in children aged 2 years or under and in the elderly, involvement of the head is more common, especially the postauricular fold.

- Burrows may be indistinct or may have been disguised by scratching which has broken and excoriated the skin.

- Scabies can mimic other skin conditions and may not present with the classic features.

- The itch tends to be generalised rather than in specific areas.
- In immunocompromised or debilitated patients (e.g. the elderly), scabies presents differently.
- The affected skin can become thickened and crusted.
- Mites survive under the crust and any sections that become dislodged are infectious to others because of the living mites they contain.

History

- The itch of scabies can take several (6–8) weeks to develop in someone who has not been infested previously.

- The scabies mite is transmitted by close personal contact, so patients can be asked whether anyone else they know is affected by the same symptoms

Signs of infection

- Scratching can lead to excoriation, so secondary infections such as impetigo can occur.

- The presence of a weeping yellow discharge or yellow crusts would be indications for referral to the doctor for treatment.

Medication

- It is important for the pharmacist to establish whether any treatment has been tried already and, if so, its identity.

- The patient should be asked about how any treatment has been used, since incorrect use can result in treatment failure.

- The itch of scabies may continue for several days or even weeks after successful treatment, so the fact that itching has not subsided does not necessarily mean that treatment has been unsuccessful.

When to refer

Babies and children

Infected skin

Treatment failure

Unclear diagnosis

Management

- There is relatively little evidence from 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.
- The treatment is applied to the entire body including the neck, face, scalp and ears in adults.
- Particular attention should be paid to the webs of fingers, toes and soles of the feet, and under the ends of the fingernails and toenails.

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.
- Medical supervision is required for its use in children under 2 years and in elderly patients (aged 70 years and over).
- *Permethrin* can itself cause itching and reddening of the skin.

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.

- The lotion can be poured into a bowl and then applied on cool, dry skin using a clean, broad paintbrush or cotton wool.

- 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.

Practical points

- The itch will continue and may become worse in the first few days
- after treatment.

- *Crotamiton cream* or lotion

- An oral antihistamine may be considered if the itch is severe.

- All members of the family or household should be treated, preferably, on the same day.

- Because the itch of scabies may take several weeks to develop, people may be infested but symptomless.

- It is thought that patients may not develop symptoms for up to 8 weeks after infestation. The incubation period of the scabies mite is 3 weeks, so reinfestation may occur from other family or household members.

- It is possible that reinfestation could occur from bedclothes or clothing and this can be prevented by washing them at a minimum temperature of 50◦C after treatment.

- **Dandruff**

Dandruff

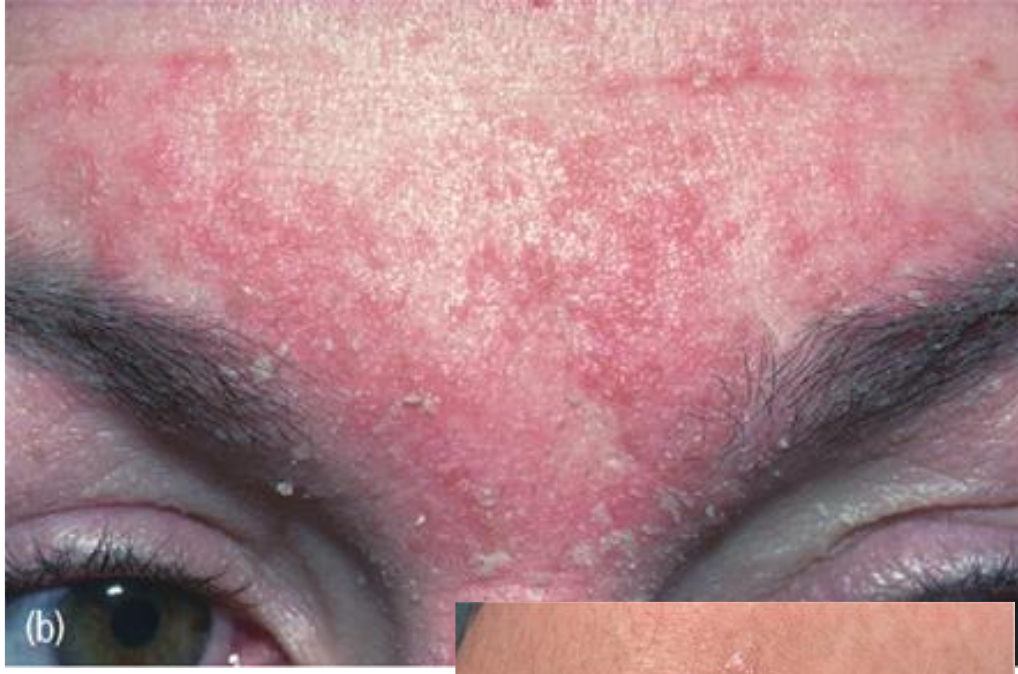
- Dandruff is a chronic relapsing condition of the scalp, which responds to treatment but returns when treatment is stopped.
- The condition usually appears during puberty and reaches a peak in early adulthood.
- Dandruff has been estimated to affect one in two people aged between 20 and 30 years and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

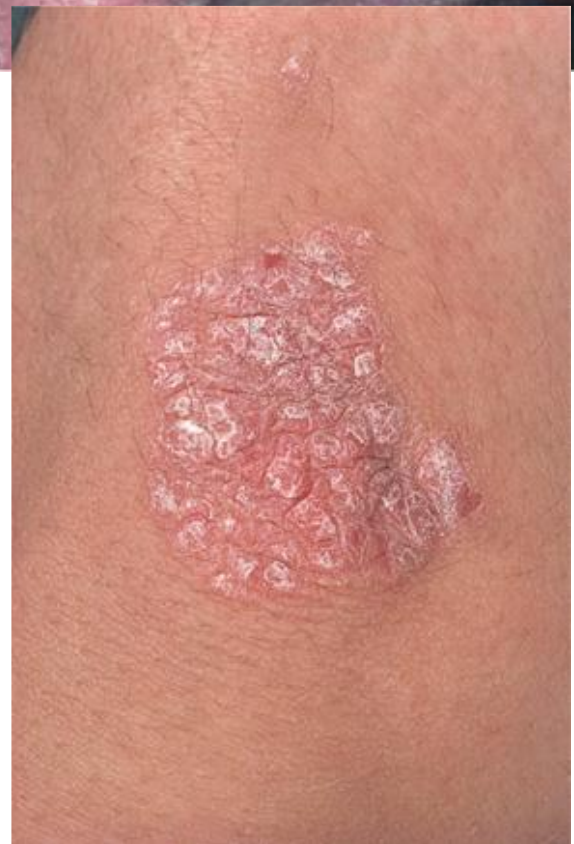
Appearance

- Dandruff is characterised by greyish-white flakes or scales on the scalp and an itchy scalp as a result of excessive scaling.
- In dandruff the epidermal cell turnover is at twice the rate of those without the condition.
- A differential diagnosis for severe dandruff could be psoriasis.
- In the latter conditions, both the appearance and the location would be different.

- In more severe cases of seborrhoeic dermatitis the scales are yellowish and greasy looking and there is usually some inflammation with reddening and crusting of the affected skin .

- In psoriasis the scales are silvery-white and associated with red, patchy plaques and inflammation



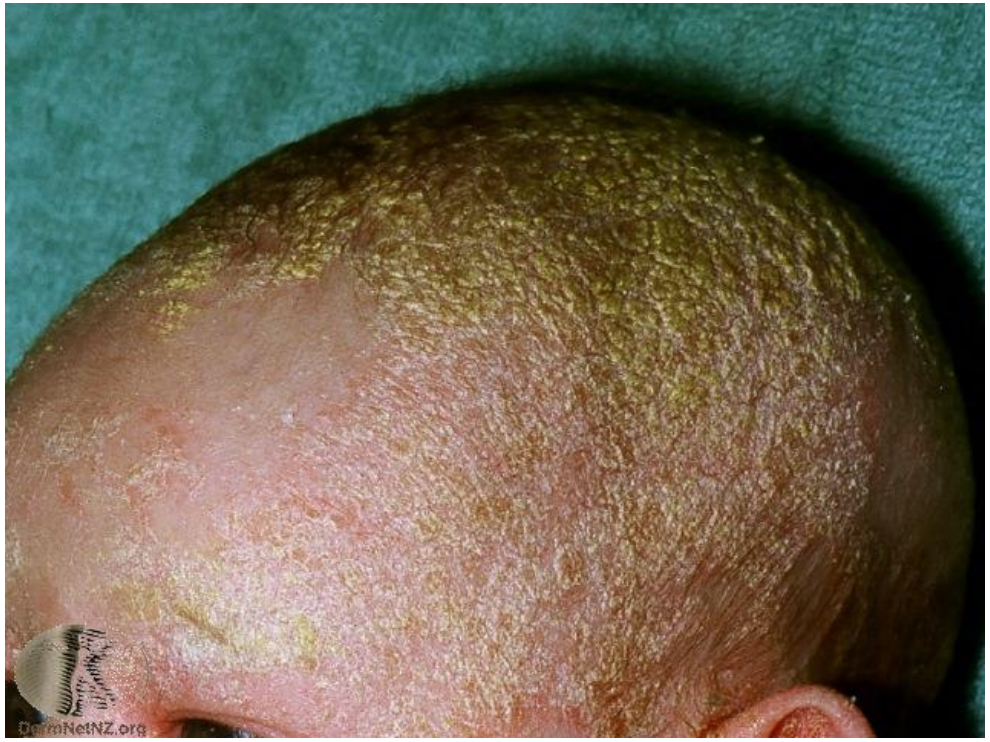


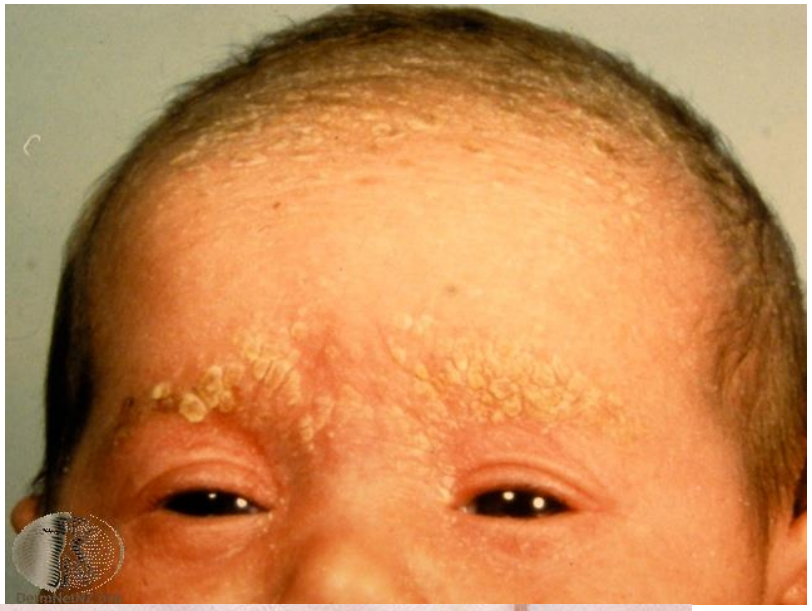
Location

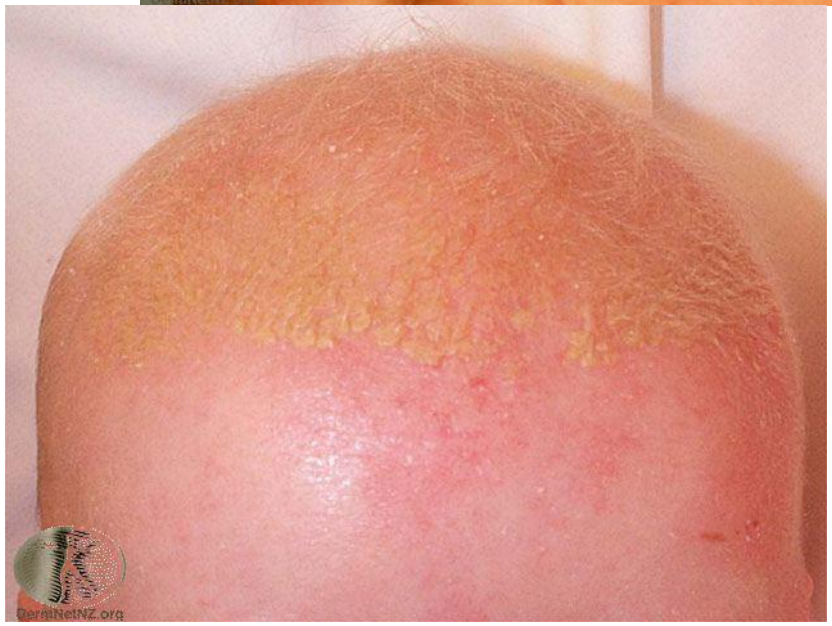
- In dandruff the scalp is the only area affected.

- More widespread seborrheic dermatitis affects the areas where there is greatest sebaceous gland activity, so it can affect
  - eyebrows,
  - eyelashes,
  - moustache,
  - paranasal clefts,
  - behind the ears,
  - nape of neck,
  - forehead
  - chest.

- In infants seborrhoeic dermatitis is common and occurs as cradle cap, appearing in the first 12 weeks of life.
- Psoriasis can affect the scalp but other areas are involved.
- The knees and elbows are commonly involved but the face is rarely affected.
- This latter point distinguishes psoriasis from seborrhoeic dermatitis, where the face is often affected.







Severity

- Dandruff is generally a mild condition.
- However, the itching scalp may lead to scratching, which may break the skin, causing soreness and the possibility of infection.
- If the scalp is very sore or there are signs of infection (crusting or weeping), referral should be indicated.

Previous history

- Since dandruff is a chronic relapsing condition there will usually be a previous history of fluctuating symptoms.

- There is a seasonal variation in symptoms, which generally improve in summer in response to UVB light.

- *M. furfur* is unaffected by UVA light.

Aggravating factors

- Hair dyes and perms can irritate the scalp.
- Inadequate rinsing after shampooing the hair can leave traces of shampoo causing irritation and itching.
- Psoriasis can be exacerbated by drugs (e.g. *chloroquine*).

Medication

- Various treatments may already have been tried.
- It is important to identify what has been tried and how it was used.
- Dandruff treatments need to be applied to the scalp and be left for at least 5 min for best effect.

When to refer
Suspected psoriasis
Signs of infection
Unresponsive to appropriate treatment

Dandruff should start to improve within 12 weeks of beginning treatment.

Management

- The aim of the treatment is to reduce the level of *M. furfur* on the scalp; therefore, agents with antifungal action are effective.

- *Ketoconazole,*
- *selenium sulphide,*
- *zinc pyrithione* and
- coal tar

- 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.

Ketoconazole

- *Ketoconazole* 2% shampoo is used twice a week for 2–4 weeks, after which usage should reduce to weekly or fortnightly as needed to prevent recurrence.
- It is considered first line in moderate-to-severe dandruff.
- The shampoo can also be used in seborrhoeic dermatitis.
- Whilst shampooing the lather can be applied to the other affected areas and left before rinsing.
- Ketoconazole is not absorbed through the scalp and side effects are extremely rare.
- There have been occasional reports of allergic reactions.

Zinc pyrithione

- *Zinc pyrithione* is effective against dandruff and has a cytostatic effect.

- It should be used twice weekly for the first 2 weeks and then once weekly as required.

Selenium sulphide 2.5%

- *Selenium sulphide* has been shown to be effective and works by reducing the cell turnover rate (cytostatic effect).

- Twice-weekly use for the first 2 weeks is followed by weekly use for the next 2 weeks; then it can be used as needed.

- The hair and scalp should be thoroughly rinsed after using *selenium sulphide* shampoo; otherwise, discoloration of blond, grey or dyed hair can result.

- Frequent use can make the scalp greasy and therefore exacerbate seborrhoeic dermatitis.
- Products containing *selenium sulphide* should not be used within 48 h of colouring or perming the hair.
- Contact dermatitis has occasionally been reported.
- *Selenium sulphide* should not be applied to inflamed or broken skin.

Coal tar

- Findings from research studies indicate that coal tar is the least effective of the antidandruff agents.
- Modern formulations are pleasanter than the traditional ones but some people still find the smell of coal tar unacceptable.
- Coal tar can cause skin sensitisation and is a photosensitiser.

Practical points

- *Continuing treatment*
- Patients need to understand that the treatment will not cure their dandruff permanently and that it will be sensible to use the treatment on a less frequent basis to prevent their dandruff from coming back.
- *Treating the scalp*
- It is the scalp that needs to be treated rather than the hair.
- The treatment should be applied to the scalp and massaged gently.
- All products need to be left on the scalp for 5 min before rinsing for the full effect to be gained.

- *Standard shampoos*
- There is debate amongst experts as to whether dandruff is caused by infrequent hairwashing.
- However, it is generally agreed that frequent washing (at least three times a week) is an important part of managing dandruff.
- Between applications of their treatment the patients can continue to use their normal shampoo.
- Some may wish to wash their hair with their normal shampoo before using the dandruff treatment shampoo.
- *Hair products*
- Gel, mousse and hairspray can still be used and will not adversely affect treatment for dandruff.

- **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.
- Jointly agreed guidelines between pharmacist and doctors are valuable here.
- Psoriasis occurs worldwide with variation in incidence between different ethnic groups.
- The incidence for white Europeans is about 2%.
- Although there is a genetic influence, environmental factors are thought to be important.

What you need to know

Appearance

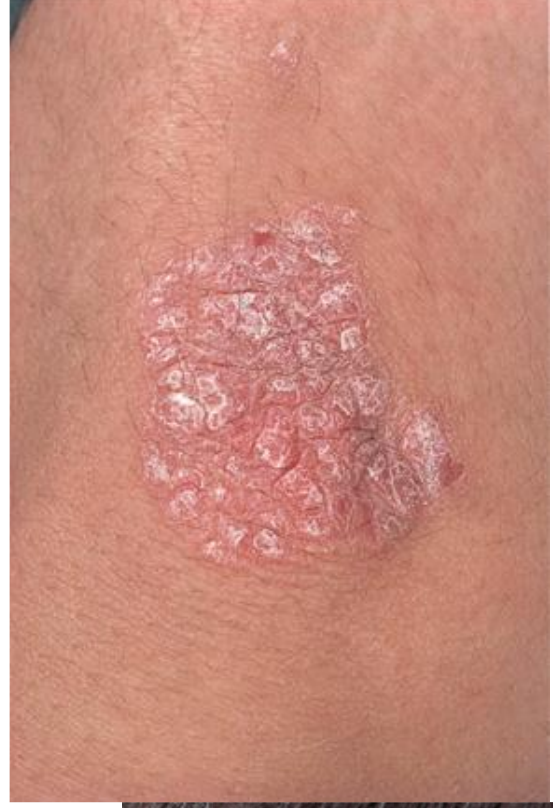
Psychological factors

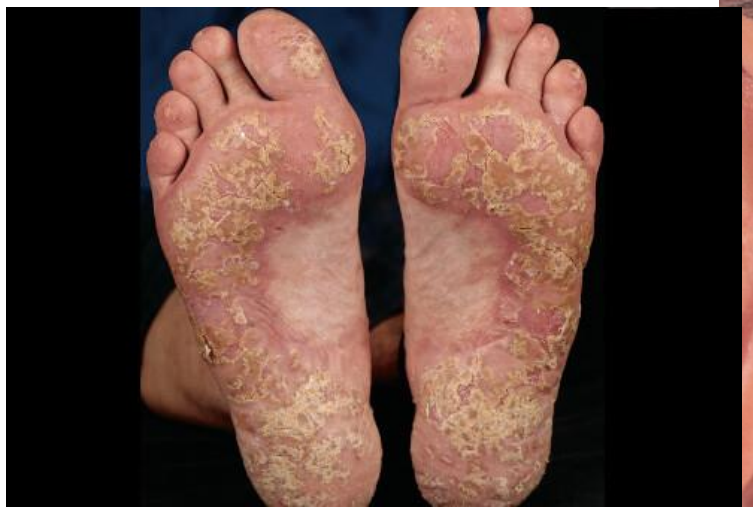
Diagnosis

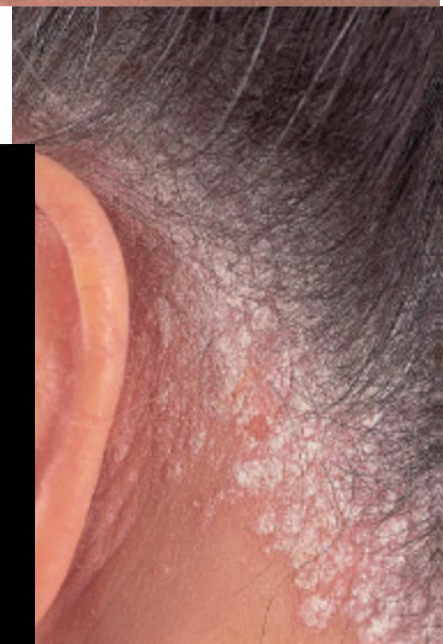
Medication

Appearance

- In its most common form there are raised, large, red, scaly patches/plaques over the extensor surfaces of the elbow and knee
- The patches are symmetrical and sometimes there is a patch present over the lower back area.
- The scalp is often involved.
- Psoriasis can affect the soles of the feet.







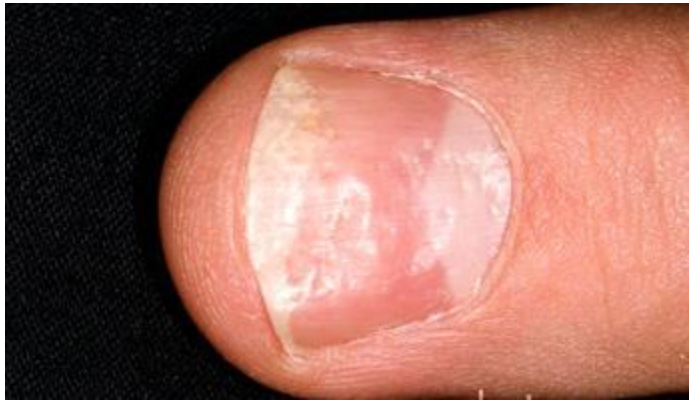
Psychological factors

- In some people these patches are very long standing and show little change.
- With others, the skin changes worsen and spread to other parts of the body sometimes in response to a stressful event.
- This is particularly distressing for the person involved who then has to cope with the stress of having a relapse of psoriasis as well as the precipitating event.
- The psychological impact of having a chronic skin disorder such as psoriasis must not be underestimated.

- There is still a significant stigma connected with skin disease. There can be a mistaken belief that the rash is contagious.

- Psoriasis can understandably cause loss of self-esteem, embarrassment and depression. However each person will react differently, with some being psychologically affected by relatively minor patches whist others are untroubled by a more widespread rash.

Diagnosis



- The diagnosis of psoriasis can be confusing.
- In addition to affecting the extensor surfaces, psoriasis can typically involve the scalp
- Often the fingernails show signs of pitting, which is a useful diagnostic guide.
- However, psoriasis can present with differing patterns that can be confused with other skin disorders.
- In guttate psoriasis a widespread rash of small, scaly patches develops abruptly, affecting large areas of the body.

- This most typically occurs in children or young adults and may be triggered by a streptococcal sore throat.

- The most common alternative diagnostic possibilities in these situations include eczema or fungal infections.

- For some people who have psoriasis there is an associated arthritis, which most commonly affects the hands and feet.

Medication

- *lithium,*
- beta-blockers,
- non-steroidal anti-inflammatory drugs
- antimalarials

- can exacerbate psoriasis.

Management

- Management is dependent on many factors, for example, 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

- The doctor is likely to offer a topical treatment, usually an emollient alone or in conjunction with active therapy.
- Emollients are important in psoriasis and may be underused.
- The pharmacist can ask the patient when and how they are being used.

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 and adrenocortical suppression).
  - main symptoms range from anorexia, fatigue, nausea, vomiting, dyspnea, fever, arthralgia, myalgia, and orthostatic hypotension to dizziness, fainting, and circulatory collapse.
- Also, stopping steroid preparations can result in a severe flare-up of the psoriasis.
- There is a combination cream with *betamethasone* and *calciptriol,* which is effective but licensed for use only on up to 30% of body surface for up to 4 weeks.

Dithranol

- *Dithranol* has been a traditional, effective and safe treatment for psoriasis and is available as proprietary creams (0.1–2.0%) which can be 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 a 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.

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 (PUVA) or systemic therapy with
  - *methotrexate,*
  - *etretinate*
  - *ciclosporin (cyclosporin).*

- Unfortunately, all of these have potentially serious side effects.

- Those not responding to PUVA or systemic therapy may be prescribed biologics (*etanercept, adalimumab or ustekinumab*), which block part of the immune system involved in causing inflammation.