# Skin Conditions II (2 hours)

## Fungal Skin Infection/ Athlete's foot

Most often, tinea infections are named based on the area affected.

The incidence of athlete's foot (tinea paedis) 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.

| **Site** | **Name** |
|---|---|
| Scalp | Tinea capitis |
| Feet | Tinea pedis |
| Groin | Tinea cruris |
| Body | Tinea corporis |
| Nails | Tinea unguium (onychomycosis |

### Patient Assessment

**Appearance**
Athlete's foot usually presents as itchy, flaky skin in the web spaces between the toes. The flakes or scales of skin become white and macerated and begin to peel off. Underneath the scales, the skin is usually reddened and may be itchy and sore. The skin may be dry and scaly or moist and weeping.

**Severity**
Athlete's foot is usually a mild fungal infection, but occasionally the skin between the toes becomes more macerated and broken and deeper and painful fissures may develop. The skin may then become inflamed and sore. Once the skin is broken, there is the potential for secondary bacterial infection to develop. If there are indications of bacterial involvement, such as weeping, pus or yellow crusts, then referral to the doctor is needed.

**Location**
Classically, the toes are involved, the web space between the fourth and fifth toes being the most commonly affected. More severe infections may spread to the sole of the foot and even to the upper surface in some cases. This type of spread can alter the appearance of the condition and severe cases are probably best referred to the doctor for further investigation. If the toenails appear to be involved, referral to the doctor may be necessary because systemic antifungal treatment may be required to deal with infection of the nail bed where OTC treatment is not appropriate.

**Previous history**
Many people occasionally suffer from athlete's foot. The pharmacist should ask about previous bouts and about the action taken in response. Any diabetic patient who presents with athlete's foot is best referred to the doctor. Diabetics may have impaired circulation or innervation of the feet and are more prone to secondary infections in addition to poorer healing of open wounds.

**Medication**
One or more topical treatments may have been tried before the patient seeks advice from the pharmacist. The identity of any treatment and the method of use should be established. Treatment failure may occur simply because it was not continued for sufficiently long enough. However, if an appropriate antifungal product has been used correctly without remission of symptoms, the patient is best referred to the doctor, especially if the problem is of long duration (several weeks).

**When to refer**
Severe, affecting other parts of the foot
Signs of bacterial infection
Unresponsive to appropriate treatment
Diabetic patients
Involvement of toenails

**Treatment timescale**
If athlete's foot has not responded to treatment within 2 weeks, patients should see their doctor.

## Management
Most cases of athlete's foot are minor in nature and can be treated effectively with OTC products. Formulations are available for the treatment of athlete's foot includes creams, powders, solutions, sprays and paints. Pharmacists should instruct patients on how to use the treatment correctly and on other measures that can help to prevent recurrence. Regular application of the recommended product to clean, dry feet is essential, and treatment must be continued after symptoms have gone to ensure eradication of the fungus. Individual products state the length of treatment and generally advise use for 1–2 weeks after the disappearance of all signs of infection.

**1. Azoles**
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, bifonazole* and *ketoconazole* have occasionally been reported to cause mild irritation of the skin. *Ketoconazole* has a 1 week treatment period, continue 2-3 days after the disappearance of symptoms.

**2. Terbinafine**
*Terbinafine* is available as cream, solution, spray and gel formulations. Apply 1‑2 times daily for 1 week. There is evidence that *terbinafine* is better than the azoles in preventing recurrence, so it will be useful where frequent bouts of athlete's foot are a problem. *Terbinafine* can cause redness, itching and

stinging of the skin; contact with the eyes should be avoided. *Terbinafine* products are not recommended for use in children.

**3. Griseofulvin**

*Griseofulvin 1% spray* can be used OTC for the treatment of athlete's foot. The spray is used once a day and the maximum treatment period is 4 weeks.

**4. Tolnaftate**

*Tolnaftate* is available in powder, cream, aerosol and solution formulations and is effective against athlete's foot. It has antifungal, but not antibacterial, action. It should be applied twice daily and treatment should be continued for up to 6 weeks. *Tolnaftate* may sting slightly when applied to infected skin.

**5. Undecenoates (e.g. zinc undecenoate, undecenoic acid and methyl and propyl undecylenate)**

*Undecenoic acid* is an antifungal agent, sometimes formulated with zinc salt to give additional astringent properties. Treatment should be continued for 4 weeks.

**6. Hydrocortisone cream or ointment**

*Topical hydrocortisone* not recommended in athlete's foot because, although it would reduce inflammation, used alone would not deal with the fungal infection, which might then worsen. Combination products containing *hydrocortisone* together with an antifungal agent are available OTC for use in athlete's foot. Treatment is limited to 7 days. Therefore they are probably best used to control initial symptoms of redness and itch before switching to an imidazole only product after the initial 7 days of treatment. They are suitable for children over 10 years of age.

## Practical point:

1. Product should be applied after careful cleaning and drying of the foot especially between the toes.
2. Creams or solutions are the most effective dosage form for the delivery of active ingredient to the epidermis. Sprays and powders are less effective because they are often not rubbed into the skin. They are probably more useful as adjunct to creams and solutions or as a prophylactic agents in preventing new recurrent infections.
3. They can be used during pregnancy.

# Eczema/dermatitis

**Dermatitis** and **Eczema** are terms used interchangeably to describe a range of skin conditions characterized by dryness, erythema, and itch of the skin, often with weeping and crusting. However the term dermatitis is more correctly used when an external precipitating factor is present (contact dermatitis). While term ezema applied to conditions with endogenous cause in atopic individuals (Atopic eczema).

## Causes of Contact dermatitis

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. Napkin dermatitis is an example of irritant dermatitis and can be complicated by infection, e.g. 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.

## Patient Assessment

### Age/distribution

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.

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. 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 skin folds or occluded areas such as under the breasts in women and in the groin or armpits.

### Occupation/contact

To know whether or not contact dermatitis is the problem, pharmacist can ask about:

Site of rash, details of job and hobbies, onset of rash and agents handheld, and improvement of rash when away from work or on holiday.

### 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 for Atopic eczema:**

- hay-fever season.
- house dust or animal danders.
- soaps or detergents and cold wind (dry the skin ).
- Certain clothing such as woollen material can irritate the skin.
- Cow's milk, eggs and some food colouring (less than 5% of sufferers).
- 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.

**Severity**

Severe contact dermatitis (badly cracked /fissured skin, bleeding), or sign of bacterial infection (weeping) required referral.

**Medication**

- Contact dermatitis may be caused or made worse by sensitisation to topical medicaments.
- Topically applied local anaesthetics, antihistamines, antibiotics and antiseptics can all provoke allergic dermatitis. Some preservatives may cause sensitisation.
  (The *British National Formulary* (*BNF*) is also a good source of information on this subject, with a list of additives for each topical product and excipients that may be associated with sensitization).
- Failed medication need referal

**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

1-All form of dermatitis can cause redness, drying of the skin, and irritation / pruritus to varying degrees. Treatment should include three steps: managing the itch avoiding the irritant (i.e. non pharmacological advice e.g.: wearing gloves to protect the skin) and maintaining the skin integrity.
Further advice could be given regarding the use of ordinary soaps that tend to dry the skin and their alternatives (soap substitutes).
2-The main agents used are emollients and steroid. Emollient used on regular basis to keep the condition under control and the flare-up is treated by short course of steroid.

**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.
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.

**Topical corticosteroids**
1-Two topical steroids are now OTC (a mildly potent steroid: hydrocortisone 1% Cream and ointment, and moderately potent steroid: clobetasone 0.05% cream only but not ointment. They are licensed for the treatment of irritant and allergic dermatitis and mild-to-moderate eczema.

2- The choice between hydrocortisone and clobetasone is based on the severity of the dermatitis and where the dermatitis is, with hydrocortisone being best for areas that have thin skin (e.g., flexures), and clobetasone possibly better for other areas (e.g., hands and palms) or where hydrocortisone has failed to control symptoms.

3- 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).

4- Children aged over 10 years and adults can be treated, and any course must not be longer than 1 week.
Topical 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.
7-Hydrocortisone cream can be applied as frequently as two to four times per day while clobetasone applied twice a day.

**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) and mild-to-moderate eczema.

# Warts and verrucae

Warts and verrucae are caused by a human papilloma virus HPV of the skin and have a high incidence in schoolchildren. Once immunity to the infecting virus is sufficiently high, the lesions will disappear, but many patients and parents prefer active treatment for cosmetic reasons.
HPV infection is very contagious; infection is easily spread from one site to another on an infected person, and from one person to another.

## Patient Assessment

**Age**
Warts can occur in children and adults; they are more common in children and the peak incidence is found between the ages of 12 and 16 years. The peak incidence is thought to be due to higher exposure to the virus in schools and sports facilities.

**Appearance**
Warts appear as raised lesions with a roughened surface that are usually flesh coloured. Plantar warts occur on the weight-bearing areas of the sole and heel (verrucae). They have a different appearance from warts elsewhere on the body because the pressure from the body's weight pushes the lesion inwards, eventually producing pain when weight is applied during walking. Warts have a network of capillaries and, if pared, thrombosed, blackened capillaries or bleeding points will be seen. The presence of these capillaries provides a useful distinguishing feature between callouses and verrucae on the feet: if a corn or callous is pared, no such dark points will be seen; instead layers of white keratin will be present. Warts may occur singly or as several lesions.

**Location**
The palms or backs of the hands are common sites for warts, as is the area around the fingernails. People who bite or pick their nails are more susceptible to warts around them.Warts sometimes occur on the face and referral to the doctor is the best option in such cases. Since treatment with OTC products is destructive in nature, self-treatment of facial warts can lead to scarring and should never be attempted. Parts of the skin that are subject to regular trauma or friction are more likely to be affected, since damage to the skin facilitates entry of the virus. Plantar warts (verrucae) are found on the sole of the foot and may be present singly or as several lesions.

***Anogenital***
Anogenital warts are caused by a different type of human papilloma virus and require medical referral for examination, diagnosis and treatment. They are sexually transmitted and patients can self-refer to their local genitourinary clinic.

**Duration and history**
It is known that most warts will disappear spontaneously within a period of 6 months to 2 years. The younger the patient, the more quickly the lesions are likely to remit. Any change in the appearance of a wart (wart that have grown and changed color) required referral.

**Medical & Medication History**

- Diabetic patients should not use OTC products to treat warts or verrucae since impaired circulation can lead to delayed healing, ulceration or even gangrene. Peripheral neuropathy may mean that even extensive damage to the skin may not provoke a sensation of pain.

- Warts can be a major problem if the immune system is suppressed by either disease (e.g. HIV infection and lymphoma) or drugs (e.g. ciclosporin (cyclosporin) to prevent rejection of a transplant).
- The pharmacist should ask whether any treatment has been attempted already and if so, its identity and the method of use. Commonly, treatments are not used for a sufficiently long period of time because patients' expectations are often of a fast cure.

**When to refer**

Children under 4 years
Changed appearance of lesions: size and colour
Bleeding
Itching
Genital warts
Facial warts
Immunocompromised patients

**Treatment timescale**

Treatment with OTC preparations should produce a successful outcome within 3 months; if not, referral is necessary.

**Management**

**A-** There is a line of treatment aims to reduce the size of the lesion by gradual destruction of the skin. Continuous application of the selected preparation for several weeks or months may be needed and it is important to explain this to the patient if compliance with treatment is to be achieved. Surrounding healthy skin should be protected during treatment.

**1. Salicylic acid**

*Salicylic acid* may be considered to be the treatment of choice for warts; it acts by softening and destroying the skin, thus mechanically removing infected tissue. Preparations are available in a variety of strengths, sometimes in collodion-type bases that help to retain the *salicylic acid* in contact with the wart. *Lactic acid* is included in some preparations with the aim of enhancing availability of the *salicylic acid*. It is a keratolytic and has an antimicrobial effect. Ointments, gels and plasters containing *salicylic acid* provide a selection of methods of application.

**2. Cryotherapy**

Dimethyl ether propane can be used to freeze warts and is available in an application system for home use or by a doctor for adults and children over 4. The wart should fall off about 10 days after application.

**3. Formaldehyde & Glutaraldehyde**

*Their gel preperation can be* used for the treatment of verrucae but considered to have an unpredictable action and are not first-line treatments for warts, though they may be useful in resistant cases.

**B-** Another line of treatment act as immune response modifier

**1. Aldara (imiquimod)**

Aldara indicated for genital warts, superficial basal cell carcinoma and actinic keratosis (a condition caused by too much sun exposure) on the face and scalp. It treats genital and anal **warts** by increasing the activity of the body's immune system.

**2. Molutrex**

Molutrex indicated for treatment of Molluscum contagiosum virus (MCV) (sometimes called water **warts**), which is a highly contagious viral skin condition.

Molutrex contains a stable solution of potassium hydroxide. This agent has been used for many years in medical laboratories as it is capable of breaking down the hard keratin surface of the skin. When painted onto the molluscum blisters this sets off an irritant reaction which stimulates the body's own immune system to attack the virus. The virus is destroyed and the blisters heal.

**C- Podofilox** (active ingredient **podophyllotoxin)** a medicine derived from the roots of the podophyllum plant. The solution is applied directly to genital warts. It **works** by penetrating the wart tissue and preventing the wart cells from dividing and multiplying (It acts by binding to tubulin to prevent the formation of microtubules, which results in mitotic arrest).

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## Scabies

1. Scabies can be defined as a **pruritic skin condition** caused by the mite *Sarcoptes scabiei*. The infestation occurs at all age and it is a common public health problem in poor communities.
2. The mite is transmitted by **direct physical contact**. Mating occurs on the skin surface after which the female mite burrows into the stratum corneum to lay eggs. The faecal pellets she leaves in the burrow cause a local hypersensitivity reaction that trigger an allergic reaction invoking intense itching (This normally takes 15 to 20 days in a primary infestation but can take up to 6 weeks to develop. In subsequent infestations this hypersensitivity reaction develops much more quickly).
3. During the asymptomatic period the mite can be passed onto others unknowingly. The eggs hatch and mature in 14 days after which the cycle can begin again.

### Patient Assessment

**Age**

Scabies infestation can occur at any age from infancy onwards.

**Symptoms**

Severe pruritus, especially at night, is the hallmark symptom of scabies (can lead to loss of sleep). The itch tends to be generalised rather than in specific areas.

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 include the web space of the fingers and toes, wrists, armpits, buttocks and 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.

**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, (e.g. other family members). In addition history is required to exclude possible allergic contact dermatitis.

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

***Notes:***
- 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.
- Treatment failure may have occurred if itching has not ceased after 3 weeks or if new area of itching continues to appear 7-10 days after treatment. In this situation patient should be referred to the doctor (Treatment failure should not be diagnosed before six weeks have elapsed).

**When to refer**
Babies and children under 2 years
Infected skin
Treatment failure
Unclear diagnosis

**Management**
Two treatments are recommended, 7 days apart. The treatment must apply 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.

**1. Permethrin (5% cream)**
*Permethrin cream* is an effective scabicide treatment. 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 (best time immediately before bed time). 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.

**2. 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.

**3. Benzyl benzoate (25% in an emulsion basis):**

Benzyl benzoate has been used to treat scabies for many years. It has now been superseded by more effective products. It has lower efficacy, and causes skin irritation and a transient burning sensation in approximately 25% of patients. This is usually mild but can occasionally be severe in sensitive individuals. In the event of a severe skin reaction the preparation should be washed off using soap and warm water. It is also irritating to the eyes, which should be protected if it is applied to the scalp. In addition, benzyl benzoate has an unpleasant smell. It must apply over the whole body; repeat without bathing on the following day and wash off 24 hours later; a third application may be required in some cases.

**4. Crotamiton (Eurax®):**

Crotamiton has antipruritic and weak scabicidal activity. It is recommended for controlling residual itching after treatment with a more effective scabicide. It required application only two to three times a day.

**Notes**:

The treatment should be applied to cool, dry skin.

All the family members should be treated, preferably on the same day because they may be infested but symptomless.

The scabies mite can live only for around 1 day after leaving its host and transmission is almost always caused by close personal contact. 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.

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# Psoriasis

Psoriasis is an immune-mediated disease, immune system and genetics play major roles in its development. Usually, something triggers psoriasis to flare. The skin cells in people with psoriasis grow at an abnormally fast rate, which causes the buildup of psoriasis lesions.

Psoriasis is not contagious. It is not something you can "catch" or that others can catch from you. Psoriasis lesions are not infectious.

## What you need to know

### 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. The scalp is often involved. Psoriasis can affect also the flexor surfaces, the groin area, palms, soles and nails.

### Severity

Severity of psoriasis is based on how much of the body is affected by psoriasis. The entire hand (the palm, fingers and thumb) is equal to about 1 percent of your body surface area.
However, the severity of psoriasis is also measured by how psoriasis affects a person's quality of life. For example, psoriasis can have a serious impact on one's daily activities even if it involves a small area, such as the palms of the hands or soles of the feet.

**Diagnosis**
There are no special blood tests or tools to diagnose psoriasis. A dermatologist or other health care provider usually examines the affected skin and determines if it is psoriasis.
Doctor may take a piece of the affected skin (a biopsy) and examine it under the microscope. When biopsied, psoriasis skin looks thicker and inflamed when compared to skin with eczema.
Doctor also will want to learn about the family history. About one-third of people with psoriasis have a family member with this disease.
In 7% of people who have psoriasis there is an associated arthritis, which usually affects a single joint but can be more severe and identical to rheumatoid arthritis.

**Types of Psoriasis**
**Plaque Psoriasis**
Plaque psoriasis is the most common form of the disease and appears as raised, red patches covered with a silvery white buildup of dead skin cells. These patches or plaques most often show up on the scalp, knees, elbows and lower back. They are often itchy and painful, and they can crack and bleed.

**Guttate Psoriasis**
Guttate psoriasis is 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.

**Inverse Psoriasis**
Inverse psoriasis shows up as very red lesions in body folds, such as behind the knee, under the arm or in the groin. It may appear smooth and shiny. Many people have another type of psoriasis elsewhere on the body at the same time.
**Pustular Psoriasis**
Pustular psoriasis in characterized by white pustules (blisters of non-infectious pus) surrounded by red skin. The pus consists of white blood cells. It is not an infection, nor is it contagious. Pustular psoriasis can occur on any part of the body, but occurs most often on the hands or feet.

**Erythrodermic Psoriasis**
Erythrodermic psoriasis is a particularly severe form of psoriasis that leads to widespread, fiery redness over most of the body. It can cause severe itching and pain, and make the skin come off in sheets. It is rare, occurring in 3 percent of people who have psoriasis during their life time.

**Medication**
Some medications may cause a flare of psoriasis as lithium, beta-blockers, non-steroidal anti-inflammatory drugs and anti-malarials.

**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 (as some treatments are teratogenic).

**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.

***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). 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 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 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.

References:


1. Symptoms in the Pharmacy 8th Edition, 2018.
2. Community Pharmacy a guide to managment of minor ailements 1st Edition, 2018.