

Eczema on hands and feet

What is eczema?

Eczema is a very nonspecific term. It is often used as being synonymous with dermatitis which simply means inflammation of skin. The different appearance, descriptions and distribution on the hands and feet can be confusing but also give clues about aetiology.

For further information, see the separate [Contact and Occupational Dermatitis](#) article.

Description

Acute pompholyx (dyshidrotic) eczema^[1]

- On the palms or soles it often starts as tiny vesicles deep under the skin, described as like 'sago'. If severe, the vesicles may coalesce to form tense bullae. In time, these burst to release exudate to the surface, with subsequent formation of erosions. Eventually, crusting occurs followed by healing or new lesions breaking out.
- Severe pompholyx around the nail folds may cause nail dystrophy, resulting in irregular ridges and chronic paronychia.

Subacute eczema on palms and soles

- This presents as erosions, crusting and some exudate; however, often the vesicles are not seen.

Chronic eczema on palms and soles

- This results in excessive scaling or keratinisation.
- Thick keratin or scale forms, which prevents easy movement of the hands and fingers, resulting in painful fissures.

Dorsum of hands or feet

- Acute or subacute eczema presents as weeping, erosions and crusting.
- Chronic eczema is dry, scaling and may show chapping with shallow erosions if contact with irritants has occurred.

Causes of eczema on the hands and feet (aetiology) ^[2]

Eczema on the hands and feet may be classified as endogenous or exogenous, although the aetiology may be mixed.

Exogenous eczema

Contact irritant dermatitis may result from any weak acid or alkali, including detergents, shampoos and cleaning materials. It may result from foodstuffs, oils and greases. These may affect the dorsum of the hand first; however, prolonged use over months or years leads to involvement of the palms.

Contact allergy is due to a type IV hypersensitivity reaction and may be precipitated by such substances as formaldehyde, rubber compounds and preservative in creams or cutting oils. The eczema should only occur at the site of contact. This will be the soles from rubber in shoes but all over the hands from creams.

Endogenous eczema

Endogenous eczema occurs when internal factors that are usually unknown precipitate the eczema. Pompholyx eczema is usually endogenous but is more common in hot climates. Atopic individuals are susceptible to hand eczema, especially if exposed to irritants.

Treatment and management for eczema on the hands and feet ^[3] ^[4]

- Irrespective of the cause, continued contact with irritant substances will make any hand or foot eczema worse. This may mean taking time off work for engineers, cooks, hairdressers and others. Sometimes a change of employment has to be considered.

- Treat blisters, exudate or erosions by soaking the affected part in potassium permanganate solution four-hourly until it is dry. Potassium permanganate is available as crystals or in a 1:1,000 solution. The strong solution is purple in colour but a few drops should be put into a basin to produce a light pink colour. If the solution is too strong, brown staining will occur.
- Apply a potent steroid cream or ointment twice a day to gain control of the condition. The evidence for long-term maintenance therapy is limited and there is a risk of scarring due to inhibition of the repair system of the stratum corneum. Treatment should therefore be limited to six weeks unless necessary. A potent form is required for such tough skin, especially the palms and soles. **No steroid cream will suppress the eczema if the causative agent is not removed.**
- Steroid creams may be applied under occlusion. There is some doubt as to whether the usual twice-daily application of steroid creams is superior to just once-daily application^[5]. The latter may be more convenient and cheaper.
- Topical pimecrolimus and tacrolimus are licensed for the treatment of atopic eczema not controlled by maximal topical corticosteroid treatment or where corticosteroid side-effects have occurred (especially skin atrophy).
- Topical pimecrolimus is recommended for moderate atopic eczema on the face and neck of children aged 2-16 years. Topical tacrolimus can be used for moderate-to-severe atopic eczema in adults and in children aged over 2 years. They are normally prescribed under supervision from a dermatologist^[6] ^[7].
- Hyperkeratotic plaques may be treated with 2-5% salicylic acid ointment. Polythene occlusion overnight improves effectiveness but can irritate normal skin^[8].
- Avoid soap and detergents, and wash hands using a moisturiser such as aqueous cream or emulsifying ointment. Regularly apply a moisturiser for dry skin between steroid applications. Protect hands when doing wet work, with rubber or PVC gloves, or use cotton gloves for dry work.

- Oral alitretinoin, a retinoid, is licensed for the treatment of chronic refractory hand eczema. It is contra-indicated in uncontrolled hyperlipidaemia, uncontrolled hypothyroidism and hypervitaminosis A^[9] ^[10] .
- Systemic corticosteroids have been used in short courses for refractory eczema. Likewise, ciclosporin is occasionally used off-label for refractory hand eczema if first-line and second-line treatment have failed.
- Phototherapy with ultraviolet B (UVB) or psoralen with ultraviolet A (PUVA) can be used in refractory cases of hand eczema, although prolonged use should be avoided, as this increases the risk of skin cancer.

A Cochrane review of interventions for hand eczema found^[11] :

- Topical corticosteroids and UV phototherapy were two of the major standard treatments, but evidence is insufficient to support one specific treatment over another.
- The effect of topical calcineurin inhibitors (eg, pimecrolimus, tacrolimus) is not certain.
- Alitretinoin is more effective than placebo in controlling symptoms, but advantages over other treatments need evaluating.

Most findings were from single studies with low precision, so should be interpreted with caution.

Prognosis

If the offending irritant can be avoided then gradual improvement may occur over about six months but some will still have troublesome eczema.

If exposure continues then the outlook is very poor. Cement dermatitis is due to the chromium content and it produces a very nasty dermatitis that often continues even after stopping exposure.

When to refer

Most patients with eczema on the hands and feet should be patch tested to establish a cause. Diagnosis of irritant and contact dermatitis on clinical grounds alone is unreliable.

An expert opinion may also be requested when an important decision has to be taken, such as change in occupation.

Further reading

- [National Eczema Society](#)
- [Hand and foot eczema](#); Primary Care Dermatology Society, 2014

References

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