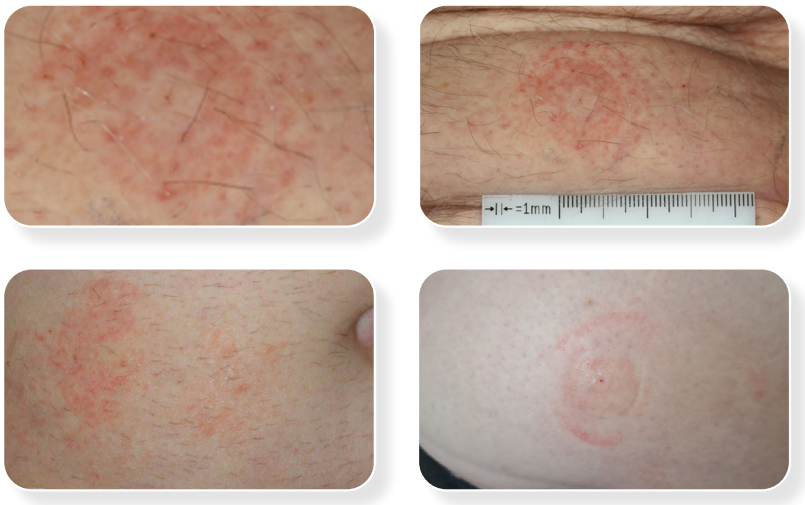
Diagnosis of Dermatitis

Characteristics

- **Dermatitis**: localized skin inflammation caused by irritation, allergens, or immune responses to infusion or delivery system.[1]
- Often presents as redness, **swelling, itching, or a rash** around the injection site and may be accompanied by dryness or flaking. In severe cases, blisters or erosions can develop.[1]
- Symptoms can vary in severity from mild irritation that resolves on its own to persistent inflammation requiring medical treatment.[1]
- **Allergic contact dermatitis** occurs in sensitized individuals who develop an immune response after repeated contact with specific allergens. It typically appears at the site of allergen contact, but the rash can spread beyond the area of contact.
- Patch testing remains the definitive gold standard for diagnosing allergic contact dermatitis.
- **Irritant contact dermatitis**: more common, and may include erythema, scaling, edema, vesiculation, and erosions in acute cases. Erythema, lichenification, hyperkeratosis, and fissures in chronic cases.
- Allergic and irritant reactions may be indistinguishable based solely on visual assessment, as both can present with characteristics similar to eczema.

Causes

- Common triggers of dermatitis include the medication itself, the adhesive used for securing infusion devices, or improper aseptic techniques.[1]



1. Forkel S, Buhl T. Allergic Contact Dermatitis After Injection of Local Anesthetic. *J Allergy Clin Immunol Pract*. 2020;8(6):2060-2061.

Other Considerations Localized vs. Non-localized Dermatitis

- **Localized and geometric** shape corresponding to what was contacting the skin → **probable contact dermatitis**





- **Not localized** to injection site → **broad differential diagnosis**



Expert insights video. Click to view
Lynne H. Robertson, Dermatologist

Prevention and Management of Dermatitis



Expert insights video. Click to view
Alexis Truax, RN
Debra Johnston, RN

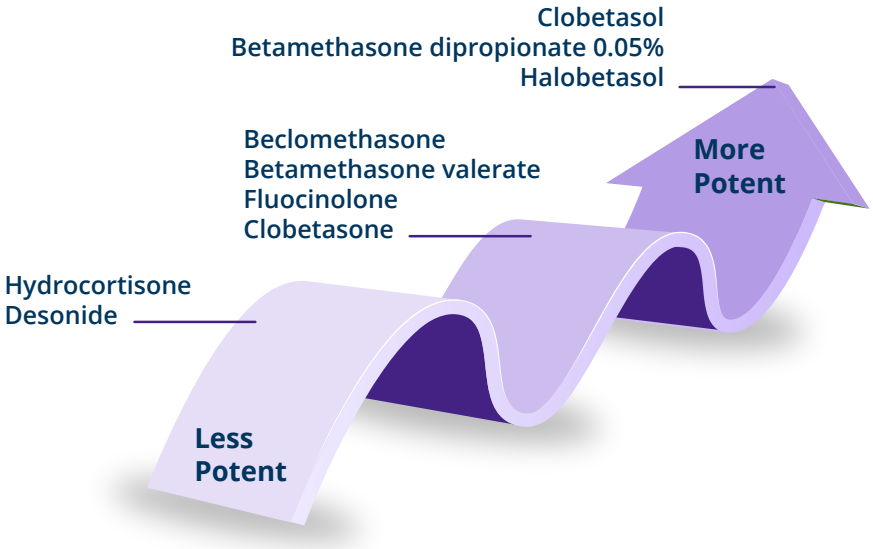
Prevention

- Infusion-site dermatitis can often be prevented by using hypoallergenic adhesives, barrier films, rotating injection sites and maintaining strict aseptic techniques during infusion setup.[1]

Management

- Management of dermatitis involves **identifying and removing the irritant** (e.g., switching adhesives or adjusting medication delivery), applying **topical treatments like corticosteroids or emollients, and maintaining proper hygiene** at the site.[1]
- For mild cases, emollients and topical steroids may suffice.
  - After removal, hydrocortisone cream or ointment can be applied to the affected area for a few days to reduce inflammation and itching.
- Severe or recurrent reactions warrant consideration of alternative infusion methods or materials and referral to patch testing.
- Consider use of skin barrier products to create a protective layer between the skin and the adhesive/cannula (e.g., 3M Cavilon No Sting Barrier Film, Skin-Prep, AllKare wipes).
- If dermatitis does not improve with treatment after 2 days or is associated with other symptoms, consider consultation with dermatologist.

Topical Corticosteroids



1. Forkel S, Buhl T. Allergic Contact Dermatitis After Injection of Local Anesthetic. *J Allergy Clin Immunol Pract*. 2020;8(6):2060–2061.

Expert Insights: Management of Itching

+/- Redness, scaling, swelling and **localized** to injection site or adhesive site → likely non-infectious injection-site reaction/contact dermatitis

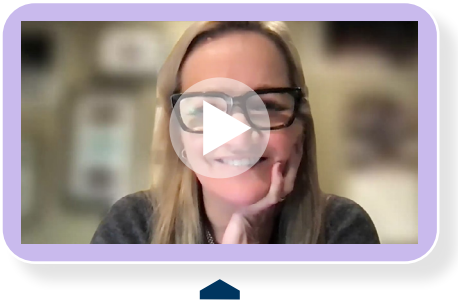
Consider

- Mid-high potency topical corticosteroid
  - Clobetasol propionate 0.05% or betaderm (which contains betamethasone) 0.1% cream 1–2 times daily
- Investigating cause +/- referral to dermatology

Not localized or associated with fever +/- skin changes/pain → possible infection

Consider

- Antibiotic
  - Initiate similar oral/IV antibiotic regimen for cellulitis, such as cephalosporin (cephalexin) or penicillin (amoxicillin or cloxacillin), depending on criteria
- Arranging to see patient/referral to dermatology/ infectious diseases



Expert insights video. Click to view
Lynne H. Robertson, Dermatologist

Expert Opinion, Dr. Lynne H. Robertson, October 2024.
IV, intravenous.

Itching at Site: Care Plan

+/- Redness, scaling, slight swelling

Consider
1. Topical steroid

Possible irritant reaction or allergic reaction to adhesive/dressing/other agent contacting skin

Consider
1. Changing cannula site
2. Patient to see MD if not getting better within 2 days or earlier if fever, increasing redness, blisters, pain
3. Stopping any suspected causative agents – wipes, creams, adhesives, solutions

Plan of Action:

Roles and Responsibilities: