Exogenous eczema

Exogenous (Environmental)

1. **Contact dermatitis:**
   - Allergic
   - Irritant
2. **Photodermatitis.**
   - Phototoxic
   - Photoallergic
3. **Infective dermatitis**

Contact Dermatitis

- An exogenous substance (solid, liquid, gas) When contact with the skin cause an inflammatory skin reaction
- The substance act as irritants or allergens
- The contact dermatitis may cause acute, subacute or chronic dermatitis.
- Very common problem
- E.g. leather–shoe dermatitis
- Nickel–earlobes, neck, wrist, periumblical
- **History of contact with some chemical substance is very important**

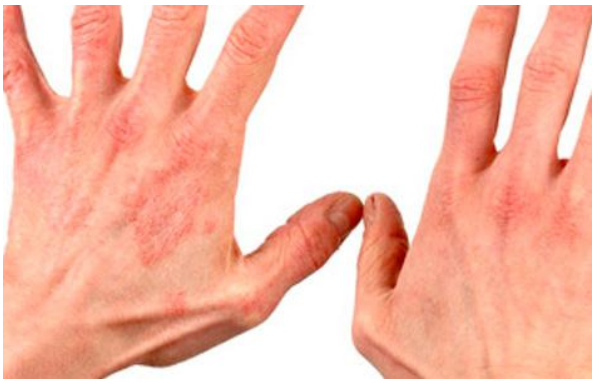
Irritant Contact Dermatitis:

Irritation of the skin is the most common cause of contact dermatitis, it accounts more than 80% of all cases.

Causes

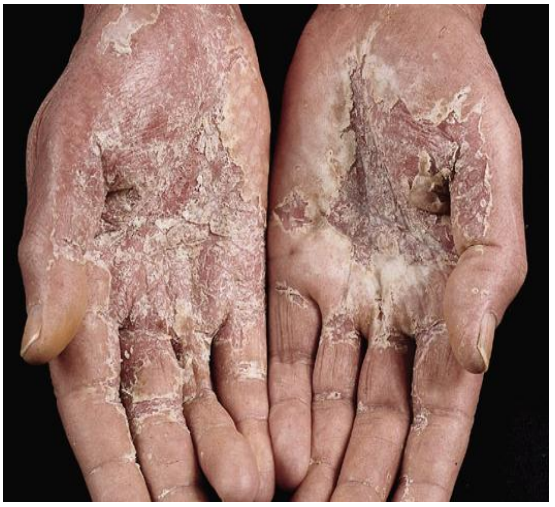
- The epidermis is a thin cellular barrier with an outer layer composed of dead cells in a water-protein-lipid matrix.
- Any process that damages any component of this barrier will compromises its function and **a non- immunological eczematous response may result**.
- **Strong** irritants cause an **acute** reaction after brief contact and the diagnosis is usually obvious.
- **Weak** irritants may need **prolonged** exposure, sometime over years, to cause dermatitis.

- There is a wide range of individual susceptibility to develop irritant contact dermatitis which include; those with **dry, fair** skin and past or present **atopic** dermatitis double the risk of irritant hand eczema.
- Contact dermatitis may occur as an occupational disease.
- **Site** of exposure gives a clue about the causative substance; such as hair dies, make up, detergents, perfumes, clothes, shoes, jewelleries...Etc.
- People liable for contact dermatitis are house wives, doctors, barbers, building workers...Etc.



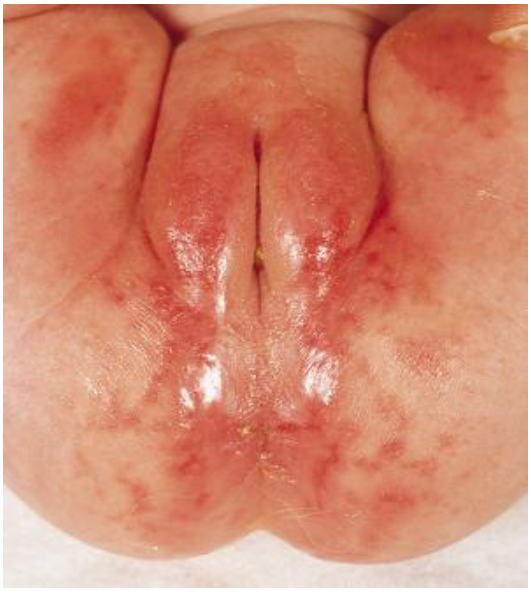
Housewife's dermatitis

- This results from repeated exposures to toxic or subtoxic concentrations of offending agents (alkaline detergents).
- Repeated rubbing of the skin, prolonged soaking in water, fasters the evolution of dermatitis.
- Present in form of itching, dyness, roughness, scaliness & fissuring.
- Mx ??



Cement Contact Dermatitis

- Is the hand eczema seen in bricklayers.
- In these persons, hand eczema is usually a **combination** of chronic **irritant** contact dermatitis (alkaline medium of cement, sand, rubbing) and **allergic** (chromate).
- Rx: (same rx) with stopping exposure or using gloves.



Napkin (Diaper) Dermatitis

- This is a primary irritant effect of body fluids on the skin. The eruption is essentially **confined** to the area in contact with the diaper.
- It is very common in infancy (but could affect old people who use diapers).
- Caused by contact with urine & faeces (bacteria in the last split urea (in urine) to ammonia which is very irritant.
- The area (especially convex areas) is mildly to intensely erythematous, macerated ± papules, vesicles& ulcers.

Rx.

- Avoid using occlusive diapers
- Keep the area clean &dry
- Using abarrier cream such as zinc oxide
- Use mild topical steiod along with topical antifungal

DDx:

1- Candidiasis which often accompany it.
2- Seborrhoeic dermatitis.
3- Tinea cruris.
4- Bacterial infections
5- Inverted psoriasis.

Investigation ICD:

Patch test with irritants is not helpful and may be misleading.
So diagnosis mainly by history of contact with substance plus the lesion of eczema

Treatment of contact dermatitis in general

- **Prevention** is better than cure, because irritant eczema once started, it can persist **for long time even after the contacts has ceased** and despite the vigorous use of emollients and topical steroid.
- Management is based upon **avoidance** of the irritants responsible for the condition which is often not possible and the best is to **reduce** the exposure by the use **of protective gloves and clothing, and barrier vasaline**
- Washing facilities at work should be good.
- Dirty hands should not be cleaned by harsh solvents.
- Topical steroid and in severe cases systemic steroid.

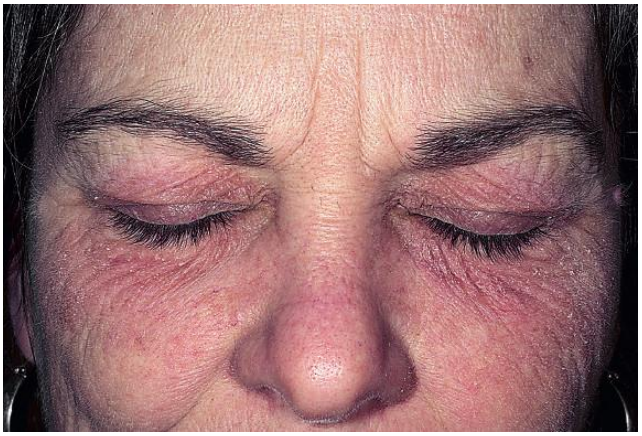
Allergic contact dermatitis:

It is a delayed (type IV) hypersensitivity reaction characterized by:

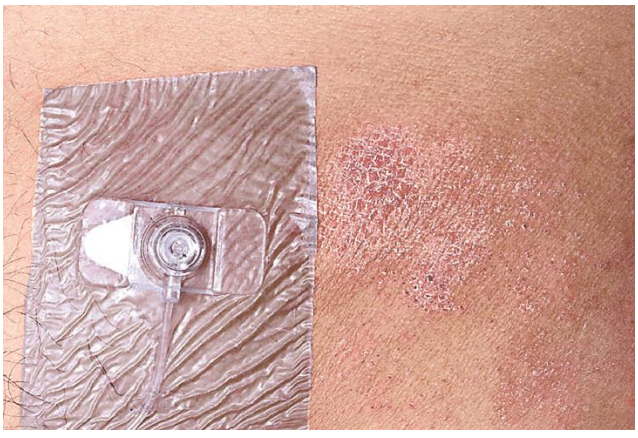
- Its specific to one chemical and its close relatives.
- After allergy has been established, all area of the skin will react to the allergens.
- Sensitization persists indefinitely.
- Desensitization is not possible.

Comparison between irritant & allergic and contact dermatitis:

	Characteristic points	Irritant CD	Allergic CD
1	People at risk	Every one	**Genetically predisposed**
2	Mechanism	Non- immunological	**Delayed hypersensitivity (type-IV) reaction**
3	No. of exposure	Few to many (sensitization)	**No need for previous exposure**
4	Nature of substance	Organic solvent, soap & detergent	**Low molecular weight hapten e.g. Nickel, fragrance, hair dye**
5	No. of compound	Many	**Few**
6	Concentration of substance	Usually high	**May be very low**
7	Distribution	Localized	**May spread beyond area of contact**
8	Onset	Gradual	**Rapid**
9	Investigation	Non	**Patch test**
10	**Avoidance**	**Decreasing exposure is useful.**	**Total avoidance of causative agent is necessary.**



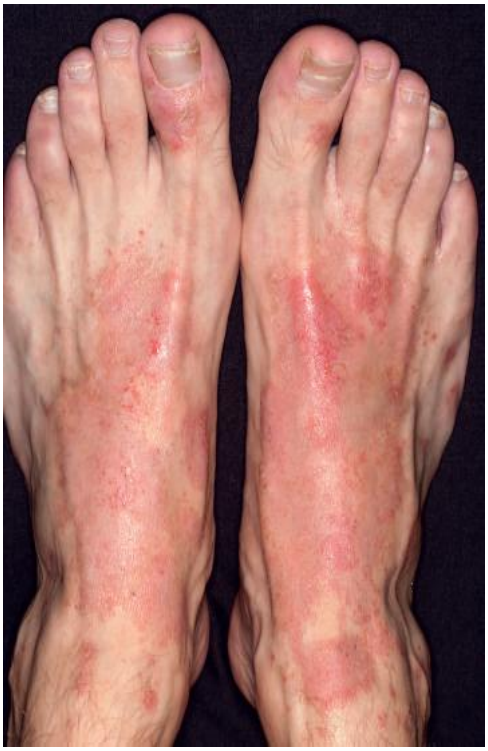
Eye (cosmetic allergy)



Allergic contact dermatitis
Adhesives allergy

Shoe allergy:

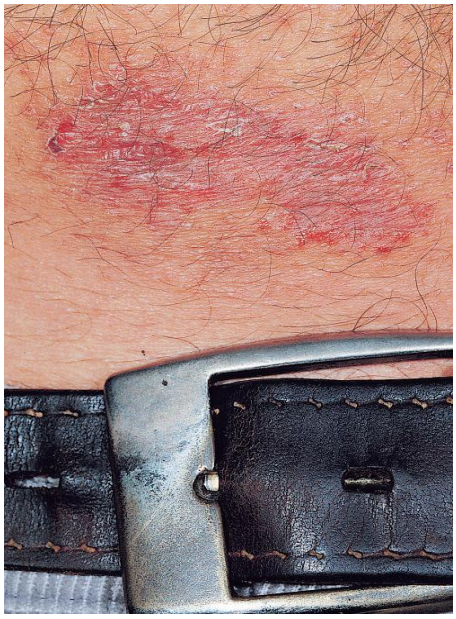
- More on the **dorsum**
- The interdigital spaces are spared, in contrast to tinea pedis.
- Inflammation is usually bilateral, but unilateral involvement does not preclude the diagnosis of allergy.
- The thick skin of the **soles** is more resistant to allergens



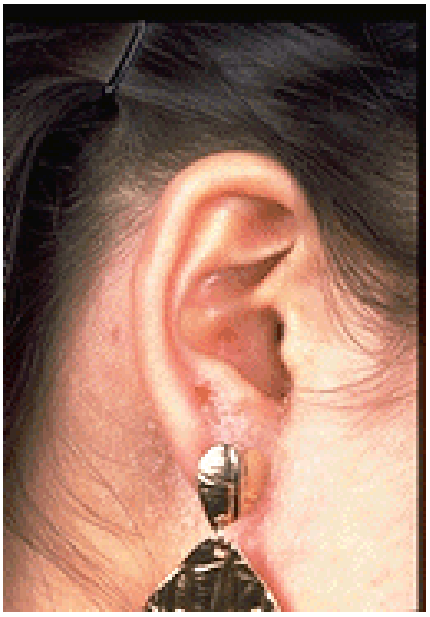
Investigation:

Patch test

- Used to detect the causative agents in ACD
- Application of known allergens to the back of & left under occlusion to be seen after 48 & 96 hrs.
- A positive patch test shows erythema and papules, as well as possibly vesicles.



Nickel ACD



Treatment:

- Avoid completely the offending allergen.
- Symptomatic treatment of eczematous reaction by topical steroid.
- Systemic steroid is used in severe cases.