TOPICAL THERAPY

ADVANTAGES - increased dose of medication to affected area.
- reduced systemic side effects and toxicity

DISADVANTAGES - takes time
- may be greasy or messy
- may have different preparations for different sites leading to confusion.
ABSORPTION THROUGH SKIN AFFECTED BY:

• Skin thickness
• Skin barrier function
• Skin hydration
• Molecule size
• Whether lipophilic or not
• Concentration
• Base may be altered to affect absorption
VEHICLES

VERY IMPORTANT
SOLUTION – usually water containing a dissolved powder

- Normal saline
- Potassium permanganate solution
- drying
LOTION – thicker may contain oil as well as water or alcohol

• Corticosteroid scalp lotion e.g. Locoid Scalp lotion (alcohol based)

• Corticosteroid lotion e.g. Betnovate lotion (water based with some oil)

• May have some moisturising ability
CREAM – an emulsion of water and oil phases

- Oil in water emulsion e.g. Aqueous Cream BP
- Water in oil emulsion e.g. healthE Fatty Cream, Oily Cream BP

- Require preservatives
- Variable moisturising ability
OINTMENTS – totally oil or grease.

- Don’t contain preservatives

- More occlusive - better penetration of active ingredient in to skin

  - better emollients
OTHERS

• GEL

• PASTE

• POWDER

• FOAM

• (TRANSDERMAL PATCH)
QUANTITY

- 30 gm required to cover an adult
- Fingertip unit (0.5 gm)
SPECIAL CIRCUMSTANCES

• Premature babies – barrier function impaired

• New born babies – barrier function virtually same as adults

• Babies and infants – surface area to body mass ratio much higher than in adults and therefore much more systemic absorption

• Pregnancy and lactation
ARE THERE ANY SPECIAL RESTRICTIONS ON THESE?

PRESCRIPTIONS

YOU CAN'T EAT... DRINK, SMOKE OR MAKE LOVE.

PRESCRIPTIONS

TAKE EM YOURSELF
TOPICAL CORTICOSTEROIDS
BENEFITS AND PITFALLS
TOPICAL CORTICOSTEROIDS

• Based on naturally occurring hydrocortisone produced by the adrenal gland and necessary for life.

• Excess production causes Cushing’s disease

• Lack of production causes Addison’s disease
TOPICAL CORTICOSTEROIDS

• Hydrocortisone first medically commercially available in the 1950’s.

• Subsequently the molecule has been altered to produce multiple topical corticosteroids, all varying in their degree of potency.

• Large selection available now
TOPICAL CORTICOSTEROIDS

• Class 1 Very potent or superpotent (up to 600 times as potent as hydrocortisone)

• Clobetasol propionate (Dermol™ cream/ointment/scalp lotion)

• Betamethasone dipropionate (Diprosone™ OV cream/ointment)
TOPICAL CORTICOSTEROIDS

• **Class 2 Potent (100-150 times as potent as hydrocortisone)**

• Betamethasone valerate (**Beta™** cream/ointment/scalp solution, **Betnovate™** lotion/C cream/C ointment, **Fucicort™** cream)

• Betamethasone dipropionate (**Diprosone™** cream/ointment, **Daivobet® 50/500** ointment/gel)

• Diflucortolone valerate (**Nerisone™** cream/fatty ointment)

• Hydrocortisone 17-butyrate (**Locoid™** lipocream/ointment/scalp lotion/Crelo topical emulsion/)

• Mometasone furoate (**m-mometasone™** cream/ointment **Elocon™** cream/lotion/ointment)

• Methylprednisolone aceponate (**Advantan™** cream/ointment)
TOPICAL CORTICOSTEROIDS

- Class 3 Moderate (2-25 times as potent as hydrocortisone)

- Clobetasone butyrate (Eumovate™ cream)

- Triamcinolone acetonide (Aristocort™ cream/ointment, Viaderm KC™ cream/ointment, Kenacomb™ ear drops)
TOPICAL CORTICOSTEROIDS

• **Class 4 Mild**

• Hydrocortisone (DermAid™ cream/soft cream, DP™ lotion-HC 1%, Skincalm™, Lemnis™ Fatty Cream HC, Colifoam™ rectal foam 10%), Pimafucort™ cream/ointment, Daktacort™ cream, Micreme™ H cream, Resolve Plus™ 0.5%, 1% cream
USES OF TOPICAL CORTICOSTEROIDS

• Have revolutionised the treatment of eczema/dermatitis

• Helpful in psoriasis

• Used in a wide variety of inflammatory dermatoses.
INTERNAL SIDE EFFECTS

• **Adrenal gland suppression** – Topical steroids can suppress the production of natural steroids, which are essential for healthy living. Stopping the steroids suddenly may then result in illness.

• **Cushing syndrome** – If large amounts of steroid are absorbed through the skin, fluid retention, raised blood pressure, diabetes and many other side effects may result.
LOCAL SIDE EFFECTS

• Skin thinning (atrophy) and stretch marks (striae).
• Easy bruising and tearing of the skin.
• Perioral dermatitis (rash around the mouth).
• Enlarged blood vessels (telangiectasia).
• Susceptibility to skin infections, eg impetigo, herpes simplex, malassezia folliculitis and molluscum contagiosum.
• Disguising skin infection, eg tinea incognito.
LOCAL SIDE EFFECTS

- **Allergy** to the steroid cream.

- Delaying diagnosis and treatment of **skin cancer**, because of the anti-inflammatory action of topical steroid. Topical steroids do not have an anti-tumour effect.

- Aggravating certain inflammatory skin conditions, particularly **pustular psoriasis**, **steroid acne** and **steroid rosacea**.
BASES/VEHICLES

• Lotions are easy to apply.

• Creams rub in well.

• Ointments may be most effective for dry lesions.

• Gels and solutions are useful in hairy areas or for a drying effect.
Skin thinning (atrophy) and stretch marks (*striae*)
Easy bruising and tearing of the skin
Perioral dermatitis (rash around the mouth).
Enlarged blood vessels (telangiectasia)
Disguising skin infection, eg *tinea incognito*. 
PRINCIPLES OF TREATMENT

• Use potent ones to get the condition under control. (Best used short term)

• Use milder ones for ongoing treatment

• Swap between the two depending on progress.
PRINCIPLES OF TREATMENT

• Don’t be afraid to use them

• Appropriate use provides great relief

• Be aware of, but don’t be ‘overawed’ by potential side effects.

• Can be used in secondarily bacterially infected dermatitis as long as antibiotics given
JUST A LOCAL PLEASE, I WANT TO TWEET THIS.
EMOLLIENTS

(Moisturisers)
SOFTEN SKIN/ADD MOISTURE

• Used to correct dryness and scaling

• Help fine lines and wrinkles

• Help mild irritant contact dermatitis
CAUSES OF DRY SCALY SKIN

• Dry air e.g. low winter humidity
• Exposure to the wind
• Over-washing
• Reduction in production of natural moisturisers (sebum) in old age
• Diuretic medications
• Underactive thyroid gland
• Inherited factors
• A skin condition such as atopic dermatitis (eczema), psoriasis or ichthyosis
• Any combination of these
## TYPES OF MOISTURISERS/EMOLLIENTS

<table>
<thead>
<tr>
<th>OCCLUSIVES</th>
<th>HUMECTANTS</th>
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<tbody>
<tr>
<td>• provide a layer of oil on the surface of the skin to slow water loss and thus increase the moisture content of the stratum corneum.</td>
<td>• are substances introduced into the stratum corneum to increase its water holding capacity.</td>
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OCCLUSIVE MOISTURISERS

• Bath oils
• Lotions
• Creams
• Ointments
HUMECTANTS

- Glycerine
- Urea
- Alpha hydroxyl acids
EMOLLIENTS

• Alpha Keri, BK, DP, Hydroderm lotions
• Glyc. 10% in Aqueous or sorbolene cream
• (Urea 10% creams)
• QV, Cetaphil, Aveeno, etc. creams
• Lipobase, healthE Fatty Cream
• Lipobase Repair
• WSP, Emuls. Oint
• Bath oils