

# **TOPICAL CORTICOSTEROIDS**



**- NATALIE AGUDELO, JESSICA MACHADO & WENDY MORAN**



# **TOPICAL CORTICOSTEROIDS- WHAT ARE THEY?**

- Topical Corticosteroids are a class of steroid hormones that are produced in the adrenal cortex.
- The adrenal cortex produces hormones that are vital to life, such as cortisol (which helps regulate metabolism and helps your body respond to stress) and aldosterone (which helps control blood pressure).
- Steroid medicines are man-made and are similar to the natural hormones made in the body. The type of steroids used to treat disease are called corticosteroids.
- They are DIFFERENT to the anabolic steroids which some athletes and bodybuilders use. These have very different effects.



# WHEN ARE TOPICAL CORTICOSTEROIDS USED?

- **Topical corticosteroids** are widely **used** to treat a variety of dermatologic conditions including contact dermatitis, atopic dermatitis, eczema, insect bites, localized burns, psoriasis and sunburns.

**Corticosteroids are involved in a wide range of physiological systems in the body such as:**

- Stress response
- Immune Response
- Regulation of Inflammation





# MECHANISM OF ACTION - THE INFLAMMATORY PROCESS OF THE SKIN

- Topical corticosteroids have anti-inflammatory, antipruritic (anti-itch) and vasoconstrictive properties.
- The mechanism of the anti-inflammatory activity of the topical steroids, in general, is unclear. However, corticosteroids mainly affect the inflammatory process. When skin is exposed to allergens that cause inflammation, the immune system releases inflammatory- causing chemicals such as prostaglandins and leukotrienes to the affected site.

Topical corticosteroids reduce inflammation by:

- Interfering with the skin cells DNA to stop the production of lipocortins. Without lipocortins, arachidonic acid is not produced and therefore there is a decline in the production of chemicals that causes inflammation.
- Constricting blood vessels to reduce redness, warmth and swelling.
- Topical corticosteroids alter the function of white blood cells and antibodies by suppressing their function. These cells are involved in allergic reaction. By interfering with the immune system cells, the body has a harder time fighting off infections and removing toxins.

# BRAND NAMES/ GENERIC NAMES

## NON PRESCRIPTION

Generic Name	Brand Name
hydrocortisone	Aveeno Anti-Itch, Bactine, Cortaid, Dermolate

## PRESCRIPTION- LOW STRENGTH

Generic Name	Brand Name
hydrocortisone	Synacort

## PRESCRIPTION- MEDIUM STRENGTH

Generic Name	Brand Name
betamethasone	
flurandrenolide	Cordran
fluticasone	Cutivate
hydrocortisone	Westcort
triamcinolone	Kenalog

## PRESCRIPTION- HIGH STRENGTH

Generic Name	Brand Name
betamethasone	
fluocinonide	Lidex
triamcinolone	Kenalog

## PRESCRIPTION- VERY HIGH STRENGTH

Generic Name	Brand Name
betamethasone	Diprolene
clobetasol	Temovate



# MAJOR ADVERSE EFFECTS & REACTIONS

\*Topical corticosteroids **rarely** cause serious side effects if they are used as instructed.

Things that increase your risk of getting side effects include:

- The potency (strength) of the topical corticosteroid
- The length of treatment – the longer you use a topical corticosteroid, especially on a daily basis, the greater the risk.
- The area of skin being treated – the larger the area you are treating with a topical corticosteroid, the greater the risk.
- Age- young children and people aged over 70 have a greater risk because their skin tends to be thinner than other age groups.





## LOCAL SIDE EFFECTS

### (more common)-

Usually occur on the face, in folds of skin and in areas that have been treated many times during the past months or years.

- Burning or stinging of the skin – this is a common side effect that usually occurs when you start treatment; it improves as your skin gets used to the medication
- Worsening of a pre-existing skin infection
- Thinning of the skin – this can make the affected skin more vulnerable to damage (example: bruising)
- Rosacea ( A condition that causes the face to become red and flushed)
- Changes in skin color – this is usually more noticeable in people with black or brown skin
- Excessive hair growth on the area of skin being treated
- Contact Dermatitis (skin irritation)
- Stretch Marks

## SYSTEMIC SIDE EFFECTS -

Occur because the steroids become absorbed into the blood stream and affect other parts of the body.  
(example: the adrenal gland)

Systemic side effects are usually mild but can include:

- swelling of the legs due to a build-up of fluid
- Hypertension
- Hypocalcemia (A drop in calcium levels in the body that can cause symptoms such as muscle cramps, shortness of breath and seizures.)
- Bone damage
- Decreased growth in children
- Rapid weight gain
- Changes to the skin, such as thinning of your skin
- Mood changes, such as feeling depressed or anxious



# WHAT TO LOOK FOR IN A TOPICAL CORTICOSTEROID

**\*\*When choosing a topical corticosteroid, it is crucial to consider the area of the body to which the therapy will be applied.**

**\*The fingertip unit (FTU) scale describes the amount of ointment from a 5 mm diameter nozzle from the distal skin crease to the tip of the index finger as 1 FTU.**

## RECOMMENDED USAGE:

Table 1 Estimation of FTUs of Topical Corticosteroid Required (Based on Age)				
Anatomic Area	FTU(s) Required to Adequately Cover Anatomic Area			
	3-6 Months	1-2 Years	3-5 Years	6-10 Years
Face and Neck	1	1.5	1.5	2
Arm and Hand	1	1.5	2	2.5
Leg and Foot	1.5	2	3	4.5
Anterior Trunk	1	2	3	3.5
Posterior Trunk and Buttocks	1.5	3	3.5	5

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