

ECZEMA



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INTRODUCTION:

Eczema, also known as atopic dermatitis, is a chronic skin condition that is characterized by inflammation, dryness, itching, and rash. It is a non-contagious condition that often occurs in individuals with a personal or family history of allergies, asthma, or hay fever.

ETIOLOGY/CAUSES:

- **Genetics:** There is a strong genetic component to eczema. People with a family history of eczema, allergies, asthma, or hay fever are more likely to develop the condition. Specific genes associated with skin barrier function and immune response are believed to be involved.
- **Immune system dysfunction:** Eczema is considered an immune system disorder. People with eczema tend to have an overactive immune response, leading to inflammation and skin irritation. This dysfunction can make the skin more susceptible to allergens and irritants.
- **Allergens:** Certain allergens can trigger or worsen eczema symptoms in susceptible individuals. Common allergens include dust mites, pet dander, pollen, mold, and certain foods. Exposure to these allergens can cause an immune response and trigger eczema flare-ups.
- **Irritants:** Various substances can irritate the skin and trigger eczema symptoms. These irritants may include harsh soaps, detergents, fragrances, certain fabrics, and chemicals in skincare products. They can disrupt the skin's barrier function and lead to inflammation.
- **Climate and environmental factors:** Changes in temperature, humidity levels, or exposure to extreme weather conditions can affect the skin and trigger eczema symptoms. Cold, dry weather, or excessive heat and sweating can worsen eczema.

Stress: Emotional stress and anxiety can contribute to eczema flare-ups or make existing symptoms worse. Stress can affect the immune system and trigger inflammatory responses, which can impact the skin.

PATHOPHYSIOLOGY:

- A compromised skin barrier is a key factor in eczema development.
- The skin barrier consists of various components, including lipids, proteins, and cells, that work together to retain moisture and protect against external irritants and allergens.
- In eczema, the skin barrier may be impaired due to genetic factors, leading to increased transepidermal water loss (TEWL) and prone to irritants and allergens cause eczema.

CLINICAL MANIFESTATION:

- Intense itching
- Rash
- Dry, scaly, or thickened skin.
- Intense itching, which can lead to scratching and further skin damage.
- Redness and inflammation of the affected areas.
- Small, raised bumps that may ooze or crust over if scratched.
- Skin sensitivity and increased susceptibility to infections

DIAGNOSIS:

- **Physical examination:** The healthcare professional will examine the affected skin and look for characteristic signs of eczema, such as redness, rash, dryness, scaling, and itching. They may also evaluate the distribution and pattern of the rash.
- **Medical history:** The healthcare provider will ask about your personal and family history of eczema, allergies, asthma, or hay fever. They will inquire

about your symptoms, triggers, and previous treatments. This information helps in establishing a diagnosis and understanding the potential causes or aggravating factors.

- **Patch testing:** In some cases, patch testing may be performed to identify specific allergens or irritants that could be triggering or exacerbating eczema symptoms. Patch testing involves applying small amounts of potential allergens to the skin and monitoring the reaction over a period of time.
- **Skin biopsy:** In rare cases, a skin biopsy may be performed to rule out other skin conditions that may present with similar symptoms to eczema. A small sample of skin is taken and examined under a microscope to help confirm the diagnosis.

PHARMACOLOGICAL MANAGERMENTS:

- **Topical corticosteroids:** These are anti-inflammatory medications available in various strengths and formulations, such as creams, ointments, and lotions. They are commonly used to reduce redness, itching, and inflammation during eczema flare-ups. Examples include **hydrocortisone, triamcinolone, betamethasone, and clobetasol.**
- **Topical calcineurin inhibitors:** These medications work by suppressing the immune response in the skin and reducing inflammation. They are typically used as second-line treatment options for eczema, especially in sensitive areas like the face or genitals. Examples include **tacrolimus (Protopic) and pimecrolimus (Elidel).**
- **Topical phosphodiesterase-4 (PDE4) inhibitors:** This newer class of topical medications helps reduce inflammation and is indicated for mild to moderate eczema. **Crisaborole (Eucrisa)** is an example of a PDE4 inhibitor used in the treatment of eczema.
- **Topical or oral antihistamines:** Antihistamines are commonly used to help relieve itching associated with eczema. They may be available as topical creams or oral tablets. Examples of oral antihistamines include **cetirizine, loratadine, and diphenhydramine.**

- **Emollients/Moisturizers:** Emollients are moisturizing agents that help hydrate and soothe the skin. Regularly applying emollients is essential in managing eczema and preventing dryness. Examples include petroleum jelly, ceramide-based moisturizers, and creams containing ingredients like glycerin or hyaluronic acid.
- **Antibiotics:** In cases where the eczema becomes infected or there are signs of a secondary bacterial infection, oral or topical antibiotics may be prescribed to address the infection.

NON PHARMACOLOGICAL MANAGERMENTS:

- **Moisturize regularly:** Keeping the skin well-hydrated is crucial in preventing eczema flare-ups. Apply moisturizers or emollients regularly, especially after bathing or washing your hands, to help maintain the skin's moisture and strengthen the skin barrier.
- **Avoid triggers:** Identify and avoid potential triggers that worsen your eczema symptoms. Common triggers can include certain allergens (such as dust mites, pet dander, pollen, or specific foods), irritants (such as harsh soaps, fragrances, or chemicals), and environmental factors (such as extreme temperatures or humidity). Minimizing exposure to triggers can help prevent flare-ups.
- **Choose gentle skincare products:** Use mild, fragrance-free, and hypoallergenic skincare products that are less likely to irritate the skin. Avoid harsh soaps, detergents, and products containing potentially irritating ingredients. Opt for gentle cleansers and moisturizers specifically formulated for sensitive skin.
- **Maintain a healthy lifestyle:** A healthy lifestyle can contribute to overall skin health. Eat a balanced diet rich in fruits, vegetables, and omega-3 fatty acids. Stay hydrated, exercise regularly, and manage stress effectively, as stress can trigger or exacerbate eczema symptoms.

- **Manage environmental factors:** Create a comfortable environment that supports your skin health. Maintain a consistent humidity level in your home, use a humidifier in dry climates, and avoid excessive heat or cold exposure. Consider using hypoallergenic bedding, washing your clothes with fragrance-free detergents, and avoiding tight or irritating clothing.
- **Practice good skincare habits:** Take care of your skin by practicing good skincare habits. Limit the use of hot water during baths or showers, as it can strip the skin of natural oils. Pat the skin dry gently with a soft towel after bathing, and avoid excessive rubbing. Avoid scratching or picking at the skin, as it can worsen eczema symptoms and lead to infections.
- **Avoid smoking and secondhand smoke:** Smoking and exposure to secondhand smoke can worsen eczema symptoms and delay the healing process. If you smoke, consider quitting, and avoid exposure to smoke whenever possible.