

ECZEMA TRIGGERS

Eczema is a skin condition characterized by inflamed, itchy, red, cracked, and rough skin patches. The term 'eczema' also describes similar skin condition including atopic dermatitis. 'Atopic' refers to skin condition which involves immune system and dermatitis describes skin inflammation. Certain food (nuts and dairy) and environmental factors (pollen) trigger eczema. Eczema is not contagious but not curable as well. Available treatment options can manage symptoms and treat damaged skin but there is no full cure of eczema.

According to the reports of National Eczema Association, approximately 31.6% of US population is affected by different types and stages of eczema. People of all age groups and ethnicities can be affected by it. [1]

➤ **Types Of Eczema**

Depending on the symptoms and causative agents, eczema is categorized into different types:

1. **Contact Dermatitis:** This is mainly an allergic reaction and often triggered by direct contact with allergens such as pollen or food.
2. **Atopic Dermatitis (AD):** Malfunction in the immune system and problems with the skin barrier cause AD.
3. **Dyshidrotic Eczema:** Skin irritation on the palms of the hands and the soles of the feet. sometimes blisters are formed.
4. **Stasis Dermatitis:** Skin irritation and inflammation of the lower limbs usually due to circulatory problems.
5. **Nummular Eczema (Discoid Eczema):** Symptoms include dry skin patches, rounds fluid-filled lesions and often caused by allergens
6. **Seborrheic Dermatitis:** Affects the oil-producing glands. Mainly caused by genetic defects and hormonal imbalance. Yellow, flaky and greasy skin patches are formed.
7. **Neurodermatitis (Lichen Simplex Chronicus):** Caused by too much scratching and skin rubbing, results in dry, thick and scaly patches.

➤ **Eczema Signs and Symptoms**

The term 'eczema' roots from a Greek word meaning 'to boil over', which is perfect description of red, itchy skin patches which may form blisters and sores. The symptoms may vary from person to person and for different types of eczema. General symptoms are:

- Dry, oversensitive skin
- Red scare
- Inflammation
- Itching
- Skin patches turn dark after some time
- Rough and scaly patches of skin
- Oozing or crusting
- Areas of swelling a
- Blisters
- Skin pigments are affected; skin color changes and patches are formed
- Dry skin patches and inflammation usually appears on neck, knees, wrists and ankles, face and arms. Scratching and rubbing irritates the skin and the symptoms further aggravate. [2]

➤ **The Underlying Mechanism And Causes Of Eczema**

What exactly causes eczema and related skin conditions are still a matter of research. Research suggests that people with eczema have a genetic mutation. The gene codes for filaggrin a protein that maintains healthy protective barrier on the top layer of the skin. In the absence of enough filaggrin, the integrity of skin barrier is affected. Moisture can escape leading to excessive skin dryness. Cracks are formed in skin surface from where bacteria, viruses and more microbes can enter. For this reasons, eczema patients have exceptionally dry and infection-prone skin.

Study reveals that several genes can be involved in development of the atopic dermatitis (atopic eczema) condition. In rare cases, the single gene mutation of *CARD11 gene* is the reason behind it. Protein product of this gene is responsible for normal function of immune cells called lymphocytes and T cell. The resulting T cell abnormalities lead to a weakened immune system against invading microbes and thus and recurrent infections occur. [3]

In addition to these, allergic reactions also trigger eczema. Certain food such as dairy and nuts and allergens such as pollens trigger eczema flare ups.

➤ **What Are The Common Eczema Triggers?**

Eczema is not curable but preventable. And taking precautions help to prevent flare ups and keep the symptoms under control. Keep in mind that eczema affects everyone differently. What triggers one person's may not affect the other person. People might experience eczema symptoms at certain times of the year or on different parts of the body. Common factors that can trigger an eczema flare up are:

1. Dry Skin

Dry skin easily becomes brittle, scaly, and rough. Skin cracks are formed allowing more microbial invasion and thus skin infection including eczema.

2. Direct Contact With Skin Irritants

Many routinely used products and even natural substances or chemicals such as detergents, soaps, shampoo, body wash, surface cleaners and disinfectants may irritate the skin and trigger skin infections. Other skin irritants are:

- Metals
- Cigarette
- Detergents
- Fragrances
- Antibacterial ointment like neomycin and bacitracin
- Formaldehyde, common present in household disinfectants
- Hair dyes, lotions etc.

3. Food

People may be allergic to certain foods such as dairy and nuts. Eating even a small quantity triggers allergic reaction.

4. Microbial Infections

Bacterial infection often triggers or aggravates eczema symptoms. For instance, staphylococcus aureus is one of the common bacteria that cause skin infection. Fungal infections such as athlete's foot or ringworm also trigger or aggravate eczema and similar skin conditions.

5. Allergens

Substances that trigger allergic flare-ups are called allergens. Seasonal pollen, dust, mites, pet dander, mold and dandruff etc are common allergens for skin conditions.

6. Hormones

Although hormones are natural substances produced by the human body, the imbalance may trigger eczema flare-up. People with eczema (especially women) may experience flare ups when level of certain hormones rise than the normal level. [4]

➤ Who Is At More Risk Of Developing Eczema?

Eczema may affect people of any age group and ethnicity. Genetic and environmental factors play significant role in onset of eczema and related skin conditions. In general, those with a family history of eczema or atopic diseases (including asthma, hay fever) are at more risk of getting such infections. Additionally, people living in urban setting or are frequently exposed to certain environmental allergens (pollens, dust, mold) are at greater risk of atopic dermatitis.

➤ Certain Ethnic Groups At Greater Risk For Eczema - Here Is Why?

According to national eczema association, certain ethnic groups are more susceptible for this. Genetic mutations in certain genes are among the probable causes of eczema and other skin conditions. Genetic mutations as we know are passed from one generation to next. Similarly, genetic mutations also tend to be more prevalent in some ethnic groups compared to others. This explains the differences in the frequency and severity of eczema among different ethnicities.

African Americans are also more likely to have eczema and atopic conditions and their symptoms are more severe as well. Aside from the severity of symptoms or appearance, people with darker skin tones may develop unique forms of atopic dermatitis.

For instance, popular eczema is more common to African Americans. This condition is characterized by appearance of small bumps on the torso, arms and legs. Africans tend to have dryer skin than white people. Excessive itching and rubbing of dry, eczema-prone skin results in thickened skin patches and raised bumps, called as ‘prurigo nodules’. [5]

Study published in scientific journal, Annals of Allergy, Asthma and Immunology reveals that dealing with atopic dermatitis is way more challenging for African Americans compared to other European Americans. The frequency of disease, the severity of symptoms and treatment is more prevalent in darker skinned African Americans. [6]

Study published in International Study of Asthma and Allergies in Childhood (ISAAC) suggest that African continent has highest prevalence of atopic dermatitis while Asia has the lowest prevalence. These differences can be explained to environmental factors or genetics. In addition to pH differences of white and darker skin tone, the ceramide/cholesterol ratio differed significantly between ethnicities. Ceramides are family of waxy lipid molecules composed of fatty acids and sphingolipids. Ceramides are essential to maintain the integrity of skin barriers. Africans were found to have lowest level of ceramide/cholesterol, Caucasians had medium level, and Asians the highest level. This explains why Africans have more dry skin and more prone to skin conditions such as eczema. [7]

➤ **Treatment And Prevention Of Eczema**

Certain medications and ointments help in managing the symptoms of eczema and atopic conditions. Though it is not completely curable, it can be prevented and managed well. Timely treatment and avoiding the allergens, substances that triggers your eczema, is major preventive measure for eczema patients.

➤ **Dietary Recommendations For Eczema Patients**

People having eczema and atopic conditions must take dietary precautions so as to avoid what may cause eczema flare-up. Here are few recommendations:

- Research suggests that infants are less likely to develop eczema if the mother is taking probiotic rich food. [8]

- Sourdough bread, naturally fermented pickles, soft cheese is among the robotic rich foods for moms.
- Apple, blueberries, cherries, broccoli are rich in Quercetin. Quercetin is a plant-based antioxidant and flavinoids. It helps a lot to reduce inflammation. Thus, these fruits and vegetables are good to use.
- Avoid foods that may provoke allergic reactions. For instance, peanuts, eggs, seafood, milk, soy and chocolate
- Bakery items and food with too much sugar is not good as it spikes the insulin level in body, which further causes skin inflammation or allergic symptoms. [9]

Not everyone with eczema is allergic to everything. People may have different kind of allergic reactions to same substance. Not every medication works for everyone. The best is to know about the symptoms and especially what triggers flare-ups or allergic reaction, so that you can better manage your symptoms and live a healthy life.

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