

Childhood Eczema (Atopic Dermatitis)

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Opinion

Atopic eczema is a common skin condition that affects one out of every ten children in affluent countries, and it is becoming more common. This could be due to a variety of factors, including increased air pollution exposure, smaller households with lower infection risks, more pets, older maternal age, and a wider variety of meals. A strong genetic component appears to be present in atopic eczema. This is exacerbated by the fact that not all of the children who are impacted are atopic, and the genes connected to atopy, as well as others yet to be discovered, are likely to be involved. It has the potential to cause major psychological problems. The majority of the children who are affected are allergic to house dust mites, which is likely one of the factors contributing to the condition's severity. Food allergy mediated by immunoglobulin E (IgE) affects less than 10% of the population, however, some persons develop late-phase reactions to foods that show up on patch tests.

In crawling newborns, the forearms, extensor regions of the knees, and ankle flexures are typically damaged. In older children, the flexor components of the elbows and knees are mostly affected. Eczema can be puffy and moist, or thickened and dry (lichenified). In children with darker skin, the rash may seem papular. Scratches can always be seen. Exacerbations can occur for a variety of reasons, and the causes of exacerbations may or may not be visible. Infectious diseases are a common occurrence. Traditional bullous impetigo can be caused by staphylococcal infection, or it can just worsen dermatitis by causing more redness and leakage. Staphylococcal folliculitis can be caused by occlusion with oily emollients or moist bandages. Streptococcal infection is marked by increased redness and erosion of the skin, as well as pustular sores. Atopic children are especially prone to severe herpes simplex infections; the disease is essentially systemic in origin, but those with active eczema are the ones who are most impacted. The majority of children suffer from atopic eczema, which is caused by allergies to inhalants such as house dust mites (*Dermatophagoides pteronyssinus*), grass pollens, and animal dander. Some children get eczema on their faces during pollen season, and many parents report that their

child's eczema worsens after close contact with pets. House dust mites produce the most IgE, hence they must be the most important allergen in eczema flare-ups.

House dust mites can be found in large numbers in children's mattresses, and they can trigger eczema flare-ups in addition to causing asthma. Efforts to reduce dust mite populations have been associated with improvements in eczema in a number of studies. Given that skin contact with mites produces eczema in children who are severely allergic to them, this is unsurprising. A role for delayed sensitization to house dust mites is also possible. In persons with atopic eczema, patch testing and lymphoproliferative reactions to the mite are both positive. Unfortunately, in ordinary life, limiting the amount of house dust mites in bedding is challenging.

Immunological mechanisms, on the other hand, do not produce food intolerance. Food intolerance is rather common: some foods, such as tartrazine or other food colorings, may cause eczema via unknown mechanisms. Food allergies are linked to one's age. It can be severe in an infant and become less severe as the child grows older. Some food allergies are transient (e.g., egg and cow's milk), whereas allergies to peanuts and shellfish can last a lifetime.

Food allergy is most common in children with severe atopic dermatitis, hence the link between atopic eczema and food allergy is convoluted. Only about 10% of all children with atopic eczema have IgE mediated food allergy with angioedema and urticaria when the diagnosis is obvious from the immediacy of the symptoms and can be corroborated by a wheal >5 mm in diameter following a skin prick. Severe atopic eczema is a serious condition that has been compared to juvenile rheumatoid arthritis in terms of reducing a child's quality of life. As a result,

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it's vital that such children get the help they need. Oral steroids should be avoided due to the severe recurrence of eczema after withdrawal, eczema becoming unstable after multiple courses and the long-term negative effects. The two most popular therapies for severe eczema are cyclosporin and azathioprine. Although it has some side effects, such as nausea, fatigue, myalgia, and liver failure, azathioprine is a safer drug to take for a long time. It is used

by pediatric dermatologists in the United Kingdom. Before commencing treatment, it's crucial to check for thiopurine methyltransferase, as children lacking this enzyme will have significant bone marrow suppression. At low doses, it is effective in the majority of children. The most dangerous long-term negative effect that may conceivably occur is lymphoma growth (as with cyclosporin). The advantage of this drug is that it can be used indefinitely.