Eczema or atopic dermatitis

What is eczema or atopic dermatitis?

Atopic dermatitis is a chronic, inflammatory condition of the skin with remissions and exacerbations. In children with atopic dermatitis, the skin's barrier layer malfunctions, making the skin dry, flakey and itchy. Some of these children also have related environmental, and food allergies. Of all the children with atopic dermatitis, 65% show signs during the first year of life, and 90% during the first 5 years of life. Half of the children with the condition show improvement between the ages of 5 and 15 years old. Parents with atopic dermatitis are more likely to have children with atopic dermatitis.

How frequent is the condition?

Very frequent. At least 15% to 20% of children manifest atopic dermatitis at some point during childhood, most frequently during the first year of life. Frequency of occurrence in the population has increased during the last few years.

Is atopic dermatitis the same as eczema?

Doctors often use the terms eczema and atopic dermatitis without differentiation for the same condition, because in most cases, eczema is caused by atopic dermatitis. Eczema is a general term for dry and inflammed skin, which is sometimes caused by something other than atopic dermatitis.

How is eczema triggered?

The main triggering agents for atopic dermatitis are irritants, stress, allergies, infections, and heat/perspiration. These agents are not the cause of the problem, but they may make it worse.

More specifically, possible triggering agents that make eczema worse are:

• Stress
• Allergies
• Perspiration
• Specific soaps, shower gels, and detergents
• Very frequent, or long, hot baths
• Sudden changes in temperature
• Aridness
• Woolen or synthetic clothes
• Dust or sand
• Cigarette smoke
• Specific foods, such as eggs, milk, fish, soya, gluten
• Contamination of the skin by germs/bacteria
Is atopic dermatitis related to food allergies?

Only 25% of children with atopic dermatitis also have food allergies. This means that remissions and exacerbations of eczema in most infants are neither affected by the foods they consume, nor by the foods mothers consume, if they breastfeed.

Which children are at risk of manifesting atopic dermatitis?

Children with a family history of allergies, asthma, and atopic dermatitis are more likely to have a problem. Some genes and mutations they have seem to play a role. Breastfeeding possibly protects from the appearance of atopic dermatitis to a certain degree, and this is why exclusive breastfeeding for six months, and introduction of solid foods with continuation of breastfeeding after six months, is recommended.

Is atopic dermatitis related to other allergies, such as allergic rhinitis and asthma?

Many children, who have eczema, have more general atopy, i.e. an overactive immune system, which over-responds in an attempt to protect the body from allergens. In some children the so-called "allergic parade" is noted: the eczema of infancy improves, gives place over the years to asthma, and later on, to allergic rhinitis.

What are the symptoms of atopic dermatitis?

1. Dry skin with exfoliation, flaking
2. Redness and swelling of the skin
3. Fluid flow and crusting
4. Thick and rough skin
5. Sensitive, itchy skin

What does atopic dermatitis look like?

The skin appears dry. Atopic dermatitis frequently causes itching (scratching of the skin), which leads to red, swollen, flakey skin. In the case of chronic itching, the skin becomes thicker and rougher.

On which parts of the body does atopic dermatitis usually occur?

It appears on various parts of the body, depending on the child's age. In infants, it usually affects the face, particularly the cheeks, while it may also expand towards the torso and the limbs, especially to the outer areas of the shins. In older children and adults, eczema tends to appear in the internal folds of the arms (elbows, wrists), in the folds of the legs (behind the knees, ankle joint), on the neck, and on the tops of the arms.
How is the diagnosis of atopic dermatitis made?

The diagnosis is clinical. This means that the doctor takes into account the child's medical history (family history of allergies and asthma, personal history of allergies and asthma), the child's symptoms, and the clinical examination of the skin. In some cases, particularly in cases of persistent or serious eczema, or eczema with frequent remissions, allergy tests may be needed, in order to ascertain if there is any particular allergen that causes exacerbation of the eczema.

What happens if the child does not stop scratching the affected areas?

Extended scratching of the skin may lead to lichenification, which means that the skin becomes thick and rough. Intense scratching may cause lesions, and lead to infection and/or permanent scars. Even though atopic dermatitis is not a life-threatening condition, many patients suffer from an inadequacy of the skin's protection mechanism, which requires them to take special skin-care measures for life.

How does the weather affect atopic dermatitis?

Severe weather conditions may cause an exacerbation of atopic dermatitis. For example, sudden exposure to cold, dry, air may make the skin worse. The same is likely to happen with the very warm and humid summer weather. Parents can find ways to help during changes in the weather, e.g. by turning on the air-conditioning on hot summer days. Sea water often improves the picture.

How serious a condition is it?

Atopic dermatitis is not a life-threatening condition. The most common concern is a serious skin infection as a complication. Severe atopic dermatitis in exacerbation may affect the child's mood and quality of life (inconvenience with his activities/school, inconvenience with sleep). In addition, more severe lesions of the skin may result in scarring.

Is it treatable?

There is no treatment that offers an immediate and permanent cure. However, with the appropriate treatment and medication, the condition can be satisfactorily controlled, and remain in remission.

Can the child swim in a chlorinated swimming pool?

Yes. Extended exposure to chlorine may worsen the child's atopic dermatitis. However, if before swimming, the child applies a hypoallergenic sunscreen, takes a shower immediately after swimming, and applies moisturizing cream to the skin immediately after getting out of the swimming pool, atopic dermatitis usually does not get worse.

How often should the child take a bath?
Children with atopic dermatitis should take baths daily, and systematically moisturize their skin after the bath. However, bathing more frequently than once a day may cause harm, and is not recommended.

If I limit the child's exposure to allergens, will atopic dermatitis go away?

Most children have an underlying skin disorder, and thus their eczema will not disappear even if all possible allergens, such as some foods etc. are limited.

How is atopic dermatitis treated?

Despite the fact that there is no cure for atopic dermatitis, the right treatment may reduce the dryness and the irritation of the skin, making the child feel more comfortable.

Daily moisturizing of the skin may be the most effective way to control the eczema, and should become a part of the child's daily routine.

The daily care measures for parents with a child suffering from atopic dermatitis are:

- Daily bath with water that is not too hot, and use of moisturizing creams. A bath is preferable to a shower.
- Use of mild soaps, and limitation of use of regular soap.
- Use of oil-based moisturizing ointments frequently during the day (at least 2 to 3 times) during skin dryness periods. Avoidance of oils (baby oil etc.).
- Proper, frequent care and cutting of the child's nails, so that his skin does not get worse from scratching.
- Dressing in light clothes so that perspiration is avoided.
- Covering of the child's skin with long sleeves and long trousers, so that the child does not scratch the affected areas.
- Avoidance of wool and synthetic clothes in direct contact with the child's skin, prefer cotton clothes.
- Application of cold, wet compresses and pads on the affected areas.
- Let the child play outside in the sun, but not excessively, so that the risk of skin cancer is not increased.
- Around 40% humidity indoors, but no more, is recommended, with the use of a humidifier, if needed, during dry weather.
- Use of air-conditioning on hot summer days, so that excessive sweating is avoided.

In severe cases, the doctor may recommend pharmaceutical preparations to relieve the child's symptoms. Commonly used medications are:

- Cortisone creams and ointments, for short-term use, to reduce the inflammation of the skin, and to suppress the exacerbation. The cortisone cream should be applied first, and the moisturizing cream on top of it.
• Antibiotics
• Topical calcineurin inhibitors (tacrolimus) for long-term treatment
• Antihistamines to reduce itching
• Immunomodulators by mouth are prescribed as a last resort to reduce eczema symptoms, but they should be used with limitations and caution.
• Medications containing cortisone by mouth, only as a short term solution, because they have potentially serious side effects, such as cataracts, osteoporosis, hypertension, and thinning of the skin.

Finally, in cases where there is a possible correlation with a food allergy, specific allergenic foods may be excluded from the child's diet. In such cases, if the child is not breastfeeding, hypoallergenic infant milk can be used.

**How long should the treatment last?**

Many children with atopic dermatitis have underlying skin barrier inadequacy, which requires special skin-care for life. They should avoid specific irritants, and they may need to use moisturizing creams daily. The duration of the treatment depends on the gravity of the case. Children with severe atopic dermatitis will most probably have atopic dermatitis as adults too.

**When should you see a doctor?**

• If the child becomes hypersensitive, and seems to be bothered a lot by his skin
• If the child is not sleeping well due to his skin
• If the lesions are spreading
• If the child runs a fever
• If the lesions seem contaminated (with fluid flowing, pus or yellow scab, pain)

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