



may ease the itch. Cortisone (steroid) creams applied directly to the affected area are helpful and a mainstay of therapy.

Cortisone pills or shots are sometimes used but they are not safe for long-term use. Researchers are constantly seeking new and safer drugs to control the itch and inflammation. Another treatment option is the use of ultraviolet light or sunlamps. Under a physician's supervision, some AD sufferers find this treatment helps. Tar baths, antihistamines, and antibiotics are often used, but these, too, meet with limited success. Treatments that may have minimal success include vitamins, mineral supplements, enriched diets, or nutritional supplements.

Topical calcineurin inhibitors (TCIs) are a family of topical medications that work to inhibit the skin's inflammatory response (which is what causes the redness and also contributes to itching). There are two FDA approved nonsteroid drugs: tacrolimus and pimecrolimus. TCIs are not steroids and do not cause thinning of the skin but they can suppress the immune system in the skin so that the use of sun protection for anyone receiving this therapy is recommended.

### What can be done about dry skin?

AD sufferers always have very dry, brittle skin. The external layer of the skin, the stratum corneum, acts as a protective barrier. When the stratum corneum cracks because of dryness, irritants can reach the sensitive layers below and cause a flare-up of AD. Using moisturizers is the best and safest treatment to prevent dry

skin. Moisturizers trap water beneath the skin making it flexible and less likely to crack. Research has found that the most effective moisturizers have ointment bases such as petrolatum. Cream based products are also helpful. Moisturizers work best when applied to wet skin. Lotions contain water and alcohol which can actually dry the skin and are usually inadequate for the very dry skin of atopics. People with AD can bathe regularly and use mild skin cleansers, as long as they follow these simple rules:

- use warm (not hot) water
- avoid excessive scrubbing, and toweling
- apply a moisturizer to damp skin within three minutes after bathing

### What can be done about infections?

People with AD are prone to skin infections, especially staph and herpes. In general, infections are hard to prevent but should be treated promptly to avoid aggravating the AD. It is important that persons with AD, or their parents, learn to recognize the early signs of skin infections and consult a physician immediately. Signs to watch for include redness, pus-filled bumps (pustules), and cold sores or fever blisters. Sometimes viral "colds" or "flu" cause AD flare-ups. Worsening can be avoided by taking extra skin care steps while the virus runs its course.

### Can sufferers of AD live normal lives?

**YES!** People with AD do not have to be limited by their disease. It can be controlled by prevention, medication, and careful adherence to a treatment program supervised by a doctor.

### Suggestions for Control:

**ESTABLISH A SKIN CARE ROUTINE.** Following the physician's instructions is crucial for keeping AD under control. This takes a lot of time and effort. Some sufferers may resent the effort or even deny that their skin needs special care. Resentment and denial are natural reactions to any disease. Failure to overcome these reactions, however, can lead to additional behavior that is harmful to the skin, such as wearing fabrics that irritate the skin, missing skin treatments, and forgetting medications.

**ESTABLISH A SCHEDULE WITH A REGULAR DAILY ROUTINE.** Include skin care along with all other activities of daily living such as brushing and flossing teeth or washing dinner dishes. It is important to maintain a flexible attitude so that when the dermatitis flares and extra skin care is needed, it can be worked into the routine.

### RECOGNIZE STRESSFUL SITUATIONS AND EVENTS.

To cope with the stress in your life, you must first notice when and how often stressful situations arise. These include day-to-day hassles as well as major events such as a job change, money problems, legal difficulties, family illness, etc. Ask yourself, "How do I react to stress? How does my body feel when I am stressed?"

### LEARN STRESS MANAGEMENT TECHNIQUES.

Certain approaches to reducing stress can be done on your own, such as setting priorities and organizing your time. Some activities that may reduce stress are regular aerobic exercise, hobbies, and meditation. Other approaches may require expert assistance such as a brief consultation with a psychologist.

**BE AWARE OF SCRATCHING.** Keep a record of times and situations when scratching is worst, and try to limit your exposure to such situations. Many people with AD scratch the most during idle times. Engaging in a structured activity with other people or keeping busy with activities that involve the use of your hands may help prevent scratching. Control your environment. Avoid irritants and allergens. Avoid low humidity. Wear cotton clothing. Guard against infection. Moisturize.



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For a complimentary copy of the NEA print newsletter, *The Advocate*, and an eczema information package, please contact us. We are always here to help!

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This information sets forth current opinions from recognized authorities, but it does not dictate an exclusive treatment course. Persons with questions about a medical condition should consult a physician who is knowledgeable about that condition.

The National Eczema Association (NEA) improves the health and quality of life for individuals with eczema through research, support, and education. NEA is entirely supported through individual and corporate contributions and is a 501(c)(3) tax-exempt organization. NEA is the only organization in the United States advocating solely for eczema patients.

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# ECZEMA

## All About ATOPIC DERMATITIS



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## What is Atopic Dermatitis (AD)?

Atopic dermatitis (AD) is a disease that causes itchy, inflamed skin. It typically affects the insides of the elbows, backs of the knees, and the face, but can cover most of the body. AD falls into a category of diseases called atopic, a term originally used to describe the allergic conditions asthma and hay fever. AD was included in the atopic category because it often affects people who either suffer from asthma and/or hay fever or have family members who do. Physicians often refer to these three conditions as the “atopic triad.” AD is not contagious. Research indicates that atopic diseases like AD are genetically determined, inherited from one’s parents. A child with one parent who has an atopic condition has a one in four chance of having some form of atopic disease. If both parents are atopic, the child has a greater than one in two chance of being atopic.

AD almost always begins in childhood, usually during infancy. Its symptoms are dry, itchy, scaly skin, cracks behind the ears, and rashes on the cheeks, arms and legs. It alternately improves and worsens. During “flare-ups,” open weeping or crusted sores may develop from scratching or from infections. Often the problem fades during childhood though people with AD have a lifelong tendency to have:

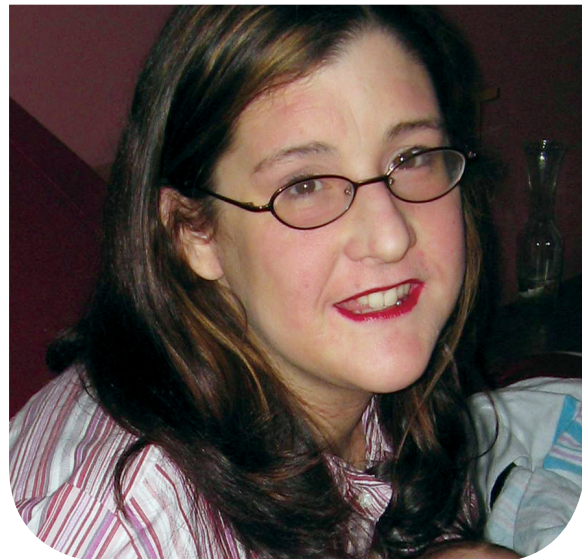
- **DRY SKIN** — easily irritated
- **OCCUPATIONAL SKIN DISEASE** — hand dermatitis
- **SKIN INFECTIONS** — staph and herpes
- **EYE PROBLEMS** — eyelid dermatitis, cataracts
- **FAMILY/SOCIAL RELATIONSHIPS DISRUPTED**
- **WORK LOSS**

Children affected by AD may suffer from asthma and hay fever at the same time, or one or both of these conditions may develop later. These diseases usually appear before age 30 and often continue throughout life.

AD is a very common disease, present worldwide, though it is more common in urban areas and developed countries. An estimated 10 percent of all people are at some time affected by AD (this may not apply in the tropics). It affects men and women of all races equally.

## Is eczema the same as AD?

Eczema is a general term for any type of dermatitis or “inflammation of the skin.” Atopic dermatitis (AD)



is the most severe and chronic (long-lasting) kind of eczema. Although the term eczema is often used for atopic dermatitis, there are several other skin diseases that are eczemas as well. A partial list of eczemas includes: atopic dermatitis, nummular eczema, dyshidrotic eczema, seborrheic dermatitis, irritant contact dermatitis, allergic contact dermatitis. All types of eczema cause itching and redness and some will blister, weep or peel.

## What sets off AD?

AD tends to flare-up when the person is exposed to certain trigger factors—substances or conditions which worsen the dermatitis such as dry skin, irritants, allergens, emotional stress, heat and sweating, and infections.

The key to controlling AD is avoiding or reducing such exposure. People with atopic diseases are usually sensitive to certain agitating substances. Some of these substances are irritants and others are allergens. Irritants are substances that cause burning, itching or redness such as solvents, industrial chemicals, detergents, fumes, tobacco smoke, paints, bleach, woolens, acidic foods, astringents and other alcohol containing skin care products and some soaps and fragrances. If an irritant is potent or concentrated enough, it can irritate anyone’s skin, whether they have AD or not.

Allergens are more subtle trigger factors. An allergen does not irritate, but may trigger an AD flare-up in those who have become allergic to it from prior expo-

sure. Allergens are usually animal or vegetable proteins from foods, pollens or pets. When people with AD are exposed to an irritant or allergen to which they are sensitive, inflammation producing cells come into the skin. There, they release chemicals that cause itching and redness. Further damage occurs when the person scratches and rubs the affected area. All AD sufferers must avoid irritants, while those with known allergies should likewise avoid allergens. Detecting an allergic substance can be difficult, as discussed below.

## What about food allergies?

Food allergies can cause flare-ups. Since an allergic reaction to food (either by skin contact during food preparation or by eating the food) can trigger an AD flare-up, it is important to identify the trigger foods. Diagnosing food allergies is extremely difficult. The surest way is to observe a worsening of eczema when a particular food is eaten. Sometimes this is only a coincidence with flaring and needs to be verified with a food challenge, where the suspected food is eaten in the doctor’s office. Withholding foods should be done only under the supervision of a physician, as serious nutritional damage can be caused by the elimination of foods suspected to cause flare-ups. Patients are seldom allergic to more than one or two foods.



A skin test, made by scratching the skin with the suspected allergen, is helpful if the test is negative (indication that the particular food will not affect the patient). If the scratched area becomes inflamed, the test is considered positive. But, unfortunately, positive results are difficult to interpret and are accurate only about 20 percent of the time. At best, positive tests provide a clue to a possible allergy but should not be accepted as the last word. Additionally, because the skin of AD sufferers is so sensitive, simply scratching it can cause inflammation, making the likelihood of a false positive skin test even higher. A blood test is another type of test to detect food allergies. Blood tests also have a very high rate of false positives and may be expensive.

## What about other allergies?

Occasionally people with AD notice a worsening of their condition when exposed to airborne allergens, such as pets or dusty rooms. An allergy to dust mites (tiny organisms present in household dust) may worsen AD in some people. As with foods, positive scratch and blood tests are not very reliable for diagnosing an allergy to airborne substances. Research is being done on a “patch test” in which the suspected allergen is placed on the surface of the skin under a protective bandage.

For now, however, the best approach is still the trial and error challenge method, exposure and avoidance under physician observation. Allergy shots do not seem helpful for people with AD. In some cases, the AD actually worsens during allergy shot therapy, even as the allergy symptoms are improving.

## What about emotional stress?

Many older AD children and adults recognize a relationship between stressful occurrences in their lives and their AD flare-ups. Anger, frustration and embarrassment all may cause flushing and itching. The resultant scratching can cascade into perpetuating dermatitis. People with AD can learn how to avoid stress-triggered flare-ups. Two key concepts are involved:

1. Coping with psychologically stressful events
2. Controlling scratching behavior

## What about climate, heat, humidity?

Extreme cold or hot temperatures, or sudden changes in temperature, are poorly tolerated by persons with AD. High humidity causes increased sweating and may result in prickly heat-type symptoms. Low humidity dries the skin, especially during winter months when homes are heated. Unfortunately, humidifiers do not help much; the best protection against “winter itch” is regular application of a good moisturizer. While you can do little about the climate (and moving to a new climate is usually not recommended), you can try to keep your home environment comfortable. Keeping thermostats set low and wearing fewer bedclothes, to prevent night sweating, are two ways to combat the problem.

## What about exercise?

The only problem with exercise is that the resultant sweating generally causes itching. Layers of clothing can be removed to avoid overheating. Strenuous exercise is best avoided when a flare-up occurs.

## What can be done when AD flares?

The best line of defense against AD is prevention, but flare-ups rarely can be avoided. Once inflammation begins, prompt treatment as directed by a physician is needed. Bathing or wet compresses

