



Official reprint from UpToDate®

[www.uptodate.com](http://www.uptodate.com) ©2021 UpToDate, Inc. and/or its affiliates. All Rights Reserved.

Wolters Kluwer

The content on the UpToDate website is not intended nor recommended as a substitute for medical advice, diagnosis, or treatment. Always seek the advice of your own physician or other qualified health care professional regarding any medical questions or conditions. The use of UpToDate content is governed by the [UpToDate Terms of Use](#). ©2021 UpToDate, Inc. All rights reserved.

## Patient education: Eczema (atopic dermatitis) (Beyond the Basics)

**Authors:** [William L Weston, MD](#), [William Howe, MD](#)

**Section Editor:** [Robert P Dellavalle, MD, PhD, MSPH](#)

**Deputy Editor:** [Rosamaria Corona, MD, DSc](#)

All topics are updated as new evidence becomes available and our [peer review process](#) is complete.

**Literature review current through:** Feb 2021. | **This topic last updated:** Nov 24, 2020.

### ECZEMA OVERVIEW

Eczema, also known as atopic dermatitis, is a skin problem that causes dry, itchy, scaly, red skin. It can affect infants, children, and adults and seems more common in certain families. Eczema can be treated with moisturizers and prescription ointments.

### ECZEMA CAUSES

Although the cause of eczema is not completely understood, genetics appear to play a strong role, and people with a family history of eczema are at increased risk of developing the condition. In most people with eczema, there is a genetic abnormality in the outermost layer of the skin, called the epidermis. The epidermis is the first line of defense between the body and the environment. When the epidermis is intact, it keeps environmental irritants, allergens, and microbes from entering the body and prevents the skin from losing too much water. In people with eczema, this barrier is less strong and more permeable than it should be.

Despite popular belief, in children eczema is rarely linked to food allergies. If you think your child might have a food allergy, you should consult an allergy specialist for evaluation. (See ["Patient education: Food allergy symptoms and diagnosis \(Beyond the Basics\)".](#))

---

## ECZEMA SYMPTOMS

Most people with eczema develop their first symptoms as children, before the age of five. Intense itching of the skin, patches of inflamed skin, small bumps, and skin flaking are common. Scratching can further inflame the skin and worsen the itching. The itchiness may be more noticeable at nighttime.

Eczema symptoms vary from one person to another and can change over time. Although eczema is usually limited to specific areas of the body, it may affect multiple areas in severe cases:

- In infants, there may be inflamed, scaly, and crusted areas on the front of the arms and legs, cheeks ( [picture 1](#)), or scalp. The diaper area is not usually affected.
- In children and adults, eczema commonly affects the back of the neck, the elbow creases, and the backs of the knees ( [picture 2](#)). Other affected areas may include the face ( [picture 3](#)), trunk ( [picture 4](#)), wrists, and forearms. The skin may become thickened and darkened, or even scarred, from repeated scratching ( [picture 5](#)).

Scratching can also lead to infection of the skin. Signs of infection include painful red bumps that sometimes contain pus; if you think you might have an infection, consult your doctor or nurse, as you may need treatment.

Other findings in people with eczema can include:

- Dry, scaly skin
- Plugged hair follicles causing small bumps, usually on the face, upper arms, and thighs ( [picture 6](#))
- Increased skin creasing on the palms and/or an extra fold of skin under the eye
- Darkening of the skin around the eyes

---

## ECZEMA DIAGNOSIS

There is no specific test used to diagnose eczema. The diagnosis is usually based upon your medical history, symptoms, and physical examination.

Factors that strongly suggest eczema include long-term and recurrent itching, symptoms that began at a young age, and a personal or family history of certain allergic conditions (including asthma and seasonal allergies as well as eczema). Another factor to consider is symptoms that get worse after exposure to certain triggers. (See ['Identifying triggers'](#) below.)

---

## ECZEMA TREATMENT

Eczema is a chronic condition; it typically improves and then flares (gets worse) periodically. Some people have no symptoms for several years. Eczema is not curable, although it is possible to control your symptoms with a variety of self-care measures and medications.

**Who treats eczema?** — Many people with eczema can initially be treated by their primary care provider. However, you may need to see a dermatologist (skin specialist) in certain situations, such as if your condition does not improve with treatment, if certain areas of your body are affected (face or skin folds), or if another condition could be causing symptoms.

**Identifying triggers** — Eliminating factors that aggravate your eczema symptoms can help to control the symptoms. Possible triggers may include:

- Cold or dry environments
- Sweating
- Emotional stress or anxiety
- Rapid temperature changes
- Exposure to certain chemicals or cleaning solutions, including soaps and detergents, perfumes and cosmetics, wool or synthetic fibers, dust, sand, and cigarette smoke

### Keeping your skin hydrated

**Emollients** — Emollients are creams and ointments that moisturize the skin and prevent it from drying out. The best emollients for people with eczema are thick creams (such as Eucerin, Cetaphil, and Nutraderm) or ointments (such as petroleum jelly, Aquaphor, and Vaseline), which contain little to no water. Emollients are most effective when applied immediately after bathing. Emollients can be applied twice a day or more often if needed. Lotions contain more water than creams and ointments and are less effective for moisturizing the skin.

**Bathing** — It is not clear if showers or baths are better for keeping the skin hydrated. Lukewarm baths or showers can hydrate and cool the skin, temporarily relieving itching from

eczema. An unscented, mild soap or non-soap cleanser (such as Cetaphil) should be used sparingly. Apply an emollient **immediately** after bathing or showering to prevent your skin from drying out as a result of water evaporation. Emollient bath additives (products you add to the bath water) have not been found to help relieve symptoms.

Hot or long baths (more than 10 to 15 minutes) and showers should be avoided since they can dry out the skin.

In some cases, health care providers may recommend dilute bleach baths for people with eczema. These baths help to decrease the number of bacteria on the skin that can cause infections or worsen symptoms. To prepare a bleach bath, one-fourth to one-half cup of bleach is placed in a full bathtub (about 40 gallons) of water. Bleach baths are usually taken for 5 to 10 minutes twice per week and should be followed by application of an emollient.

## Treating skin irritation

**Topical steroids** — Your doctor may suggest a steroid (also called "corticosteroid") cream or ointment if you have mild to moderate eczema. Steroid creams and ointments are available in different strengths; the least potent are available without a prescription (eg, [hydrocortisone](#) 1% cream). Stronger versions require a prescription.

Steroid creams or ointments are usually applied to the skin once or twice per day. These help to reduce symptoms and moisturize your skin. As the skin improves, you can switch to a non-medicated emollient. Strong topical steroids may be needed to control severe flares of eczema; however, these should be used for only short periods of time to prevent thinning of the skin that can result from long-term use.

**Other skin treatments** — Newer skin treatments for eczema include [tacrolimus](#) ointment (brand name: Protopic) and [pimecrolimus](#) cream (brand name: Elidel). These are effective in controlling eczema, although they do not work as quickly as topical steroids. They are useful in sensitive areas such as the face and groin, and can be used in children over age two. Due to concerns about the long-term safety of these medications, it's important to carefully follow your health care provider's instructions about how and how long to use them.

**Oral steroids** — Oral steroids (eg, [prednisone](#)) occasionally are used for a short period of time to treat a severe flare of eczema, although this treatment is not usually recommended on a regular basis or for prolonged periods of time because of potential side effects.

**Ultraviolet light therapy (phototherapy)** — Ultraviolet light therapy (also called phototherapy) can effectively control eczema. However, this therapy is expensive and may

increase your risk of skin cancer, and is therefore recommended only for people with severe eczema whose symptoms do not respond to other treatments.

**Injectable medications** — The injectable "biologic" medication [dupilumab](#) (brand name: Dupixent) may be beneficial for treating eczema. Due to its high cost and potential side effects, this drug is reserved for adults with moderate to severe eczema that has not responded to other treatments.

**Immunosuppressive drugs** — Drugs that weaken the immune system may be recommended for people with severe eczema who do not improve with other treatments. However, treatment with these drugs can cause serious side effects, including an increased risk for infection. They are not recommended for use in infants or young children.

## Relieving itching

**Oral antihistamines** — Oral antihistamines sometimes help relieve the itching of eczema. The over-the-counter antihistamine [diphenhydramine](#) (sample brand name: Benadryl) and prescription antihistamines, such as [hydroxyzine](#) (sample brand names: Vistaril, Atarax) and [cyproheptadine](#), cause drowsiness; these may be especially beneficial for people who have trouble sleeping due to itching.

The nonsedating antihistamines such as [cetirizine](#) (brand name: Zyrtec) and [loratadine](#) (sample brand names: Alavert, Claritin) may relieve itching; both are available without a prescription in the United States and cause less drowsiness.

**Wet dressings** — Wet dressings (wet wraps) help soothe and hydrate the skin, reduce itching and redness, loosen crusted areas, and prevent skin injury due to scratching. Dampened cotton garments (eg, gauze) may be worn over the affected area and covered with a dry garment. You can wear these dressings for a few days, overnight, or during the day (change to a fresh dressing every eight hours).

**Mood problems** — Talk to your health care provider if your eczema is making you feel anxious or depressed. There are treatments that can help with this.

**Can eczema be prevented?** — Babies who have a parent, brother, or sister with eczema have a high risk of developing eczema. If you have a baby at high risk, using moisturizing creams or ointments on your baby's skin daily from the first week of life may prevent eczema during his or her first year. However, it is uncertain whether this is effective in preventing eczema later in life.

---

## WHERE TO GET MORE INFORMATION

Your health care provider is the best source of information for questions and concerns related to your medical problem.

This article will be updated as needed on our website ([www.uptodate.com/patients](http://www.uptodate.com/patients)). Related topics for patients, as well as selected articles written for health care professionals, are also available. Some of the most relevant are listed below.

**Patient level information** — UpToDate offers two types of patient education materials.

**The Basics** — The Basics patient education pieces answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials.

[Patient education: Eczema \(atopic dermatitis\) \(The Basics\)](#)

[Patient education: Seborrheic dermatitis \(The Basics\)](#)

[Patient education: Giving your child over-the-counter medicines \(The Basics\)](#)

[Patient education: Melasma \(The Basics\)](#)

[Patient education: Peanut allergy \(The Basics\)](#)

[Patient education: Topical corticosteroid medicines \(The Basics\)](#)

**Beyond the Basics** — Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are best for patients who want in-depth information and are comfortable with some medical jargon.

[Patient education: Food allergy symptoms and diagnosis \(Beyond the Basics\)](#)

**Professional level information** — Professional level articles are designed to keep doctors and other health professionals up-to-date on the latest medical findings. These articles are thorough, long, and complex, and they contain multiple references to the research on which they are based. Professional level articles are best for people who are comfortable with a lot of medical terminology and who want to read the same materials their doctors are reading.

[Approach to the patient with a scalp disorder](#)

[Atopic dermatitis \(eczema\): Pathogenesis, clinical manifestations, and diagnosis](#)

[Introducing formula to infants at risk for allergic disease](#)

[Primary prevention of allergic disease: Maternal diet in pregnancy and lactation](#)

[The impact of breastfeeding on the development of allergic disease](#)

[Treatment of atopic dermatitis \(eczema\)](#)

[Management of severe atopic dermatitis \(eczema\) in children](#)

[Role of allergy in atopic dermatitis \(eczema\)](#)

The following organizations also provide reliable health information.

- National Library of Medicine

([www.nlm.nih.gov/medlineplus/healthtopics.html](http://www.nlm.nih.gov/medlineplus/healthtopics.html))

- National Institute on Arthritis and Musculoskeletal and Skin Diseases

([www.niams.nih.gov/health-topics/atopic-dermatitis](http://www.niams.nih.gov/health-topics/atopic-dermatitis))

- American Academy of Dermatology

([www.aad.org](http://www.aad.org))

- American Academy of Allergy, Asthma and Immunology

([www.aaaai.org](http://www.aaaai.org))

- National Eczema Association

([www.nationaleczema.org](http://www.nationaleczema.org))

[1-4]

Use of UpToDate is subject to the [Subscription and License Agreement](#).

## REFERENCES

1. [Eichenfield LF, Tom WL, Chamlin SL, et al. Guidelines of care for the management of atopic dermatitis: section 1. Diagnosis and assessment of atopic dermatitis. J Am Acad Dermatol 2014; 70:338.](#)
2. [Wollenberg A, Barbarot S, Bieber T, et al. Consensus-based European guidelines for treatment of atopic eczema \(atopic dermatitis\) in adults and children: part II. J Eur Acad Dermatol Venereol 2018; 32:850.](#)
3. [Tollefson MM, Bruckner AL, Section On Dermatology. Atopic dermatitis: skin-directed management. Pediatrics 2014; 134:e1735.](#)
4. [Galli E, Neri I, Ricci G, et al. Consensus Conference on Clinical Management of pediatric Atopic Dermatitis. Ital J Pediatr 2016; 42:26.](#)

Topic 7638 Version 27.0

## GRAPHICS

### Baby with eczema



This picture shows a baby with eczema on the cheeks and neck.

Reproduced with permission from: [www.skindsight.com](http://www.skindsight.com). Copyright VisualDx. All rights reserved.

Graphic 118445 Version 2.0



## Child with eczema



This picture shows eczema on the back of a child's legs. In some areas the skin has been damaged by repeated scratching.

Reproduced with permission from: [www.skindsight.com](http://www.skindsight.com). Copyright VisualDx. All rights reserved.

Graphic 118446 Version 2.0

## Eczema affecting the eyelids



This picture shows a person with red, scaly skin from eczema on the eyelids.

Reproduced with permission from: [www.skindsight.com](http://www.skindsight.com). Copyright VisualDx. All rights reserved.

Graphic 118447 Version 2.0

## Dry skin in eczema

---



This child has dry skin from eczema on their chest and arms.

Reproduced with permission from: [www.skinsight.com](http://www.skinsight.com). Copyright VisualDx. All rights reserved.

Graphic 129432 Version 1.0

## Skin thickening in eczema



Over time, eczema can lead to thickening of the skin.

Reproduced with permission from: [www.skindsight.com](http://www.skindsight.com). Copyright VisualDx. All rights reserved.

Graphic 129387 Version 1.0

## Eczema



Eczema sometimes looks like scaly bumps on the skin.

*Reproduced with permission from: [www.skindsight.com](http://www.skindsight.com). Copyright VisualDx. All rights reserved.*

Graphic 129386 Version 1.0

## Contributor Disclosures

**William L Weston, MD** Nothing to disclose **William Howe, MD** Nothing to disclose **Robert P Dellavalle, MD, PhD, MSPH** Equity Ownership/Stock Options: Altus Labs [Itch, eczema]. Grant/Research/Clinical Trial Support: Pfizer [Patient decision aids, inflammatory and immune-mediated skin disease]. Consultant/Advisory Boards: Altus Labs [Itch, eczema]; ParaPRO [Scabies, lice]. Other Financial Interest: Journal of Investigative Dermatology; Journal of the American Academy of Dermatology [Stipends]; Cochrane Council meetings [Expense reimbursement]. **Rosamaria Corona, MD, DSc** Nothing to disclose

Contributor disclosures are reviewed for conflicts of interest by the editorial group. When found, these are addressed by vetting through a multi-level review process, and through requirements for references to be provided to support the content. Appropriately referenced content is required of all authors and must conform to UpToDate standards of evidence.

### [Conflict of interest policy](#)

→