

Understanding

Atopic Dermatitis (AD)

Disease Activity...

Exploring WHAT CAN—

and CAN'T—Be Seen

on the AD Iceberg

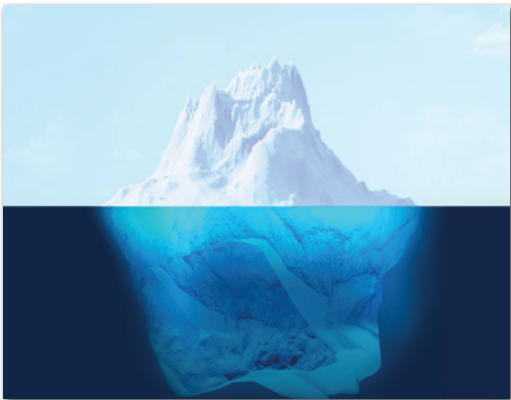
**A Planning Guide to Help You
Work With Your AD Care Team
to Optimize Treatment**

The information contained in this publication is intended to reinforce and supplement information you receive from your healthcare team. It is not a substitute for medical advice from your physician. If you have questions about the information you read in this publication, please discuss them with your healthcare provider.

This has been produced as a patient education resource by Pfizer Inc.

How to Use This Planning Guide

The Iceberg



Consider the popular phrase, *the tip of the iceberg*. This means that only part of an iceberg is visible above the surface of the water, yet below the surface lies a much larger piece of the iceberg that cannot be seen. It’s a commonly used image to help explain situations where what you see doesn’t tell the full story.¹

The iceberg is a useful metaphor to explain what’s happening in your body when you’re living with atopic dermatitis (AD), a chronic or recurring form of eczema.²

That’s because the signs and symptoms of AD—dry skin, red skin, itching, and patches that may appear on various parts of the body—are just the tip of the iceberg.^{1,2} AD is an immune system disease marked by chronic inflammation.³ This means that inflammation may still be occurring below the surface of your skin even when there may be no visible signs of the disease.³

This publication will help you:

- 1

Define AD, also known as eczema, as well as describe the common signs and symptoms of AD
- 2

Understand the potential causes of AD—the physical and other factors associated with the disease, the environmental triggers that may make it worse, and the reasons for skin barrier dysfunction
- 3

Explain the other medical conditions that may occur with AD
- 4

Identify available treatment options for AD while understanding the core goals of AD treatment—namely, *reducing itching and skin irritation and keeping skin well hydrated and protected*, while preventing flares and infections⁴
- 5

Describe how AD can affect your quality of life (including the associated emotional challenges that may impact patients and their caregivers) and the importance of regularly communicating with your healthcare team about important treatment-related issues

Support for Treatment Decision-Making

This is a different type of patient resource in that it’s intended to support treatment decision-making between patients and caregivers and their healthcare professionals. The medical content is more in-depth than traditional patient education materials. That is by design. Each section explains important clinical concepts and raises key issues you will want to discuss with your healthcare team during your treatment.

If you’re a caregiver, the information in this publication may help you support a patient in need. If you’re a patient, these new insights about AD may help you support your own treatment through improved communication and shared decision-making with your doctor.

This guide includes medical terms you may have never seen before. **Bolded** terms throughout each section are defined in the glossary.

Treatment Takeaway

Gaining new insights about AD may help empower you to support your own treatment. Empowerment means gaining control over medical well-being and acting on the medical issues that a patient or caregiver defines as important.⁵ Being empowered also involves partnering with your AD Care Team—your primary care physician, dermatologist, pediatrician, allergist, nurse practitioner, physician assistant, pharmacist, etc, to design a treatment plan that’s right for you or for a person under your care.

A Tip From the AD Iceberg

Patients should seek out as much information as possible about AD—including clinical insights found in this brochure that may not be found in patient education materials—to support their treatment through enhanced patient-healthcare professional communication and shared decision-making.

Need-to-Know Information About AD

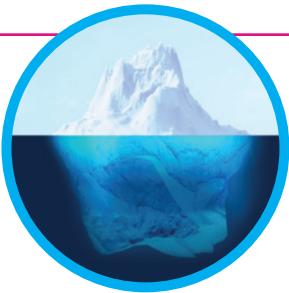
1 AD: A Chronic Inflammatory Disease Marked by a Range of Symptoms



Understand these key facts about AD. Then, in each section, mark down your personal questions and concerns when discussing your medical condition and treatment plan with your healthcare professionals.

AD: a chronic inflammatory disease marked by a range of symptoms

AD is a chronic, relapsing, inflammatory disease.⁶ Relapse means that the signs and symptoms of AD may return after a period of improvement.⁷ Inflammation may still be occurring under your skin even when there may not be visible signs on your body.^{3,8,9}



A Tip From the AD Iceberg

Because underlying inflammation is always present in your body when you have AD—that is, it is occurring below the surface of the AD Iceberg—it’s important to always adhere to your treatment plan as directed by your healthcare professional, even if your skin is clear and there are no visible signs of AD, unless your doctor instructs otherwise.³

Medical Terms for Signs and Symptoms of AD

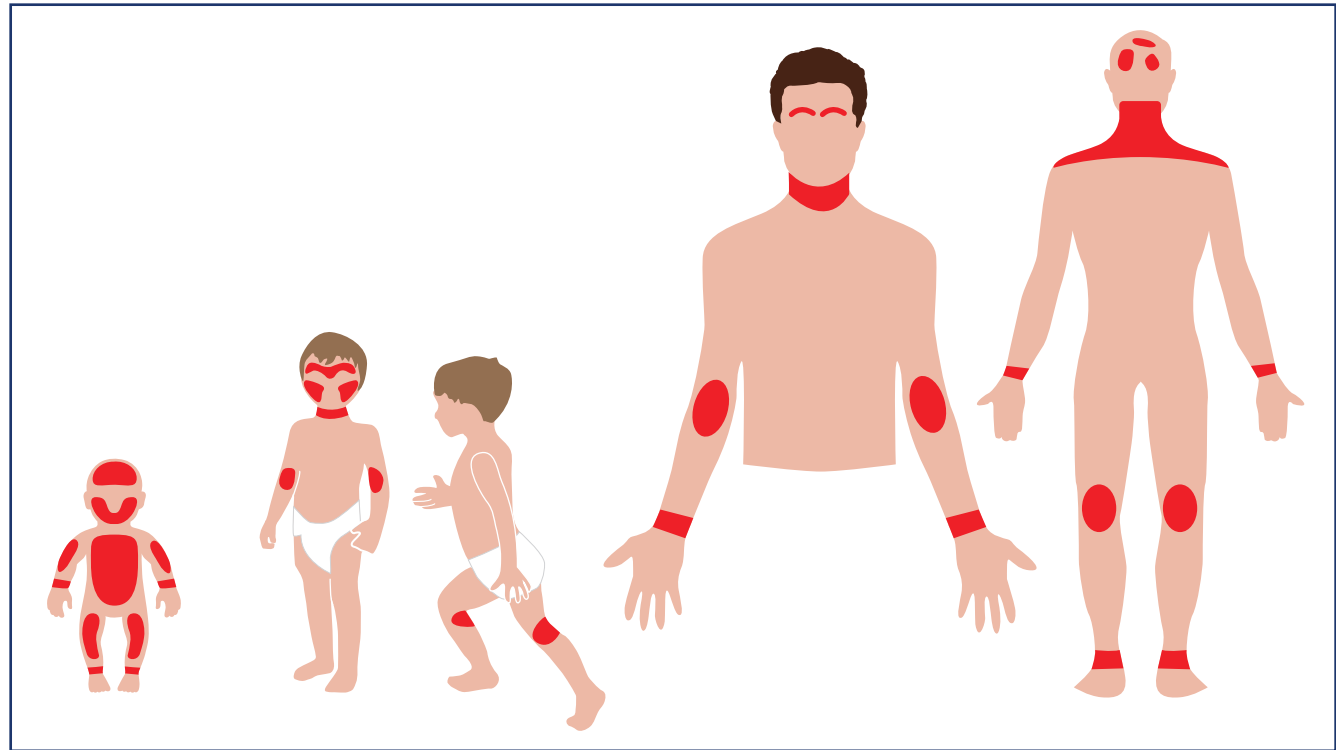
Multiple signs and symptoms characterize AD and the underlying inflammation that causes it. The following table shows how AD signs typically appear on the body (although an individual patient’s signs may vary depending upon their skin tone):

Sign/Symptom	Principal Characteristics
Dry, scaly skin ^{10,a}	Excessive dry skin (xerosis) ⁶
Redness ^{10,a}	Erythema : reddening of the skin ⁹
Lesions	Abnormal conditions on the skin, such as bumps, sores, discoloration, or oozing and crusting ¹¹
Skin thickening ^{10,a}	Thick, leathery skin patches (lichenification), occurring as a result of scratching or rubbing ⁶
Itching	Itchy skin, which is a main symptom and a factor in the AD disease burden ⁶

^aReprinted from *The Lancet*, 387(10023), Weidinger S, Novak N. Atopic dermatitis. 1109-1122. Copyright 2016, with permission from Elsevier.

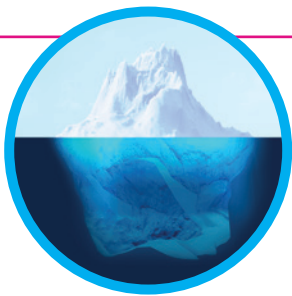
AD usually first appears in childhood.⁴ In fact, approximately 85% of patients with AD experience their first symptoms before the age of 5. But it's important to note how patterns of AD vary by age.^{10,12} **Note:** the symptoms shown below are for illustrative purposes; your particular AD signs and symptoms may appear elsewhere on your body.

Age-related locations of AD¹⁰



Reprinted from *The Lancet*, 387(10023), Weidinger S, Novak N. Atopic dermatitis. 1109-1122. Copyright 2016, with permission from Elsevier.

- In infants, AD tends to appear mainly on the face, limbs, and trunk¹⁰
- In children (age 1-2 years and up), AD may appear on the skin on the inside of a joint that folds¹⁰
- In adolescents and adults, AD may appear on the wrists, ankles, and eyelids—as well as on the head, neck, and upper trunk; AD signs may also appear on the shoulders and scalp¹⁰



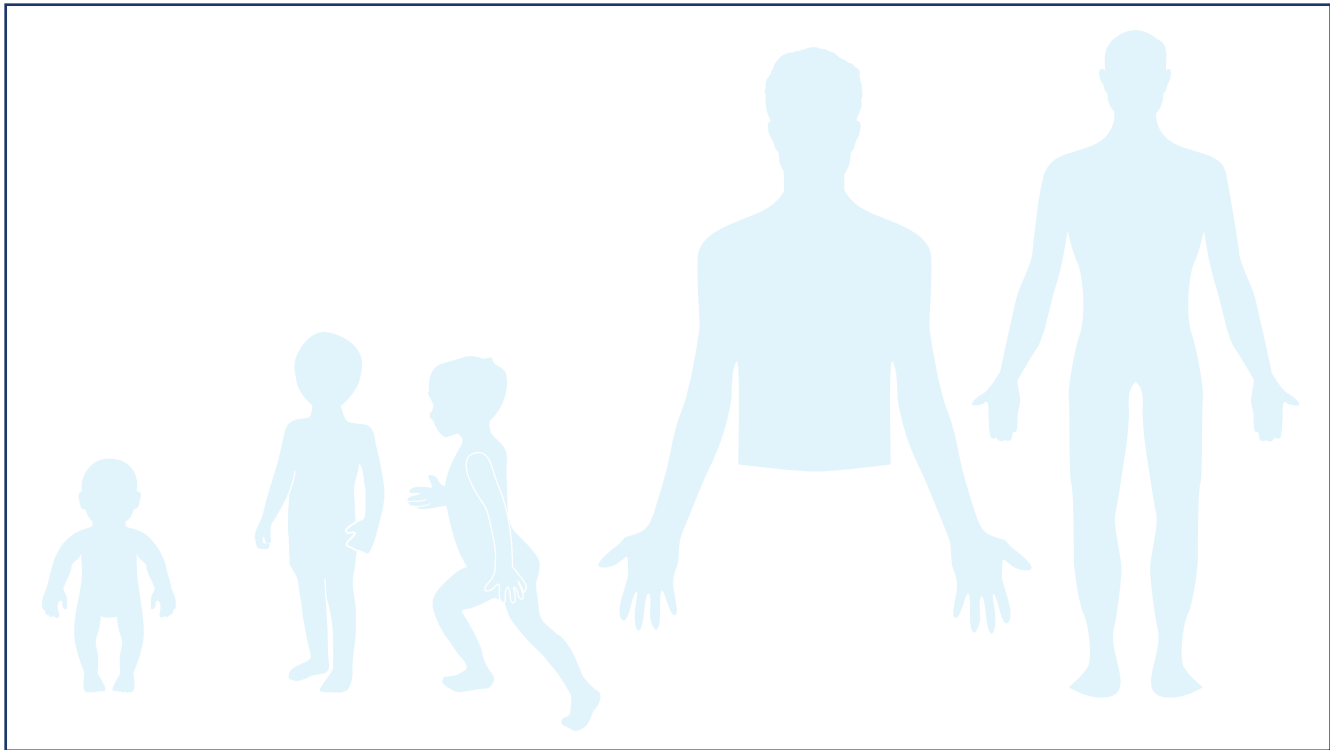
A Tip From the AD Iceberg

Your dermatologist, pediatrician, allergist, and other healthcare professionals may be ready to help you address the quality of life challenges associated with AD. You should share your concerns with your healthcare professionals. They can help you cope with disease-related obstacles that may be interfering with daily activities.



Where do *your* AD signs appear?

On the diagram below, work with your healthcare professional to mark down exactly where your lesions are, then discuss with him or her how these areas may be treated.



Treatment Takeaway

Itching—known by the medical term, **pruritus**—is a main symptom of AD and represents part of the disease burden experienced by patients and caregivers.⁶ Pruritus may lead to what's known as the *itch-scratch cycle*. The term describes how the act of scratching damages the skin barrier (leading to itchier skin and prolonging the disease) and which may be caused by complex immune system mechanisms.¹³

Note your personal questions/issues to discuss with your healthcare team:

Four horizontal lines for writing notes.

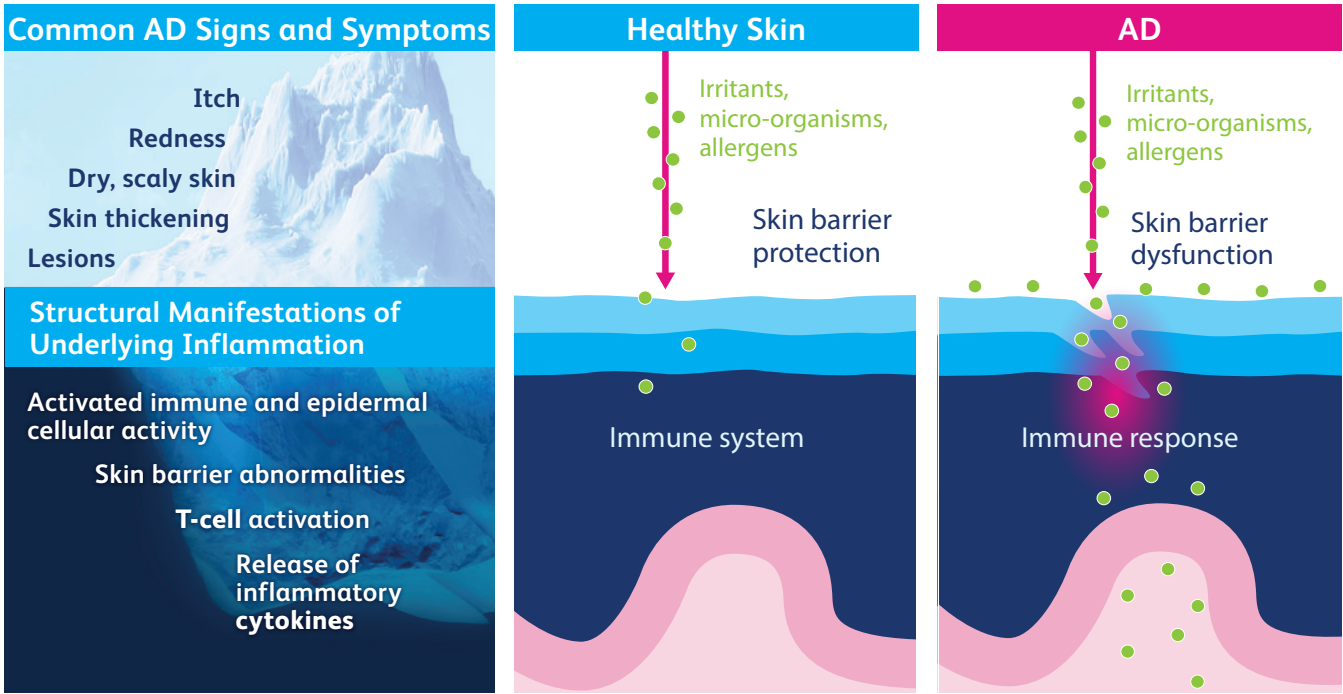
2 The Causes of AD and the Environmental Factors That Can Worsen It

The iceberg metaphor helps explain what’s happening above and below the surface of your skin when you have AD.

Look at the image below. It shows how healthy skin forms a natural barrier to external irritants. But it is believed that physical abnormalities in the outer layer of your skin (the **epidermis**)—along with **immune system** irregularities occurring below the surface of the skin—help explain the common signs of AD.¹⁴

In clinical terms, the activity under your skin causes damage to the epidermis.¹⁴ The image shows how your immune system is triggered due to *skin barrier dysfunction*, which allows irritants, micro-organisms, and **allergens** to penetrate the skin and cause cellular interactions that lead to chronic inflammation.^{14,15}

Above and Below the Skin's Surface: An Image and an Iceberg^{1,14,15}



Note your personal questions/issues to discuss with your healthcare team:

AD is often associated with the patient’s and their family members’ medical histories.⁹ But external factors may also contribute to the development of AD or be related to severity. Here are just a few of the things that can trigger AD or worsen it.

Environmental elements—also known as triggers—that may cause or worsen AD include (but are not limited to):

- Soap, bubble bath, and detergent with fragrance and perfumed products¹⁶
- Tobacco smoke, air pollution, bacteria, and mold^{16,17}
- Food allergies¹⁸
- Stress⁴
- Hormones^{19,20}
- Hot water⁴
- Wearing wool or rough fabrics next to the skin^{4,16}

There may be times when triggers will cause your AD to worsen significantly. This is called a *flare*.²¹ Flares may be caused by external or internal triggers—such as food allergies, stress, or hormones—which may increase inflammation in the body and lead to a bad rash. Flares may require special treatments, such as those involving prescription medications.⁴

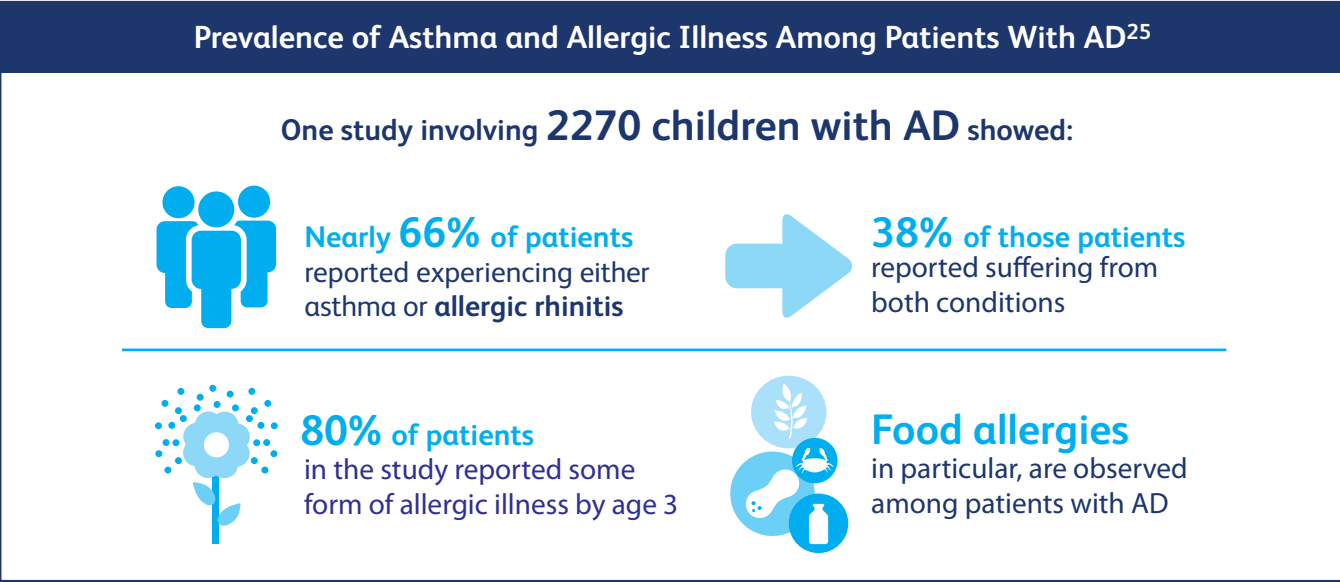
Treatment Takeaway

It’s important to try to identify your personal triggers to avoid them and the disease activity they may provoke. Understanding your triggers is key to help manage your symptoms.²² Be sure to document and share your AD experiences with your healthcare professional to help pinpoint your specific triggers.

3 AD and Other Associated Medical Conditions—Known as Comorbidities

If you have AD, you may have other health problems known as **comorbidities**, which may be physical or psychological in nature.^{18,23}

Asthma and allergies, in particular, are associated with AD.^{18,23} *Atopic march* is a specific term that describes the natural progression of allergic diseases that sometimes occurs in patients with AD, often beginning early in life.^{6,24} Statistics show how common the atopic march is.



Physical comorbidities: examples

Other physical comorbidities linked to AD include **bacterial infections** and **viral infections**.²⁶ Problems with the epidermal skin barrier make patients with AD more likely to experience these and other types of infections.

Some patients may easily get staph infections.²⁷ Data show that more than 90% of patients with AD already have staph existing on their skin (although it may have not yet caused an infection). It's important to recall the challenges of the itch-scratch cycle previously discussed, which may worsen and prolong AD.¹³

Studies have shown how frequently comorbidities may occur among patients with AD. The following table presents consolidated data from multiple studies about the prevalence of 3 AD-related comorbidities—asthma, hay fever, and food allergies—among children and adults²⁸:

Percent of Patients Experiencing Common AD-Related Comorbidities in a 1-Year Period ²⁸		
	Children, %	Adults, %
Asthma	19.8	18.7
Hay fever	34.4	28.4
Food allergy	15.1	13.2

Psychological comorbidities: examples

Comorbidities of an emotional nature, which tend to affect children with AD, include²⁹:

- Depression
- Anxiety
- Behavior disorders

If you are experiencing any of these difficulties, please consult with your doctor.



Treatment Takeaway

Comorbidities among patients with AD are common.²⁵ But remember, every patient's situation is different. AD is linked to a complex mix of genetic and environmental factors.^{16,17,30,31}


Work with your healthcare professional to better understand the specific factors that contribute to your condition.


Note your personal questions/issues to discuss with your healthcare team:


4 The Goals of AD Medical Care and Available Treatment Options


Medical guidelines established for the treatment of AD emphasize the importance of reducing itching and repairing the skin barrier to avoid worsening your condition or that of your child.³² Keeping skin well hydrated and protected is central to all AD treatment approaches.⁴


There are several steps you can take each day to help keep your skin hydrated and protected.⁴ They include³³:


**Establish a bathing routine**

**Moisturize 2 to 3 times daily**


**Use a small amount of mild non-soap or gentle skin cleanser**

**Choose fragrance-free soaps, moisturizers, and laundry detergent**

**Pat skin dry—don't rub**

 In addition to the above steps, your healthcare professional may recommend nonpharmacologic topical treatments—which include creams, lotions, and ointments—to apply externally to the skin.³⁴

Another type of nonpharmacologic treatment is wet wrap therapy.^{4,35,36} Here a moisturized layer of cotton and bandages is applied over topical treatments to help increase skin hydration and decrease itching.

-  Sometimes, prescription medications may be needed to help treat your AD. They include:
- **Topical corticosteroids (TCS)**⁶
 - **Topical calcineurin inhibitors (TCI)**⁶
 - **Topical phosphodiesterase-4 inhibitor (PDE-4i)**³⁷
 - **Systemic treatments** (pills or injectable drugs that work inside the body)⁷

Note your personal questions/issues to discuss with your healthcare team:

5 AD and Its Potential Impact on Your Quality of Life



AD can be a difficult condition to live with.³⁸ It's challenging to patients because of its symptoms and the changes it causes in physical appearance.³⁹ It may also cause burdens for caregivers who strive to help young patients in need.³⁸ In short, AD may directly affect quality of life.

For some patients, living with AD may hinder their social, academic, or professional activities depending on the severity of their condition. We have seen how AD tends to appear early in childhood. Patients often experience emotional distress due to embarrassment, social isolation, and feelings of helplessness and depression.^{38,40,41}

For caregivers, helping patients may lead to physical and emotional exhaustion due to the many hours of nighttime care required by pediatric sufferers—not to mention feelings of hopelessness, guilt, or sadness over their loved ones' medical issues.^{38,40} Quality of life problems may be linked to a patient's disease severity: that is, lifestyle challenges may be more burdensome when a patient experiences significant skin discomfort and sleep disturbance.^{38,42}



A tool is available to help you track your AD and generate information for your medical team. It is the Patient Oriented Eczema (POEM) Scale. This questionnaire lets you document your signs and symptoms—information that you can share with your healthcare professionals to help them monitor and evaluate your AD.⁴³

Treatment Takeaway

It is important to regularly discuss quality of life challenges with your healthcare professional team to help them evaluate the effectiveness of your treatment plan (and to make any required changes) as well as to determine other types of medical/healthcare support you may need to manage your AD.

Resources for People With AD



The following organizations provide educational resources on atopic dermatitis and other skin disorders:

- [National Eczema Association \(NEA\)](#)
www.nationaleczema.org
- [International Alliance of Dermatology Patient Organizations \(IADPO\)](#)
www.globalskin.org
- [Society for Pediatric Dermatology \(SPD\)](#)
www.pedsderm.net
- [American Academy of Dermatology \(AAD\)](#)
www.aad.org

Glossary of Key Terms

Allergen	A substance that can cause an allergic reaction. Common allergens include ragweed pollen, animal dander, and mold. ⁷
Allergic rhinitis	Medical term for hay fever, an allergic reaction that mimics a chronic cold. Symptoms include nasal congestion, a clear runny nose, sneezing, nose and eye itching, and postnasal drip. ⁷
Bacterial infection	Of or pertaining to an infection caused by bacteria. ⁷
Comorbidities	The coexistence of 2 or more disease processes experienced by a person at a given time. ⁷
Cytokine	A small protein released by cells that has a specific effect on the interactions between cells, on communications between cells, or on the behavior of cells. ⁷
Epidermis	The upper or outer layer of the 2 main layers of cells that make up the skin. ⁷
Erythema	Redness of the skin that results from capillary congestion and which can occur with inflammation. ⁷
Immune system	A complex bodily system that helps provide protection against infections and foreign substances. ⁷
Lichenification	A condition marked by the appearance of thick or leathery skin that results from excessive scratching or rubbing. ⁷
Pruritus	Clinical term for itching. Pruritus can result from a variety of conditions. ⁷
Systemic treatment	Any type of medicinal treatment that reaches cells throughout the body by traveling through the bloodstream. ⁷
T cell	A white blood cell type that serves an important function in the immune system’s ability to seek out and destroy pathogens. ⁷
Viral infection	An infection caused by the presence of a virus in the body. ⁷
Xerosis	A condition marked by abnormal dryness of the skin. ⁷



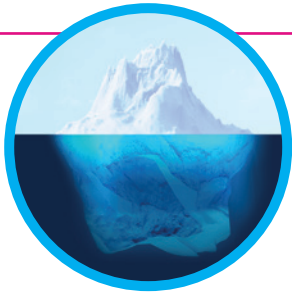
Preparing for Your Next Appointment With Your Healthcare Professional

Your next appointment:

Healthcare professional: _____

Date: _____

Location: _____



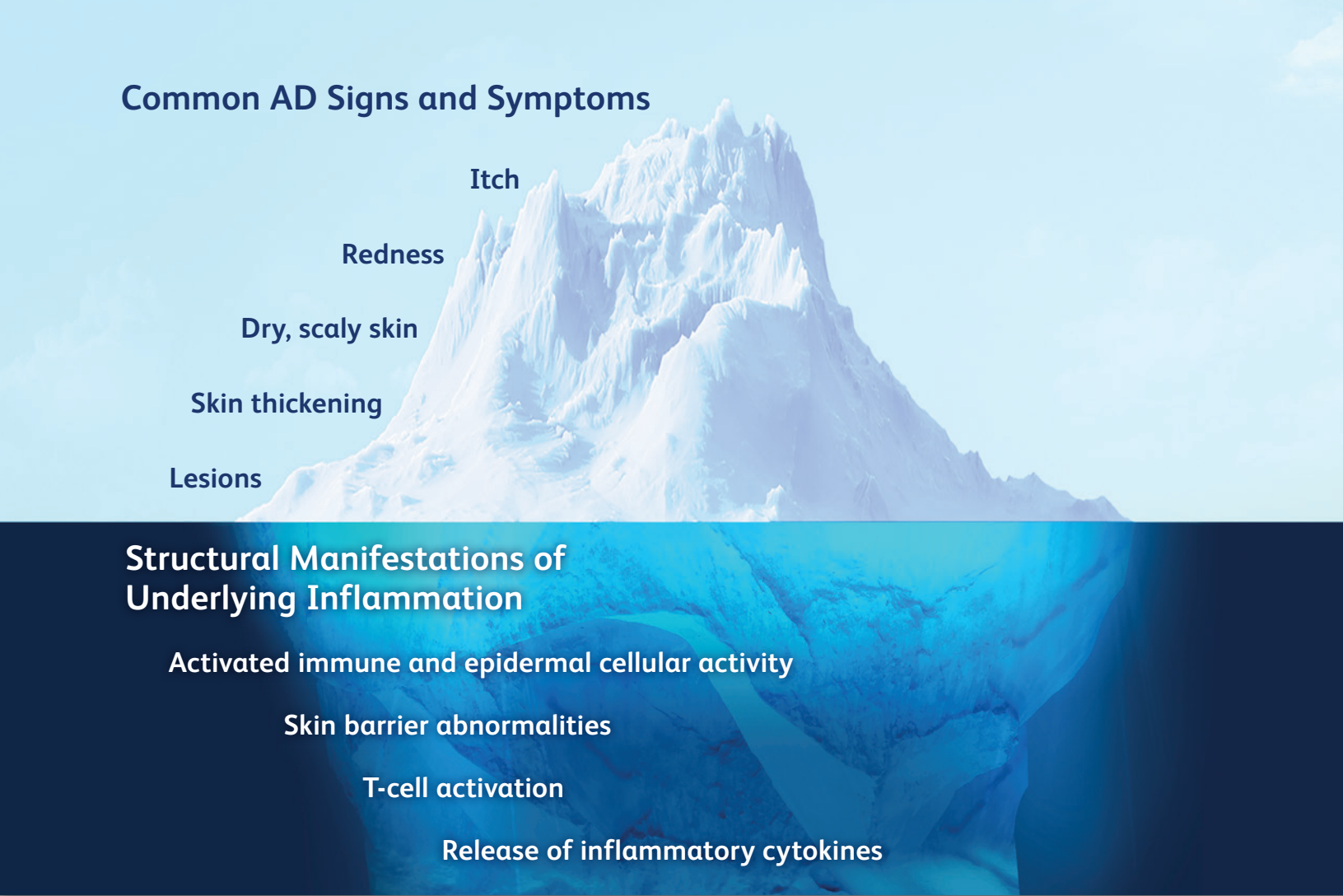
A Tip From the AD Iceberg

The symptoms of atopic dermatitis are diverse.⁶ That’s why different healthcare professionals—an “AD Care Team” comprised of dermatologists, allergists, pediatricians, and other healthcare professionals—may be needed to provide specialized medical care.



List any other questions, issues, or concerns you would like to discuss with your healthcare professional (dermatologist, family practitioner, pediatrician, allergist, nurse practitioner, physician assistant, or pharmacist) during your next visit:

Common AD Signs and Symptoms



The image features a large iceberg floating in a blue body of water under a clear sky. The tip of the iceberg, which is above the water line, is labeled with common signs and symptoms of atopic dermatitis (AD). The submerged part of the iceberg, which is below the water line, is labeled with structural manifestations of underlying inflammation. The labels are arranged vertically on the left side of the iceberg.

Itch

Redness

Dry, scaly skin

Skin thickening

Lesions

Structural Manifestations of Underlying Inflammation

Activated immune and epidermal cellular activity

Skin barrier abnormalities

T-cell activation

Release of inflammatory cytokines

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