



# Pediatrics Atopic Dermatitis Guide (Eczema)

Allergy and Immunology  
Awareness Program (AIAP)



مؤسسة حمد الطبية  
Hamad Medical Corporation

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# Introduction



This booklet, prepared by the Allergy and Immunology Awareness Program (AIAP) at Hamad Medical Corporation (HMC), is intended to provide information to the families of children with Atopic Dermatitis (AD).

Our goal is to teach patients and their families how to manage AD, so that they can lead happy and healthy lives.

I would like to thank the National Eczema Association ([www.nationaleczema.org](http://www.nationaleczema.org)) for giving me the permission to include their patient education materials in this booklet, also, the Family Counseling Center and AD Rescue Wear Company for providing us with the images.

**Dr. Mehdi Adeli, MD**

FAAAAI, FACAAI, FAP

Allergy and Immunology Senior Consultant

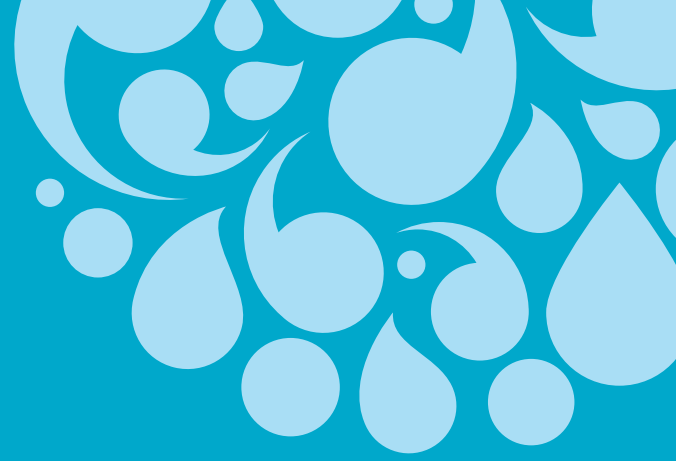
Allergy and Immunology Awareness Program (AIAP)

Hamad Medical Corporation (HMC)

Doha, Qatar



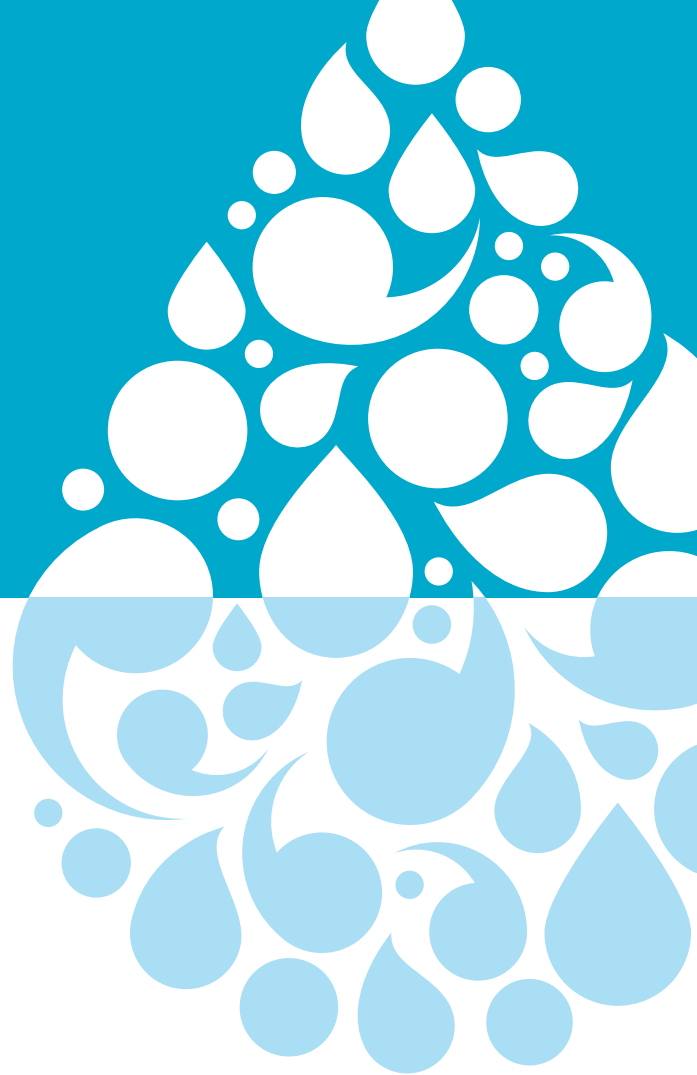
# Table of Contents



<a href="#">Atopic Dermatitis</a>	<a href="#">4</a>
<a href="#">Avoiding things that will exacerbate your rash</a>	<a href="#">7</a>
<a href="#">Irritants and allergens</a>	<a href="#">9</a>
<a href="#">Stress and Emotions</a>	<a href="#">12</a>
<a href="#">Infections</a>	<a href="#">13</a>
<a href="#">Treatment and Medication Therapy</a>	<a href="#">16</a>
<a href="#">Medications that help eczema</a>	<a href="#">23</a>
<a href="#">Atopic Dermatitis Action Plan</a>	<a href="#">26</a>
<a href="#">Wet Wrap Therapy</a>	<a href="#">28</a>
<a href="#">Living with Atopic Dermatitis</a>	<a href="#">31</a>
<a href="#">Frequently Asked Questions</a>	<a href="#">33</a>
<a href="#">Myths and Facts</a>	<a href="#">34</a>
<a href="#">Simple Chronic Eczema Management Plan</a>	<a href="#">37</a>
<a href="#">References</a>	<a href="#">39</a>



# Pediatrics Atopic Dermatitis Guide



Eczema refers to a chronic inflammatory skin condition, characterized by dry skin, with patches that are red and intensely itchy. These patches of eczema may ooze, become scaly, crusted or hardened. The patients may have times when their skin is clear and other times when they have rash. It is also called atopic eczema.

Atopy refers to a hereditary tendency toward eczema, asthma and allergic rhinitis (hay fever). People with eczema may suffer with one of the other atopic diseases. Both dermatitis and eczema mean inflammation of the skin.

## Infants and Small Children

In infants and small children, the rash is often present on the skin around the knees and elbows and the cheeks.

## Teenagers and Adults

In teenagers and adults, the rash is often present in the creases of the wrists, elbows, knees or ankles and on the face or neck. Atopic dermatitis usually begins and ends during childhood, but some people continue to have the disease into adulthood, it will present as:

- Dry, sensitive skin
- Hand dermatitis
- Skin infections

### Q: What Causes Atopic Dermatitis?

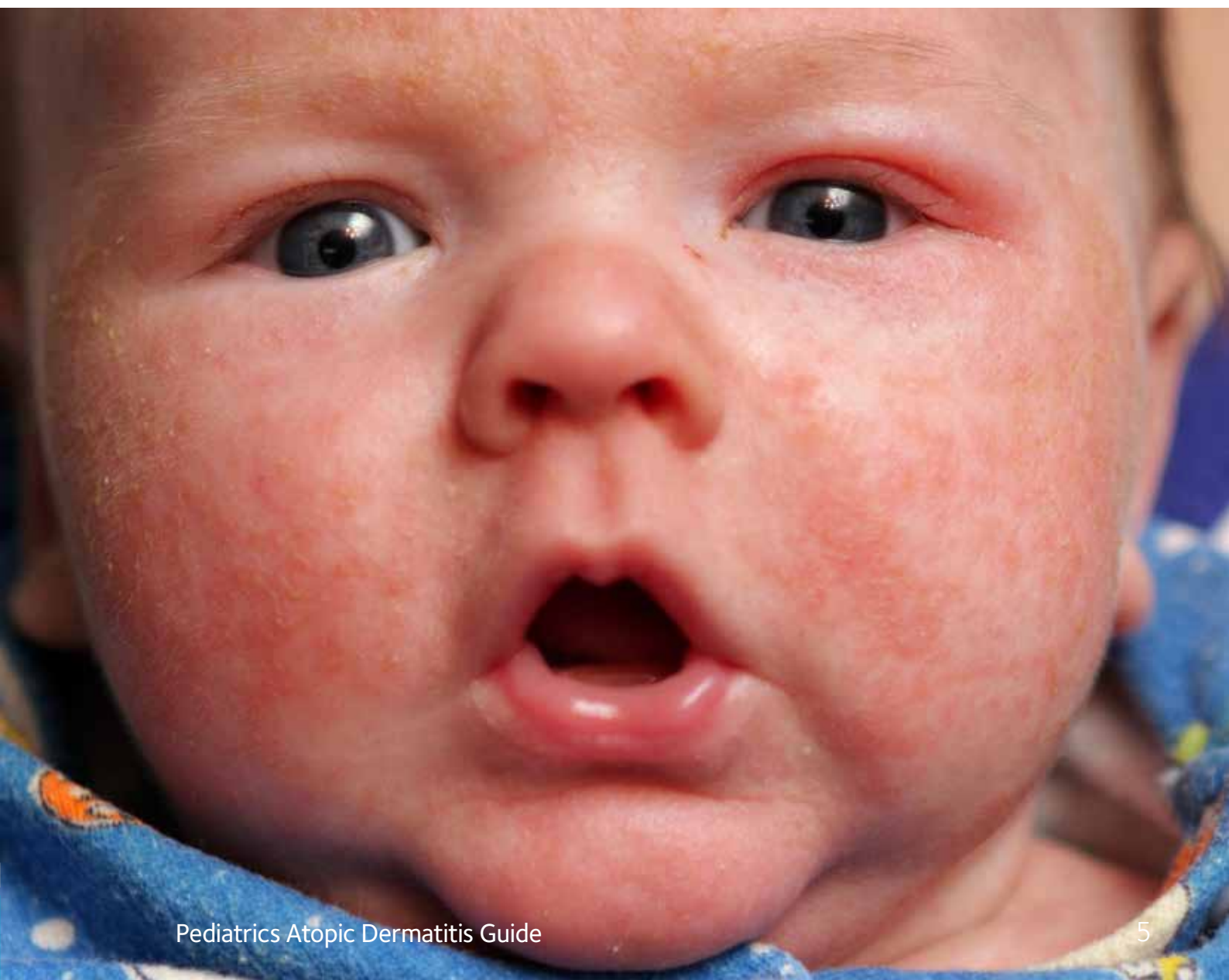
The exact cause of atopic dermatitis is unknown. Atopic Dermatitis (AD) inflammation results from too many reactive inflammatory cells in the skin. Research seeks to find the reason these cells over-react. Patients with

AD (asthma or allergic rhinitis) are born with these over-reactive cells. Research suggests that atopic dermatitis and other atopic diseases are genetically determined. AD is not contagious. People with AD cannot “give” it to someone else. When something triggers them, they don’t turn off as they should. We try to control AD by controlling the trigger factors that “turn on” inflamed skin, or by “damping the flames” with anti-inflammatory therapies.

Atopic March means the three mentioned diseases may develop one after another over a period of years. Recognizing that a person with atopic dermatitis is at a higher risk of developing one of these diseases is important for parents, patients and health care providers. Knowing that a child with a slight wheeze has had a history of atopic dermatitis for example makes it easier to diagnose the subtle onset of asthma. There are many things that make the itching and rash of atopic dermatitis worse.

**Q: How do we know if it's atopic dermatitis?**

1. **Time of onset.** This type of eczema usually begins during the first year of life and almost always within the first five years. It's seldom present at birth, but it often comes on or develops during the first six weeks. Other rashes also can start at any time, but most rashes disappear within a few days to weeks. AD tends to persist. It may wax and wane, but it keeps coming back.
2. **Itching.** Atopic dermatitis is a very itchy rash. Much of the skin damage comes from scratching and rubbing that the child cannot control.
3. **The location of the rash** can also help us recognize AD. In babies, the rash usually starts on the face or over elbows and knees, places that are easy to scratch and rub. It may spread to involve all areas of the body, although moisture in the diaper region protects the skin barrier. Later in childhood, the rash is typically in the elbow and knee folds. Sometimes it only affects the hands, and at least 70 percent of people with AD have hand eczema at some time in their life. Rashes on the feet, scalp or behind the ears are other clues that might point to AD. It is important to note that these symptoms may also indicate other conditions such as seborrheic dermatitis.
4. **The appearance of the rash** is probably the least helpful clue, because it may be very different from one person to another. Scratch marks are often seen, along with scaly dry skin. The skin may become infected and show yellow crusts or little, pinpoint, pus-containing bumps. The skin also may thicken from long-term scratching and rubbing.
5. **Heredity.** If other family members or relatives have AD, asthma or hay fever, the diagnosis of AD is more likely. The bottom line: Be sure to get your child diagnosed by a physician before assuming that the condition is AD.



## Q: Does it run in families?

AD is a familial disease, though the exact way it passes from parents to children is unclear. If one parent has AD, or any of the other atopic diseases (asthma, hay fever), the chances are 30-40 percent that the child will have one or more of the diseases. If both parents are atopic, chances are even greater that their child will have it (60-70 percent). However, the connection is not an absolute one: As many as 30 percent of the affected patients have no family members with any of these allergic disorders.

## Q: When to seek expert help?

You may choose to visit a doctor who is an expert in AD. These doctors are called allergists or dermatologists.

If you have any of the following, you need to see an expert:

- Worsening of itching, dry skin or rash
- Certain food triggers your rashes
- Being around certain things in the environment worsens your rash
- You are on medicine for your skin a lot of the time
- Frequent skin infections
- Loss of the ability to participate in daily activities
- Failure of your regular physician in treating the eczema

## Our aims of the treatment are:

The patient should be able to:

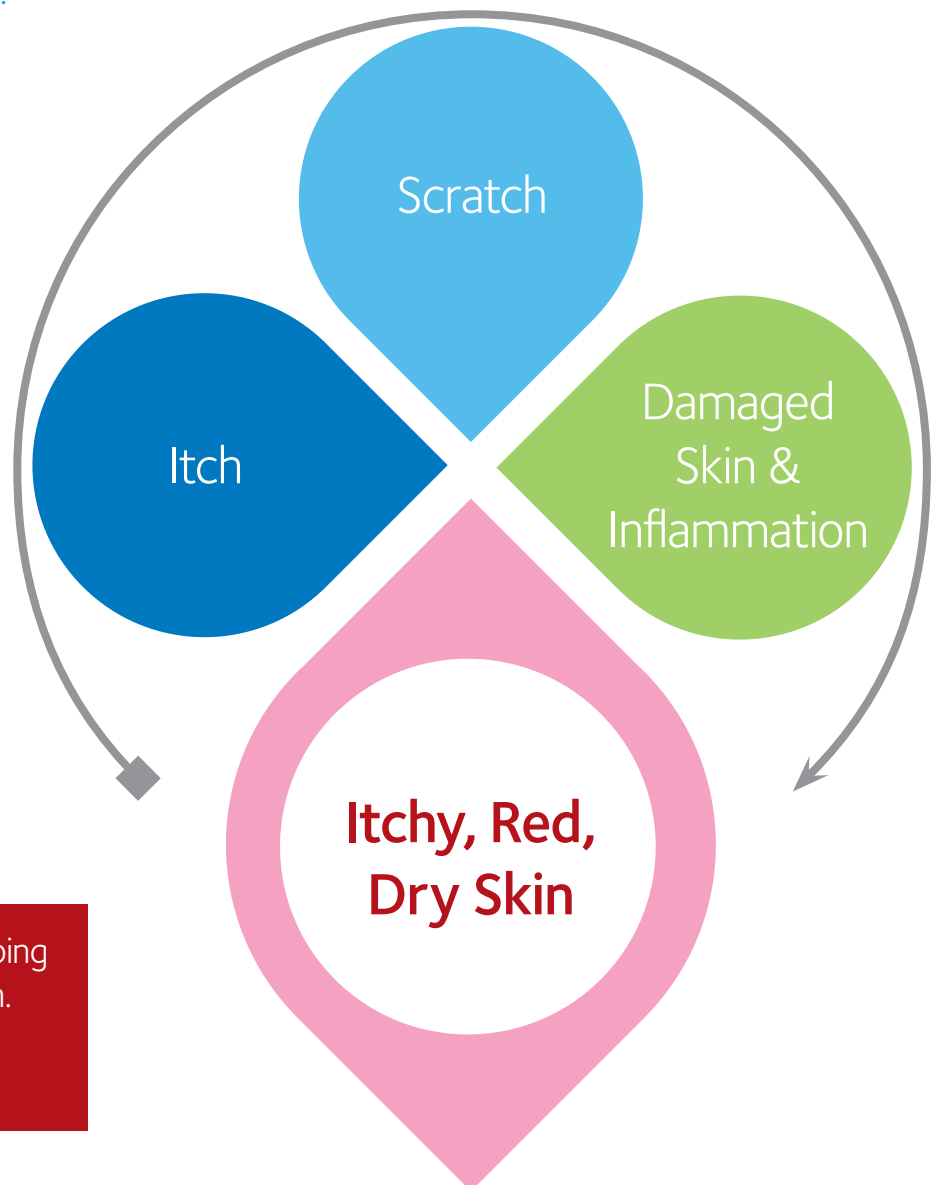
- Contribute in family, social, school and/or work activities
- Have little or no rash
- Experience very few or no side effects from medicines
- Have a good sense of his/her illness's manifestations and appropriate skin care
- Get fully restful sleep

This book explains how you can reach these goals.



# Avoiding things that will exacerbate your rash

Nearly every person with AD has had tickly skin at some time. It is not recognized why skin feels irritated. What is known is that scratching or friction leads to even itchier skin. This is called the itch-scratch cycle. Scratching and rubbing irritates the skin and can cause or exacerbate the itchiness. Over time, scratching and rubbing may cause thickening of the skin.



Scratching or rubbing leads to itchier skin. This is called the itch-scratch cycle



## Actions to be taken

- Keep fingernails very short, smooth and clean to avoid harm from scratching
- Use moisturizer when you feel itchy, as an alternative to scratching or rubbing
- Apply medicines prescribed by your doctor
- Keep your hands busy and away from the rash

Lots of things can make the itch and rash of AD worse. These are different for each individual. Ask your physician about what triggers it. Irritants, extremes of temperature and humidity, allergies, emotions and stress can worsen itching and rash. Infections and exceedingly dry skin also can be a dilemma.



# Irritants and allergens

Things that cause inflammation, itching or redness are called irritants or allergens. Chemicals, solvents, soaps, detergents, fragrances, ingredients in skin care products, some fabrics and smoke are things you may have to stay away from. The physician may advocate special patch testing to see if products you use or are exposed to may be causing an allergic skin response.



## Actions you can take

- Wash new clothes prior to their first wear because formaldehyde and other irritating chemicals are present
- Wear cotton or cotton-blend clothing as these may reduce the amount of irritation caused by other fabrics such as wool. Remove labels if they irritate you. If seams cause itching, try wearing clothes inside-out while at home
- Use fragrance-free, dye-free liquid detergent, if normal laundry detergent is irritating. A second rinse can help get rid of remaining laundry detergent
- Apply a sunscreen with SPF 15 or higher to avoid sunburn which can cause further inflammation
- If your sunscreen is irritating, try different products or sunscreens made for the face
- Shower or bathe after swimming or using a hot tub. Use a mild cleanser to remove chemicals and apply moisturizer

## Temperature and humidity

High temperatures and humidity, like what we experience in Qatar, can be a problem for people with atopic dermatitis. Sweat caused by overheating and elevated humidity can aggravate the skin. Low humidity causes water to be lost from the skin. This can also lead to dry skin and irritation.

## Actions to be taken

- Keeping the skin barrier integral. Remember to MOISTURIZE!
- Try to keep your environment at a comfortable temperature and humidity. Don't overheat your home, particularly the bedroom
- Dress in loose fitting, soft, open-weave clothing. Avoid fabrics made of wool, nylon or stiff material. If sweating causes itching, find ways to stay cooler and reduce physical exertion
- If you develop itching after sweating or exposure to dust, pollen or others, have a cooling bath or shower, then dry yourself and moisturize within three minutes

## Allergies

Allergens are materials (such as pollen, pet hair, certain food and dust mites) that create allergic responses. Allergic diseases such as asthma and hay fever are a reaction to allergens. Allergic symptoms, such as itching and sneezing, appear rapidly after contact to airborne allergens and last only temporarily. However, slower, long-term, chronic eczema might not be easy to associate with specific allergens.

Food allergies can cause flare-ups, in particular for children with moderate to severe eczema. Dust mites, cockroaches, pollens, hairy/feathered animals, and chemicals can also aggravate eczema in young children. Your doctor might advise allergy testing and food challenges to see if certain allergens worsen itching or rash.

Allergy testing consists of skin testing, blood tests or patch tests. Many actions can be taken to avoid things that activate your allergies including making the bedroom and other parts of the house allergen-free.

With allergy-prone children, hairy animals are a risk. If you have pets, keep them outside or at least off beds, rugs and furniture. Dust mites accumulate in bedroom carpets and bedclothes. Easy ways to control this are coverings for pillows and mattresses, removing bedroom carpets and regular washing of bedclothes in hot water.

Discuss about what actions you can take to avoid allergens with your doctor.

## Making the bedroom skin-friendly is vital







## Food Allergies

Food allergies may be the reason of itching or rash that occurs right after consumption, particularly in children. Some widespread food allergens include milk, eggs, peanuts, wheat, nuts, soy and seafood. The majority of people are allergic to only one, two or at the most three foods. If you suspect food allergy you have to think carefully. Probable offenders are eggs, milk, peanuts, soy, wheat and seafood, but any food can do it. You can exclude the most obvious offenders for a week to see if you notice any changes.

Replace hydrolysate (e.g. Alimentum® or Nutramagen®) with cow's milk formula. Keep a food diary to see what

your triggers are. When the skin clears up, try the food you suspect is causing the reaction. Watch for signs of itching or redness over the next two hours. Eradicate a food group if it causes hives or face swelling.

Don't eliminate multiple food groups at the same time – it's uncommon to have more than one or two food allergies.

Consult your doctor about maintaining a balanced diet.





## Stress and emotions

Although emotions and stress do not cause AD, they may exacerbate it. Annoyance, frustration and discomfort can lead to flushing and itching. Day-to-day stresses as well as major stressful events can contribute to, or make the itch-scratch cycle worse.

### Actions to be taken

Learn to manage stress

- Seek help or assistance from family and friends
- Study how to cope and practice relaxation skills
- Aim to make eczema management part of your daily family routine
- Help children learn skills to cope with their condition  
Consult your physician if you require help dealing with emotions and pressure

## Infections

Skin infections are frequently problem for people with AD. Infectious organisms (bacteria, viruses and fungi) are frequently present in higher than normal numbers on the skin.

Skin that has been scratched or has a rash is more easily infected. Signs of skin infection consist of:

- Redness
- Oozing
- Cold sores or fever blisters

Bacterial “staph” infections are the most common, particularly on arms and legs. Such infections could be suspected if areas are weeping or crusted or if small “pus-bumps” are seen.

A common virus infection among children, Molluscum sp., tends to be more severe in children with eczema. Molluscum infections look like small bumps, often with a central white core.

Herpes infections (such as fever blisters or cold sores) and fungi (ringworm or athlete’s foot) can also aggravate eczema. If a number of lesions look unusual, ask your doctor. If they turn out to be infected, they can be treated with antibiotics.





### Q: *Staphylococcus aureus*- what is it?

When we talk about staph we are referring to the bacteria *Staphylococcus aureus*. Staph is generally a sturdy organism that can live harmlessly on the skin. A lot of us in the community carry the bacteria without any active infection or disease.

Staph is a problem when the skin is broken for any reason. We see this in atopic eczema when dry, itchy skin causes the patient to scratch. Scratching often leads to broken, damaged skin. The barrier function that the skin normally provides is disrupted allowing staph to enter. For some people, staph infections play a major role in the flares and exacerbations of their eczema.

Staph not only causes infection but it releases a potent toxin. This toxin stimulates the body's immune response to release histamine, which in turn causes inflammation and itch. And so the cycle goes on.





#### Q: What are bleach baths?

Bleach baths can reduce bacteria on the skin. To make one, mix one quarter to a half a cup of common liquid bleach (e.g. Clorox) in to a full bath tub. Soak the patient in chlorinated water for about 10 minutes. Rinse thoroughly with fresh water at the end. This can be done two to three times a week.

To prevent spread of infection and re-infection

- Wash hands after contact with affected skin for example, following baths or cream application etc
- All those living in the house are to be vigilant with hand washing
- Each family member should have their own towel
- Put itchy kids' towels in laundry after each use
- Bathe children separately
- Keep lids securely on creams
- Use Oilatum Plus or household bleach in the bath (any brand, one teaspoon to half a cup per adult sized bath) to kill the staph
- If infection is present do not wet wrap

#### Actions to be taken

- Call your doctor right away if you have any signs of infection
- Pursue your doctor's action plan to treat the infection





## Treatment and Medication Therapy

### Soak and Seal

- Dry skin makes the itching and rash of AD worse.
- Dry skin can be caused by wind, low humidity, soaps, some skin care products and washing or bathing without proper moisturizing
- The most imperative treatment for dry skin is to put water back in it. Soaking in a bath or shower are the best ways to get water into the skin. Softly pat dry, leaving skin a bit moist. Apply a thick coating of moisturizer right away to seal the water in the skin

### Daily "Soak and Seal".

- Soak in the bathtub or shower each day for 15–20 minutes so that the skin absorbs a lot of water. Use warm water
- A gentle skin cleanser should be used without scrubbing
- Excess water should be gently pat away and the recommended medicine or moisturizer should be immediately applied to moist skin. Try to do this within three minutes. This seals in the water. (If you are applying skin medicine, do not apply moisturizer over it).



## Moisturizers

### Q: Emollients (moisturizers) what are they?

Emollients (moisturizers) are a major part of eczema treatment. They are used to replace lost skin moisture, help restore the normal barrier function of the skin, help the skin feel more comfortable and reduce itch. Some children's skin responds better to some moisturizers rather than others. It doesn't matter which product you choose, the point is emolliation. It should emolliate, then emolliate some more. Even from a young age itchy kids can apply their emollients themselves. Let them help if they show interest. Encourage them if they don't. Itchy kids can gain power over their eczema by being fully involved in their care and moisturizing is a safe easy way to do that. It gives them something constructive to do when they are itchy and they can do something FOR themselves rather than have things done TO them. As

they get older, encourage more responsibility towards initiating their self-care, similar to how we teach them to brush their teeth. They need to know the equipment they need for the job, where to get it, how to do it, when to do it and how to pack up after.

Use the moisturizer that fits your skin best. Throughout the day, apply more moisturizer every time your skin feels dry or itchy.

A skin cleanser is a bar or liquid used to clean the skin. Use products that are authorized for use on "sensitive skin."

A moisturizer is a skin care product that adds moisture to the skin. Ointments and creams are recommended instead of lotion for people with very dry skin.



**Q: Do emollients (moisturizers) contain steroids?**

No, emollients do not contain any steroids.

**Q: How often is it safe to apply emollients (moisturizers)?**

Emollients are very safe to use. You can apply them as often as you need or wish.

A good timetable to follow is:

- Apply when you get up in the morning
- Re-apply at lunchtime
- Apply again when you get home from work or school
- Re-apply after your evening meal
- A final application before you go to bed at night
- If you feel the need to apply more frequently because your skin is feeling 'prune-like' then it is perfectly safe to do so without any worries

**Q: How do I take care of my dry skin?**

The most important treatment for dry skin is to put water back in it. The best way to get water into your skin is to briefly soak in a bath or shower and to moisturize immediately afterwards.

Use of an effective moisturizer several times every day improves skin hydration and barrier function. Moisturizer should be applied to the hands every time they are washed or in contact with water.

The goal of bathing and moisturizing is to help heal the skin. To repair the skin, it is necessary to decrease water loss.

Some specialists recommend that you perform your bathing and moisturizing regime at night just before going to bed. You are unlikely to further dry out or irritate your skin while sleeping, so the water can be more thoroughly absorbed into your skin.

If you have hand eczema, specialists recommend that you soak your hands in water, apply prescription medications and moisturizer (preferably an ointment) and put on pure cotton gloves before going to sleep.

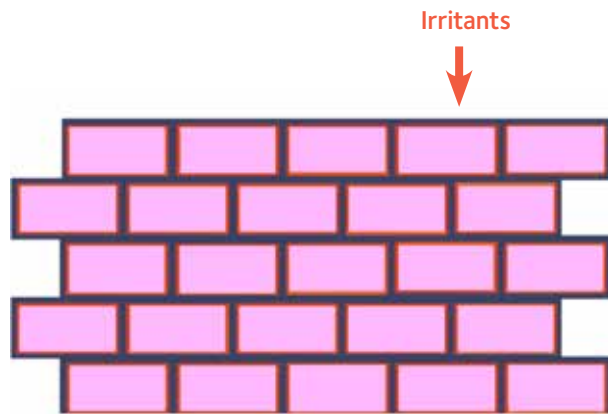
**Q: If I am using prescription drugs for my eczema, do I still need to moisturize?**

Basic skin care can enhance the effect of prescription drugs, and it can prevent or minimize the severity of eczema relapse.

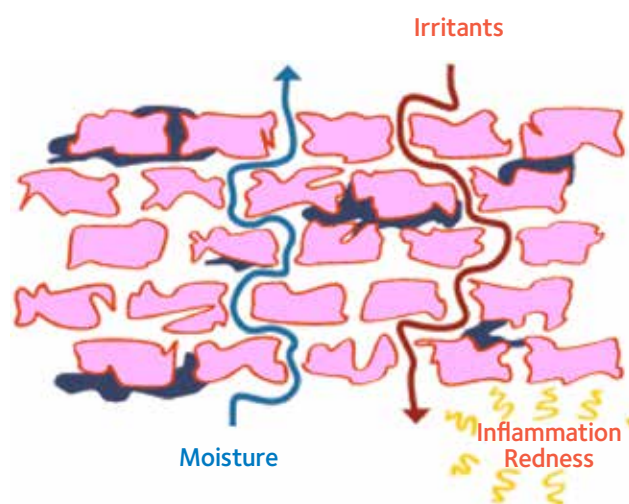


**Q: What does moisturizing do?**

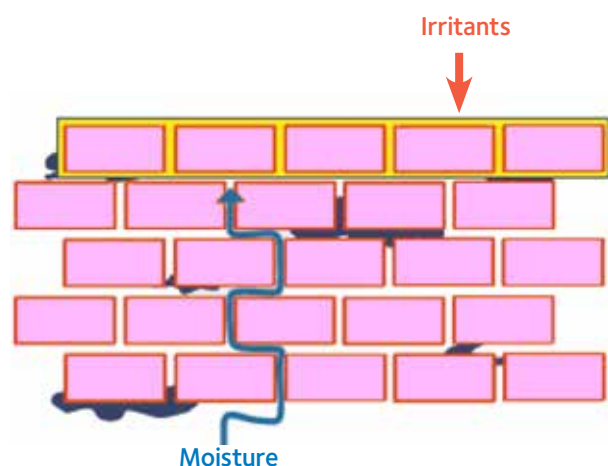
Moisturizing improves skin hydration and barrier function. Moisturizers are more effective when applied to skin that has been soaked in water.



Normal skin is made of units called cells. These cells need to stay glued together. Moisturizing factors and fats help seal the water on the inside and keep the skin elastic.



When skin is dry, the glue shrivels up creating cracks and breaks allowing allergens and germs to enter and even more water to leave.



This can be minimized by the regular use of emollients and moisturizers. Neglecting your moisturizing regimen can cause the redness and itchiness to recur.



## Q: What are the different kinds of moisturizers?

There are three basic classes of moisturizers:

**Ointments** are semi-solid greases that help to hydrate the skin by preventing water loss. Petroleum jelly has no additional ingredients, whereas other ointments contain a small proportion of water or other ingredients to make the ointment more spreadable. Ointments are very good at helping the skin retain moisture but they are often disliked because of their greasiness.

**Creams** are thick mixtures of greases in water or another liquid. They contain a lower proportion of grease than ointments, making them less greasy.



A warning: creams often contain stabilizers and preservatives to prevent separation of their main ingredients, and these additives can cause skin irritation or even allergic reactions for some people.

**Lotions** are mixtures of oil and water, with water being the main ingredient. Most lotions do not function well as moisturizers for people with dry skin conditions because the water in the lotion evaporates quickly.

Apply moisturizer to your skin immediately after your bath or shower and throughout the day whenever your skin feels dry or itchy. Some people prefer to use creams and lotions during the day and ointments at night.

## Q: What are proper moisturizing techniques?

Just as it is important to use proper bathing techniques, it is important to properly apply moisturizers to your skin within three minutes of showering or bathing.

- While your skin is still wet, apply prescription medications, and then apply a moisturizer to the rest of your unaffected skin
- A thick bland product is best
- Dispense the moisturizer from large jars with a clean spoon, butter knife, or pump to avoid contamination
- Take a dollop of moisturizer from the jar, soften it by rubbing it between your hands, and apply it using the palm of your hand stroking in a downward direction.
- Do NOT rub by stroking up and down or around in circles
- Leave a tacky film of moisturizer on your skin; it will be absorbed in a few minutes

Everyone has different preferences concerning how products feel on their skin, so try different products until you find one that feels comfortable. Continue use of the moisturizer(s) even after the affected area heals to prevent recurrence.

## Q: How can I reduce skin irritation?

After bathing and moisturizing, the next important step is to attempt to reduce skin irritation.

- **Don't scratch or rub the skin.** These actions can worsen any itch. Instead, apply a moisturizer whenever the skin feels dry or itchy



- **Wash all new clothes before wearing them.** This removes formaldehyde and other potentially irritating chemicals which are used during production and packing

- Add a second rinse cycle to ensure the removal of soap if you are concerned. Use a mild detergent that is dye-free and fragrance-free
- Wear garments that allow air to pass freely to your skin. Open-weave, loose-fitting, cotton-blend clothing may be most comfortable. Avoid wearing wool



Wet wrap therapy can effectively rehydrate and calm the skin.

- Work and sleep in comfortable surroundings. Try to maintain a fairly constant temperature and humidity level. Cooler temperatures are preferred but not so cool as to initiate chilling
- Keep fingernails very short and smooth. File them daily to help prevent damage due to scratching
- Make appropriate use of sedating antihistamines. These may reduce itching to some degree through their tranquilizing and sedative effects
- Use sunscreen on a regular basis and always avoid getting sunburned. Use a sunscreen with an SPF of 15 or higher. Sunscreens made for the face are often

less irritating than regular sunscreens. Zinc oxide or titanium dioxide-based products are less irritating

- Go for a swim, this can provide good hydration. Chlorine can also decrease bacteria on the skin that can cause itching or develop into an infection. Of course, residual chlorine or bromine left on the skin after swimming in a pool or hot tub may be irritating, so take a quick shower or bath immediately after swimming, washing with a mild cleanser from head to toe, and then apply an appropriate moisturizer while still wet

## Q: How does water help my skin?

- Water hydrates the stratum corneum (the top layer of skin)
- Water softens skin so the topical medications and moisturizers can be absorbed
- Water removes allergens and irritants
- Water cleanses, debrides, and removes crusted tissue
- Water is relaxing and reduces stress

## Q: Is water an irritant or a treatment?

Water **irritates** skin IF...

- Skin is frequently wet without the immediate application of an effective moisturizer
- Moisture evaporates, causing the skin barrier to become dry and irritated

Water **hydrates** skin IF...

- After skin is wet, an effective moisturizer is applied within 3 minutes
- Hydration is retained, keeping the skin barrier intact and flexible

## Q: What are some cleansing tips?

- Gently cleanse your skin each day
- Use mild, non-soap cleansers
- Use fragrance-free, dye-free, low-pH (less than 5.5) cleansing products
- Moisturize immediately after cleansing while your skin is still wet
- Avoid scrubbing with a washcloth or towel; pat instead

## ECZEMA

**Q: What is preferable, a bath or a shower?**

**For how long?**

Either a bath or shower (about 10 – 15 minutes long) will keep the skin from drying out.

Do **NOT** rub your skin.

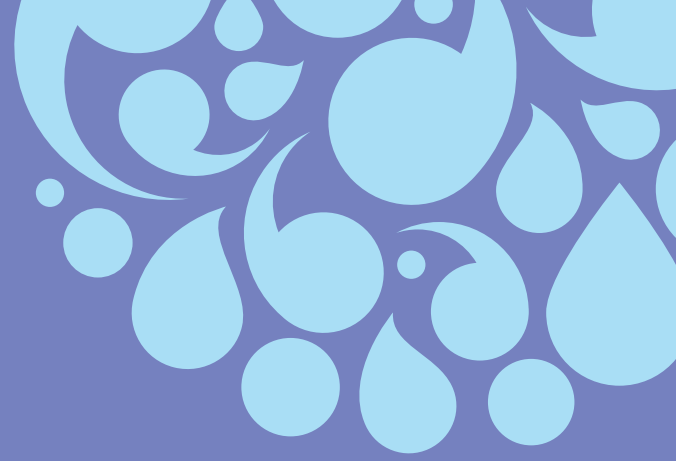
Do **NOT** completely dry your skin after your shower or bath. Instead, pat yourself lightly with a towel if needed.



While your skin is still damp (within three minutes of taking a bath or shower), apply any special skin medications prescribed for you and then liberally apply a moisturizer on remaining healthy skin. This will seal in the water and make the skin less dry and itchy.

Soaking in a bath or shower and then applying a thick layer of moisturizer right away is the most significant management for dry skin.

# Medications that help eczema



Medicines are additional to every day skin care when itching and rash are not well controlled and when there is infection.

The medications used in atopic dermatitis consist of:

- Topical steroids
- Topical immunomodulators
- Tar products
- Anti-infectives
- Antihistamines

## 1. Topical Steroids

Steroid medicines that are applied to the skin are called topical steroids. Topical steroids are drugs that battle inflammation.

They are extremely supportive when rash is not well controlled. Topical steroids exist in lots of forms such as ointments, creams, lotions and gels. It is significant to recognize that topical steroids are made in low to super potent strengths. We recommend not to alternate one topical steroid for another without the doctor's recommendation. If it is used properly, topical steroids can work well. Oral Steroids (pills or liquids), ought to be avoided due to their side effects and the rash often returns after they are stopped.

Hydrocortisone, a very mild steroid, is fairly safe. The stronger ones can cause thinned skin, stretch marks and even growth retardation. Suppression of the adrenal gland may occur if used for too long in the same areas of the body. The child's use of topical steroids should be monitored. Always consult the physician about the strength and side effects of prescribed corticosteroid medicines and follow the product directions with care.

## Tips for using topical corticosteroids

- Use the least potent corticosteroid possible to control the inflammation
- Only apply the corticosteroid to areas of skin affected by the skin disease
- It is most effective to apply corticosteroids immediately after bathing
- Emollients may work better if applied to wet skin.
- Do not wet the skin without applying an emollient afterwards
- Only use the corticosteroid as often as prescribed by your doctor – more than twice daily increases the risks but not the benefits of corticosteroids; for many topical corticosteroids, once-a-day application is sufficient
- Do not use a topical corticosteroid as a moisturizer
- Wherever possible, avoid using large quantities of corticosteroids for long periods of time
- Be aware that certain areas of skin – the face, genitals, raw skin, thin skin and areas of skin that rub together, such as beneath the breasts or between the buttocks or thighs – absorb more corticosteroid than other areas
- Applying dressings over the area of skin treated with the corticosteroid increases the potency and absorption of corticosteroid into the skin. Only use dressings with topical corticosteroids if advised to do so by a physician
- Once the inflammation is under control, reduce or stop using the corticosteroid
- Remember: proper bathing and moisturizing practice helps prevent flare-ups



- The vehicle (type of base in which the medication is contained) and type of corticosteroid influences the strength of the topical medication more than the percentage of medication dissolved in the vehicle
- Given the same percentage and type of topical corticosteroid, the following list generally represents the strengths of the medication, from highest to lowest: Ointment (highest), creams, lotions (lowest)
- Topical corticosteroids come in various strengths, ranging from “super potent” (Class I) to weaker, “least potent” (Class 7)

The following topical corticosteroids medications are commonly used in younger children.

Clobetasol propionate 0.05% foam > 12 years

Fluocinonide 0.1% cream > 12 years

Fluocinolone acetonide 0.01% oil > two years

Mometasone 0.1% cream/ointment > two years

Fluticasone 0.05% lotion/cream > one year

Aclometasone 0.05% cream/ointment > one year

Prednicarbate 0.1% cream/ointment > one year

Desonide 0.05% foam/gel > three months

Hydrocortisone butyrate 0.1% cream > three months

Hydrocortisone 1% cream/ointment > three months

However, topical corticosteroids are often used for indications and ages that have not been specifically studied. This is referred to as “off-label” use.

## Q: What are the most common risks of using topical corticosteroids?

Most people immediately think of thinning of the skin (skin atrophy). This is a well-recognized possible side effect. It is true that potent and super potent topical corticosteroids can cause skin atrophy if applied too frequently and for a prolonged time without a break.

Although early skin thinning can disappear if the topical corticosteroid is discontinued, prolonged use can cause permanent stretch marks (striae). Stretch marks usually occur on the upper inner thighs, under the arms and in the elbow and knee creases. It should be noted that preteens and teenagers who have never used corticosteroids can also get stretch marks.

Permanent skin atrophy from topical corticosteroids is now extremely uncommon when the treatment is used properly. In the past, recommendations did not specify the amount, frequency and duration with which to apply topical corticosteroids. We now know that these medications are safest when used intermittently, in an appropriate quantity, and for an appropriate length of time.

Many patients with under-treated eczema have the opposite of skin thinning, and actually develop thickening, and sometimes darkening of the skin (changes known as lichenification). This is the skin’s response to rubbing and scratching.

## Q: What are some other risks?

Frequent and prolonged application of a topical corticosteroid to the eyelids can cause glaucoma and even cataracts. Topical corticosteroids can occasionally cause tiny pink bumps and acne, especially when used on the face and around the mouth. On the body, greasy corticosteroid ointments can rarely cause redness around hair follicles, sometimes with a pus bump centered in the follicle (folliculitis). When corticosteroids are applied to large body surface areas, enough may be absorbed to inhibit the body’s own production of cortisol, a condition known as “adrenal suppression”.

The risk of adrenal suppression is highest with high potency (Class one to two) corticosteroids. Infants and young children have a higher ratio of body surface area compared to their weight, so they are more susceptible to corticosteroid absorption. If a child is given corticosteroids by mouth, in large doses or over a long period of time, prolonged adrenal suppression can be associated with growth suppression and weakened immune responses. Adrenal suppression does not have a significant effect on a child’s brain development. The risk of uncontrolled eczema is far greater than that of topical corticosteroid use.

## 2. Topical Calcineurin Inhibitors (TCIs)

Topical Calcineurin Inhibitors (TCIs) are also medicines that are applied to the skin. They are not steroids. TCIs don't cause steroid side effects. They treat inflammation.

A common side effect of TCIs is skin burning. This is frequently a short-term problem.

They can suppress the immune system in the skin so that the use of sun protection for the children getting this treatment is suggested.

### Common Topical Calcineurin Inhibitors (TCIs) include:

- Protopic® ointment (tacrolimus)
- Elidel® cream (pimecrolimus)

For children less than two years of age these medications are only used off-label and as always, with any medication, they ought to be used with careful regulation of a doctor.

## 3. Tar Preparations

Tar creams or bath emulsions can be helpful for mild inflammation.

## 4. Antibiotics

Oral or topical antibiotics reduce the surface bacterial infections that may accompany flares of AD.

## 5. Antihistamines

Oral Antihistamines (taken by mouth) can help decrease itching. Some antihistamines cause sleepiness. This can make the patient feel less itchy and help him/her sleep. We recommend avoiding creams and lotions that have antihistamines or anesthetics (for numbing). They have the potential to cause skin irritation and allergic skin reactions.



Every day “Soak and Seal” skin care has to be continued throughout topical treatment. Following soaking, apply the topical medicine to your rash and moisturizer to the rest of your skin.

## Atopic Dermatitis Action Plan

It was found that an action plan will help in controlling the patient's atopic dermatitis.

It will help the patient know what to do if the skin is dry, itchy or has a rash. Each patient should have his/her own action plan; the physician can help develop it.

The action plan should include the following:

- Next step if every day "Soak and Seal" skin care isn't sufficient
- What the best way to decrease scratching is
- When to start, stop, increase or decrease medicine
- What the signs of infection are and what should be done
- When to call for help

Before leaving the clinic, make sure the action plan is understandable.

Feel free to contact the doctors for any question or concern.

Always be ready; know what to look for and what to do. Always make sure to have a supply of the skin care products and medicines you require.


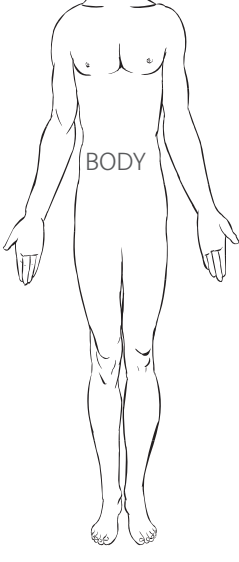
### Q: How to treat severe symptoms

If the skin is not improving and gets extra dry, itchy or the rash is getting worse, contact your hospital for counsel. Increasing daily "Soak and Seal" skin care to two to three times a day can be the solution, or maybe even a trial of different medication (The physician will decide).



If you feel that nothing will bring relief, be sure to talk with your physician about wet-wrap therapy. It may be exactly what is needed to "wrap up" severe eczema.

## Allergy & Immunology Eczema Action Plan

		CLEAR	MILD-MODERATE	SEVERE
 FACE	AM	Moisturizer* Protopic/ Elidel	Moisturizer*: Protopic/ Elidel Hydrocortisone Butyrate ointment	Moisturizer*; Hydrocortisone Butyrate ointment Bactroban/Fusidic Acid ointment
	PM	Moisturizer* Protopic/ Elidel	Moisturizer*: Protopic/ Elidel Hydrocortisone Butyrate ointment	Moisturizer*; Hydrocortisone Butyrate ointment Bactroban/Fusidic Acid ointment
 BODY	AM	Moisturizer* May use Protopic/ Elidel or Hydrocortisone Butyrate ointment to small flareups for several days as needed	Moisturizer* Protopic/Elidel Corticosteroid: _____ _____ Bactroban/Fusidic Acid ointment	Moisturizer* Corticosteroid: _____ _____ Bactroban/Fusidic Acid ointment <i>Call your doctor if not improving after 2 weeks</i>
	PM	Moisturizer* May use Protopic/ Elidel or Hydrocortisone Butyrate ointment to small flareups for several days as needed	Moisturizer* Protopic/Elidel Corticosteroid: _____ Bactroban/Fusidic Acid ointment Bleach Bath Wet wraps	Moisturizer* Corticosteroid: _____ Bactroban/Fusidic Acid ointment Bleach Bath Wet Wraps <i>Call your doctor if not improving after 2 weeks</i>

- Frequently moisturize:** Use fragrance-free moisturizers\* (Vaseline, CeraVe, Aquaderm, Aveeno, Cetaphil, or Eucerin )
- Reduce skin irritation:** Wear loose-fitting clothing such as cotton blends. Wash clothes with liquid, fragrance-free, dye-free detergent.
- Keep fingernails short and smooth** to help prevent damage from scratching.
- Bathe** (20–30 min) or shower (5 min) once a day using luke warm water & mild soap (Dove or Cetaphil). Gently pat or drip dry & immediately apply moisturizer or skin medication on wet skin.
- Wet wraps:** Pat skin dry after an evening bath. Apply topical medication to affected areas & moisturizer to unaffected areas. Soak dressings (tube socks, Ace bandages or cotton gloves) in warm water. Squeeze out excess water (wet but not dripping). Cover affected areas with wet dressings, followed by a dry dressing on top (another tube sock, Ace bandage, dry pajamas). Wet dressings should stay in place overnight.
- Bleach baths** \_\_\_\_\_x/week, to decrease bacteria on skin. Mix 1/4 to 1/2 cup of common liquid bleach (e.g. Clorox) into a full bath tub. Soak the patient in chlorinated water for about 10 minutes. Rinse thoroughly with fresh water at the end of the bleach bath.





## Wet Wrap Therapy

When the rash is very severe, Wet Wrap Therapy may be recommended. Wet wraps are dressings, such as gauze or articles of clothing that have been soaked in water and then applied to the skin after soaking and sealing. Wet cotton gloves can be applied over the hands. They help keep the skin damp, augment absorption of topical medicines and have a cooling effect.

The wet wraps should be re-wet or taken off when they start to dry out. The patients with uncontrolled rashes may require hospital stay for better care. This treatment is used in all well known hospitals in the world. Children,

adolescents and adults spend their days in a hospital and go home at night. This can help get treatment back on track in numerous ways.

It allows the patient to be seen by a team of physicians, nurses and other providers who specialize in atopic dermatitis. Antibiotics may be prescribed to battle secondary skin infections, if present.

Most people's atopic dermatitis improves throughout the hospital stay so they can avoid using excessively aggressive treatments.



# How to use wet wraps

## Step 1

Soak wraps in warm water



*Wet wraps have a cooling anti-itch effect.*

## Step 2

Bathe child in warm (not hot) water for 15-20 minutes and use a gentle cleanser



## Step 3

Lightly pat child's skin dry with a towel



Apply cream within 3 minutes!



## Step 4

## Step 5

Wring out excess water from wrap and immediately dress child in damp wrap to seal in moisture



*Wet wrap therapy relieves eczema by adding needed moisture to the skin.*

## Step 6

Apply a dry layer of clothing on top.

*Smile.*



Reproduced with permission from the AD Rescue Wear Company. For information on their Wet Wrap Therapy products, please visit [www.adrescuewear.com](http://www.adrescuewear.com)

Studies of Wet Wrap Therapy show an average reduction of symptoms of 71%.

ref: Wet Wrap Therapy in children with moderate to severe atopic dermatitis in a multidisciplinary treatment program

## Benefits of Wet Wrap Therapy

The benefits of wet-wrap therapy include:

- Skin re-hydration
- More restful sleep
- Reduced redness and inflammation
- Less frequent itching
- Decrease in the staphylococcus aureus (staph) bacteria found on the skin

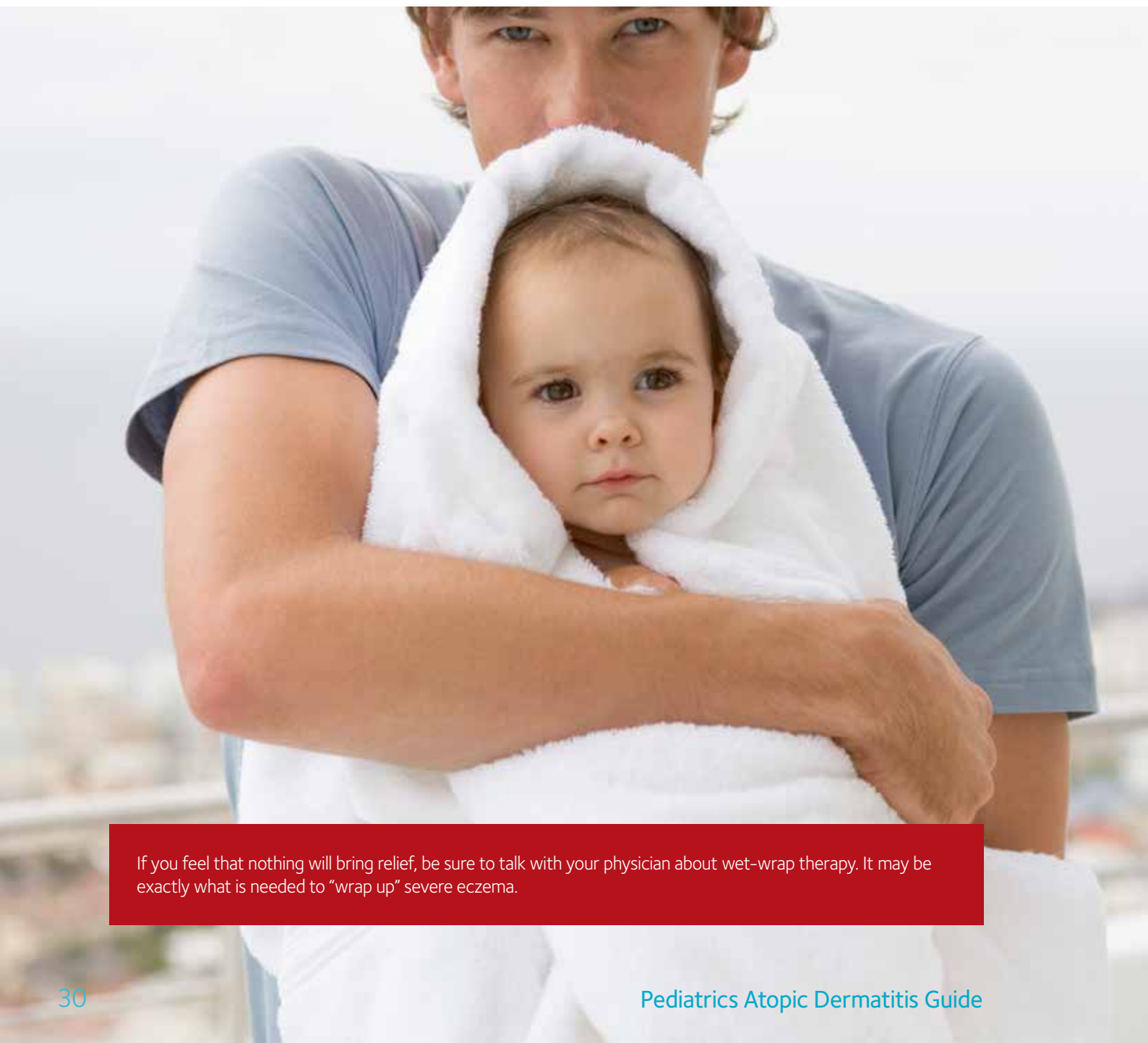
## Drawbacks of Wet Wrap Therapy

Wet-wrap therapy has some drawbacks. It is time-consuming. If you are treating a child, it requires a great

deal of patience and supervision. Children tend to squirm when the bandages are being applied and may try to remove the bandages. As one parent said, “It’s not a nice thing for any parent to have to do.” However, most parents agree that the results are worth the effort when other therapies are not effective.

### Q: How to Maintain Results?

Wet-wrap therapy is generally used for one to two weeks. To maintain the results, you must apply moisturizer frequently throughout the day and after bathing. Additionally, triggers must be avoided, and it may be necessary to continue using medication.



If you feel that nothing will bring relief, be sure to talk with your physician about wet-wrap therapy. It may be exactly what is needed to “wrap up” severe eczema.





### Living with Atopic Dermatitis

Individuals with atopic dermatitis may struggle with feelings of low self-esteem. In severe cases, the look of the skin can encourage mockery/bullying, particularly in kids, which can interfere with peer relations. The fatigue from lack of adequate sleep that may take place with

AD can put extra stress on the family. People with AD who have a lot of stress may benefit from psychological consultation. Repose therapy and biofeedback can also be helpful for people who are finding it tough to manage their scratching.



## Sleeping

Getting an adequate amount of sleep is an essential requirement for good health. Most scientists recommend a consistent number of hours of sleep per night and consistent bed times and waking times as well. While “sleeping in” on the weekend may seem like a special treat, it may not be the best thing to do to ensure good health. Erratic sleep patterns have been shown to have negative effects on our body systems. Some helpful sleep guidelines include:

- Go to sleep and wake up at roughly the same time each day
- Avoid late nights

- Avoid consumption of caffeine (such as caffeinated coffee, sodas or tea)
- Avoid eating heavy meals in the evening or snacking right before bedtime
- Minimize potential disturbances during the night
- Avoid long naps during the day that could interfere with the regular sleep schedule
- Plan the schedule around a night that will include an age-appropriate amount of sleep

Adequate amounts of sleep are essential for children.

Children ages 3 and younger require naps during the day in addition to their night time sleep. (See Table)

**Table : Age Appropriate Nightly Sleep**

Age	Average Nighttime Sleep Duration (Hours)	Average Daytime Sleep Duration (Hours)
6 months	11	3½
1 year	12	2
2 years	11½	2
3 years	11	2
4 years	11	1
6 years	11	0
8 years	10½	0
10 years	10	0
13 years	9	0
16 years and up	8	0



### Atopic Dermatitis: Frequently Asked Questions:

#### Q: When will my child outgrow Atopic Dermatitis (AD)?

For any given child, it is difficult to predict. The majority of babies with AD will lose most of the problem by adolescence. A small number will have severe AD into adulthood. Many have remissions that last for years. The dry skin tendency often remains. Most people learn to use moisturizers to keep their dermatitis controlled. Occasional episodes of AD may occur during times of stress or with jobs that expose the skin to irritants and wet work.

#### Q: Will AD affect my child's career choice?

Someone who has had eczema should avoid jobs that can injure the skin. Military service automatically excludes people with AD or asthma. Wet work in restaurants or hospitals is especially damaging to hands predisposed by AD to drying and cracking. Generally, it's better to pick "clean" indoor work such as with people, computers, papers or books, given the choice.

#### Q: Can my child have all the usual immunizations?

Virtually all children with eczema can have their normal immunizations (including measles and influenza). This includes children with suspected/confirmed egg allergies.

# Myths and Facts

**MYTH**

Topical corticosteroids should not be used on cracked, broken or weepy skin.

Topical corticosteroids are effective in helping to heal cracked and broken eczematous skin. While these creams and ointments are more easily absorbed through eczematous skin, they are safe as long as they are used according to the advice of your physician and their use is tapered or discontinued when the skin is healed. If your skin is tender and swollen it may be infected; this should be evaluated by your doctor.

**MYTH**

Topical corticosteroids promote excessive hair growth.

If topical corticosteroids are used for long periods, they can occasionally cause a temporary, mild increase in fine hair growth in the treated areas, although this is rare. Frequent scratching can also cause a temporary, mild increase in fine hair growth.

**MYTH**

Topical corticosteroids will prolong the eczema and decrease the chances of improvement with age.

There is no evidence that topical corticosteroids change the underlying natural course of the disease.

**MYTH**

A lot of moisturizer can eliminate the need for topical corticosteroids.

Proper bathing and moisturizing is essential in managing chronic eczema. Although moisturizers are a first-line treatment, when used alone they will only control the very mildest forms of eczema. Moderate or severe eczema cannot be treated effectively with moisturizers alone. Once the skin becomes red (inflamed), additional anti-inflammatory medication is needed to control the disease. Anti-inflammatory treatments include topical corticosteroids, topical calcineurin inhibitors (TCI's such as Elidel or Protopic), ultraviolet light therapy, or systemic medications.

**MYTH**

Topical corticosteroids should always be applied in smaller amounts than prescribed.

A useful way of knowing the correct amount to apply is the fingertip rule: Squeeze a ribbon of the topical corticosteroid onto the tip of an adult index finger, between the fingertip and the first finger crease.

This amount of corticosteroid represents "one fingertip unit", and should be enough to cover an area of skin the size of two flat adult palms of the hand (including fingers).









## Keep Your Goals in Mind

The patient should be able to:

- Participate in family, social, school and/or work activities
- Have little or no rash
- Experience very few or no side effects from medicines




- Have a good sense of his/her disease manifestations and appropriate skin care regimen
- Have sufficiently relaxing sleep

Sometimes having atopic dermatitis can be hard for the patient and his/her family. Chatting with someone can be helpful. The doctor can help you find an expert to talk to.



### Simple Chronic Eczema Management Plan:

Putting your traffic lights in a row to prevent and treat eczema flares and maintain healthy skin

	 <p><b>Green Light Routine:</b> Daily Skin Maintenance Symptoms : none</p>	 <p><b>Yellow Light Routine:</b> Mild Eczema Flares Symptoms: itchiness, red patches on the skin, open sores, or broken skin</p>	 <p><b>Red Light Routine:</b> Severe Eczema Flares Symptoms: skin flares that have not responded to treatments for mild eczema</p>
Bath	Soak in a bath of lukewarm (not hot) water for 15 to 20 minutes. Cleanse with a non-drying fragrance free soap	Soak in lukewarm bath once or twice per day for 15 to 20 minutes	Soak in a lukewarm bath at least twice per day for 15 to 20 minutes. Add 1½ cup of bleach to the bath 1 time per week.
Medicine	Apply corticosteroids twice a week on the previously affected areas	To the face: Apply hydrocortisone 2.5% ointment immediately after bathing 1 time per day, for a maximum of 14 days. To the body: Apply corticosteroids immediately after bathing 1 time per day, for a maximum of 14 days.	To the face: Apply topical hydrocortisone immediately after bathing 1 time per day for a maximum of 12 days . To the body : Apply topical mometasone immediately after bathing 1 time per day, for a maximum of 12 days.
Moisturize	Gently pat skin dry and apply moisturizer within 3 minutes after bathing. Do not use lotions (lotions dry skin) or scented moisturizers. Apply moisturizer at least 1 additional time(s) per day.	Gently pat skin dry . Apply moisturizer generously to all areas of healed and unaffected skin within 3 minutes after bathing. Apply moisturizer to all areas of the body at least 1 additional time(s) per day . Apply cool compresses or wet wraps at night.	Gently pat skin dry . Apply moisturizer generously to all areas of healed and unaffected skin within 3 minutes after bathing . Apply moisturizer to all areas of the body frequently, keeping the skin greasy . Apply cool compresses or wet wraps at night.
Next Steps		When skin is healed , follow the green light routine for daily skin maintenance.	When skin starts to improve, follow the yellow light routine for mild eczema flares.

## Epilogue

We would like to thank you for giving us the opportunity to serve you.

We hope, through this booklet we have accomplished the goal of increasing your awareness about Eczema.

In our endeavor to improve our services, we would really appreciate to hear your feedback and opinion.

We look forward to your continuous support and cooperation in achieving our goal which is helping you live a healthy life.

For any questions or suggestions, please contact us on email: [madeli@hamad.qa](mailto:madeli@hamad.qa)

### **Dr. Mehdi Adeli, MD**

FAAAAI, FACAAI, FAP

Allergy and Immunology Senior Consultant

Allergy and Immunology Awareness Program (AIAP)

Hamad Medical Corporation (HMC)

Doha, Qatar

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