

Eczema and food allergy in babies and young children

This fact sheet for parents is about eczema and how to care for skin prone to eczema in babies and young children. It describes the differences between eczema and the skin symptoms of food allergy. It also explains ways to control eczema and help prevent food allergy.

What is eczema?

The word eczema is used to describe a number of chronic skin disorders. Atopic dermatitis is the most common type of eczema, especially in babies and young children. In Canada, about 10 percent of infants and children have the atopic dermatitis form of eczema.

It is common for the word eczema to be used instead of atopic dermatitis. In this resource, the word eczema means atopic dermatitis.

What are the symptoms of eczema?

Eczema is a chronic condition which causes red, itchy areas on the skin. Sometimes the itching is very severe. When skin is scratched it can break open, ooze and then crust over. Symptoms of eczema can come and go. Babies with eczema often have it on their cheeks, forehead and scalp. Older children often have it on their hands, wrists, ankles, feet, and on the inside folds of their elbows and knees.

What causes eczema?

Some children are more prone to eczema due to differences in their skin and their immune systems:

1. Healthy skin acts as a *barrier* to prevent moisture from getting out and irritants from getting in. This barrier function of the skin does not work very well in children who are prone to eczema. Their skin does not hold moisture very well. As a result, their skin gets dry easily and allows irritants to get in more easily.
2. The *immune system* of children with eczema reacts more strongly to irritants than usual. When the immune system responds strongly to irritants, it makes the skin red and itchy.

When it is red and itchy, it is even harder for skin to be a good barrier, so it lets in even more irritants. This leads to a cycle of itching, scratching and more irritation, which makes eczema worse.

Eczema belongs to a group of allergic conditions including asthma, hay fever, and food allergy. Allergic conditions tend to run in families. Genetics has a major role in determining who will get eczema. Eczema is not caused by a single gene, rather many genes act together to increase the chance of eczema developing.

An example of one gene that has a role is called filaggrin (pronounced PHIL-a-GRIN). It is responsible for making the skin protein filaggrin. When this gene is not working properly, the barrier function of the skin does not work as well. Many, but not all, children with eczema have a problem with this particular gene.

Eczema usually starts in babies, but it can start at any age. Some children outgrow it, but it can also return later in life.

Can food allergy cause eczema?

Although food allergy is more common in children who have eczema, they are separate conditions.

Food allergy does not normally cause eczema, but having eczema may increase the chance that a food allergy develops. For a description of how eczema may increase the risk of food allergy, please refer to the section on the next page called: *How can good eczema control help prevent food allergy?*

What are the differences between the skin symptoms of food allergy and eczema?

An allergic reaction to a food typically happens quickly. Symptoms of an allergic reaction then go away, usually after several hours, as long as the food is not eaten again. Eczema is a chronic condition that does not go away quickly. Eczema tends to show up in predictable places, such as on the cheeks of young babies or elbow creases of older children. The places on the skin where symptoms of an allergic reaction to food appear are more unpredictable. Hives, redness and itching from an allergic reaction can show up just about anywhere on the body and even in different places each time the food is eaten.



Why is it important to control my child's eczema?

When eczema is not well controlled, it can affect a child's quality of life and health. It increases the chance of skin infections, and it can also be painful. Itching and scratching can be distressing for your child and for you as a parent to watch. Physical comfort, sleep, social interactions and self-image can all be affected. Good control allows your child to feel well and stay focused on childhood activities such as learning and playing.

What is food allergy?

Food allergy results from an abnormal immune response to a food protein. Food proteins that can cause an allergic reaction are called food allergens. Children with food allergy will have an allergic reaction every time they eat the food to which they are allergic. Managing a food allergy involves avoiding the food that causes the allergic reaction. For more information about food allergy, look at: "Reducing Risk of Food Allergy in Your Baby" and "Severe Food Allergies in Children".

If you suspect your baby or child is reacting to a food, stop giving that food and talk to your child's doctor. Your child's doctor can refer your child to a pediatric allergist if help with a diagnosis and a treatment plan are needed. If you are concerned about your child's nutrition, talk with a registered dietitian.

Some new research shows there may be an additional benefit to keeping eczema under good control. Good control might help prevent food allergy. This is especially good news for parents who have babies and toddlers who are at increased risk for food allergy.

How can good eczema control help prevent food allergy?

Since healthy skin acts as a barrier, it also helps prevent substances like food allergens from getting into the body through the skin. Healthy skin helps protect the immune system from being exposed to food allergens. When your child's eczema is under good control, your child's skin is better at preventing food allergens from getting in.

New research suggests that when your child's skin is scratched open, food allergens can get into the body more easily to make contact with the immune system. Direct contact between open skin and food, such as peanuts, may increase the chance that an allergy will develop to that food. The immune system may be more prone to developing a food allergy if the first exposures to the food are through scratched open skin.

The opposite may be true if the immune system is first introduced to the food by eating it. If the first exposure to a food is through the digestive tract, the immune system may more likely tolerate the food.

For more information about controlling eczema, please refer to the section on the next page called: *How can I help control my child's eczema?*

What are other ways to help prevent food allergy?

Many health professionals now think there are two steps parents can take to help prevent food allergy.

1. Avoid unnecessary delays when introducing new solid foods to your baby.
2. If your baby tolerates a new food, continue to offer it regularly. "Regularly" means about once per week, or more often if you prefer. Offering foods regularly may remind the immune system to tolerate the foods rather than develop an allergy to them.

Health Canada recommends introducing solid foods to babies starting at six months of age. Babies with eczema should also be offered solid foods starting at six months.



You can introduce boneless fish, egg, peanuts, tree nuts, and sesame seeds in age appropriate forms starting at six months of age if you wish. Whole tree nuts and big globs of peanut butter are choking hazards. You can start by offering peanut, tree nut and sesame seed butters mixed into infant cereal.



When your baby is ready for finger foods, you can offer these foods spread thinly on small strips of toast. For more information about introducing solid foods to babies, see “Baby’s First Foods” and “Reducing Risk of Food Allergy in Your Baby”.

Since 2008, the American Academy of Pediatrics no longer recommends delaying the introduction of foods such as fish, eggs and foods that contain peanut protein beyond 4 to 6 months of age to babies at increased risk for allergy.

In 2000, it was thought that delaying the introduction of new foods into a baby’s diet decreased the chance of a food allergy. However, the delay may increase the chance that the first exposures to the food will be through skin that has been scratched open. Therefore, delaying the introduction of new foods may actually increase the chance that a food allergy will develop.

A few recent studies suggest introducing certain foods even before 4-6 months of age may help prevent food allergy, but more research is needed before this can be recommended. An example of a study currently being done is called the LEAP Study. LEAP stands for “Learning Early About Peanut Allergy”. For more information visit: www.leapstudy.com

How can I help control my child’s eczema?

Although eczema cannot be cured, three main steps can be taken to help control it:

1. Follow a daily bathing routine and apply moisturizer right after the bath to help moisturize your child’s skin.
2. Use skin medications to calm the immune response when needed.
3. Avoid contact with personal irritants.

1. Keep skin moisturized



Keep your child’s skin well moisturized at all times. This helps improve the skin’s barrier function and helps break the cycle of irritation, which leads to itching and scratching. Even after skin has healed after an eczema flare-up, continue with the daily steps that keep skin well moisturized. This will help prevent new flare-ups.

Allow your child to soak in bath water *every day*. Soaking for about 10 minutes is best. Use lukewarm water not hot water.

Use mild soap and only on skin surfaces that need cleaning, such as underarms and the diaper area. Do not use strong soaps, which can be too drying. Use soap and shampoo at the end of the bath to prevent your child from soaking in products that cause skin to dry out. Wash skin gently. Scrubbing can irritate skin prone to eczema.



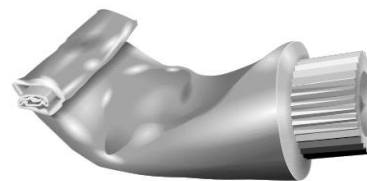
After the bath, gently pat your child dry and apply any medicated creams prescribed by your child's doctor. Apply moisturizer within 3 minutes of the bath. The moisturizer helps to "lock-in" the water absorbed by the skin during the bath.

Applying moisturizer immediately after the bath is probably the single most important thing that you can do to help your child's skin.

Always wash your hands before applying moisturizer. Apply moisturizer generously to all skin surfaces. Avoid rubbing. Use moisturizer after every bath, after hand washing and after swimming.

2. Use skin medications when needed

For some babies and children with eczema, daily bathing and moisturizing is not enough for good control. These children also need a medical treatment plan, which often includes medicated creams or ointments that calm the immune system in the skin and control irritation. Medical treatment plans also include instructions on how often and when to apply the cream or ointment.



There are a variety of skin medications available for eczema, each with a different strength. The strength of the medication prescribed should be right for the area of the body that needs medication. For example, a child may have one medication prescribed for the face and another one for the elbows and knees. Do not use the percent on the label to judge the strength of your child's medication. Speak to your child's doctor or pharmacist if you have questions about medication strength.

Follow the treatment plan provided by your child's doctor, so your child gets the most possible benefit from the medication. It is especially important to follow your doctor's advice about how much of the medication to apply, so you do not use too little or too much. Some doctors recommend applying a layer of medication to eczema patches every day for about two to four weeks. The medication is more effective if you apply it to skin immediately after the bath, while the skin is still damp.

The treatment plan may need to be adjusted from time to time, based on the severity of the eczema and the response to the skin medication. You may be the first to notice that the plan needs to be adjusted. Let your child's doctor know if you think the plan needs adjustment.

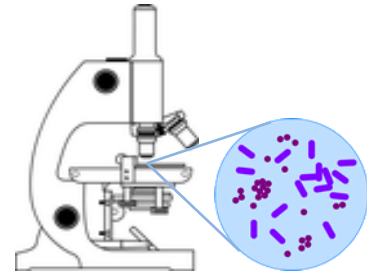
3. Help your child avoid personal irritants

Some substances can irritate skin and start the cycle of itching and scratching. If you notice that your child's eczema gets worse after being exposed to something, help your child avoid it. Irritants are not the same for all children. If a common trigger does not bother your child, there is no reason to avoid it. Here are some examples of possible triggers that can cause eczema flare-ups in some children.

- Perfumes and fragrances, including the skin care and bathing products that contain them**
- Harsh soaps**
- Bath salts or bubble baths**
- Rough clothing, including wool fabrics**
- Temperature extremes, including hot and cold, dry air**
- Skin Infections**

Children with eczema often have more bacteria on their skin. Even when it does not cause an infection, the bacteria can make the skin more irritated and can make the eczema worse, so keeping clean is important.

Babies and children with eczema are also prone to skin infections. Infections make the eczema even worse and need to be treated by a doctor. An oral antibiotic, antibiotic cream or very small amount of bleach added to bath water might be prescribed. Bleach should not be added to bath water without guidance from your child's doctor. Signs of possible infection include: increased pain, tenderness or swelling, hot skin, fever, pus, or red streaks extending from the affected skin.



Bacteria under a microscope

- Stress**

Emotional upset, frustration and embarrassment are stressful and can trigger itching that leads to more scratching in children with eczema. Help your child learn to cope with stressful events.

- Environmental allergens**

Environmental allergens include animal dander (skin flakes) and saliva, dust mites, pollens, and moulds. Children with eczema may also have environmental allergies. For these children, being exposed to these allergens may make the eczema worse. If your child is allergic to specific environmental allergens, reduce your child's exposure to them when possible. For more information on how to reduce exposure to allergens visit the Allergy/Asthma Information Association at www.aaia.ca.



Plants like grass produce pollen

- Foods that are not allergens**

Some foods that are not allergens can irritate inflamed skin through contact. To reduce irritation, avoid food contact with eczema when possible. You may apply ointment to your child's skin before offering food to reduce skin contact. If food does make contact with your child's inflamed skin, wash it off gently and re-apply moisturizer.

Foods that irritate eczema through contact do not cause any problems when they are eaten, unless your child also has a food allergy to them.

Many parents report foods such as tomato, strawberry and citrus fruits (such as oranges) irritate eczema. If your child's eczema is not bothered by these foods continue to offer them to your child.

What else can I do to help control my child's eczema?

- Keep your child's finger nails short and clean. This can help prevent an infection if skin gets scratched.
- Use unscented laundry products and avoid dryer sheets.
- Wash new clothes and remove tags before your child wears them.
- Dress your child in loose rather than tight clothes.
- If your child's eczema is hard to keep well controlled, get help from health care providers who have expertise in eczema care.

What should I look for when selecting skin care products?

Choose soaps and moisturizers made for sensitive skin. Although there is no single group of products that are right for every child, generally, products with fewer ingredients are best. Expensive products are not always better. If you need help finding products for your child, ask your doctor or pharmacist.

Products for bathing

You do not need to add anything to your child's bath water. Choose a gentle soap for cleaning skin. Avoid harsh products and those containing perfumes or fragrances.

Moisturizers

Choose a thick moisturizer without perfumes or fragrances. Thick products are more effective for moisturizing than thinner ones that pour easily. Thick moisturizers include creams and ointments, and these are usually available in jars or in tubes.

Moisturizers can be divided into three categories based on the amount of oil or grease in comparison to the amount of water present. These three groups are called ointments, creams and lotions. Ointments are just grease, and do not contain much water. They are usually very thick, clear and nearly colourless. Creams are usually a half-and-half mixture of oil (or grease) and water. They are typically too thick to pour, come in jars and often white in colour. Lotions are creams with much more water added. They are pourable or come with a pump dispenser, and they are normally white in colour.



Thick moisturizers come in jars

Examples of product ingredients that help keep moisture locked in skin:

Petroleum jelly and petrolatum: These are greasy ingredients and *very good* at keeping moisture locked in the skin.

Silicone and dimethicone: These are non-greasy ingredients and also good at locking moisture in the skin. They feel silky to the touch and are added to many moisturizers.

Ceramides: These are moisture holding substances and naturally present in the skin. People with eczema lack normal amounts of ceramides in their skin. Applying ceramides to skin helps keep moisture locked in. Some newer moisturizers have ceramides added to them. Products made with ceramides may be more expensive than other moisturizers.

Resources

The EASE Program: www.eczemaCanada.ca provides information and resources on eczema for Canadians.

The Asthma/Allergy Information Association: www.aaia.ca provides information about how to reduce exposure to environmental allergens like as dust mites.

Reducing Risk of Food Allergy in Your Baby:
www.healthlinkbc.ca/dietitian/infants_children.stm#13

Baby's First Foods: www.healthlinkbc.ca/dietitian/infants_children.stm#1

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