National Eczema Association

The Atopic March: How Eczema Can Lead to Allergies and Asthma
How and why all three of these conditions are interrelated. p7

What People With Eczema Need to Know About Self-Screening for Skin Cancer
Flaring skin can complicate the process. p18

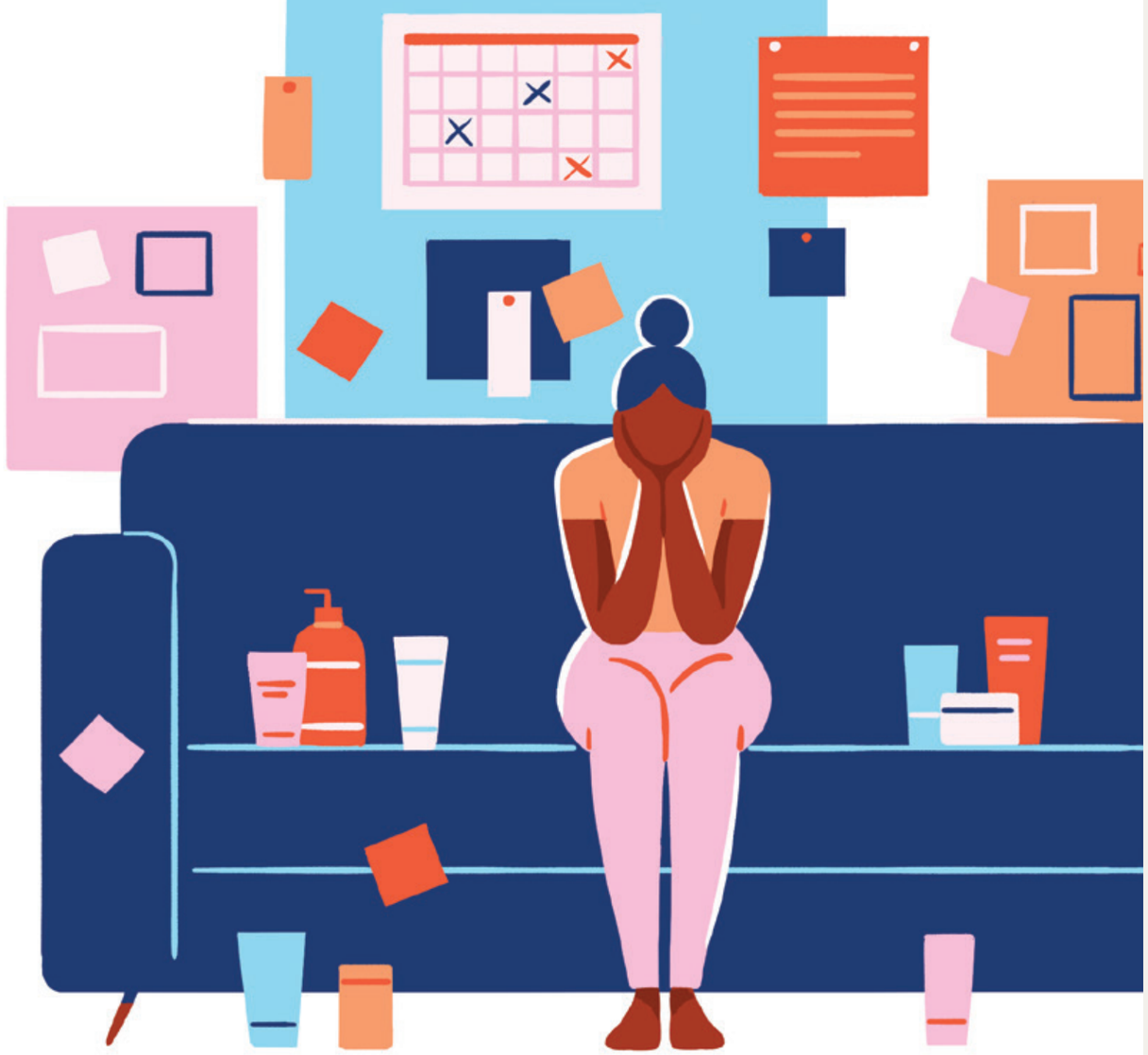
It's All Relative: Eosinophilic Esophagitis
How to spot the most common symptoms of this relatively new condition. p26

NEA Magazine

Research, Support and Education for Those Affected by Eczema

My Journey: Jasmine Hsieh
On perseverance and patience
p16

Summer 2022 **NationalEczema.org**



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Managing it shouldn't be.

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NEA Magazine

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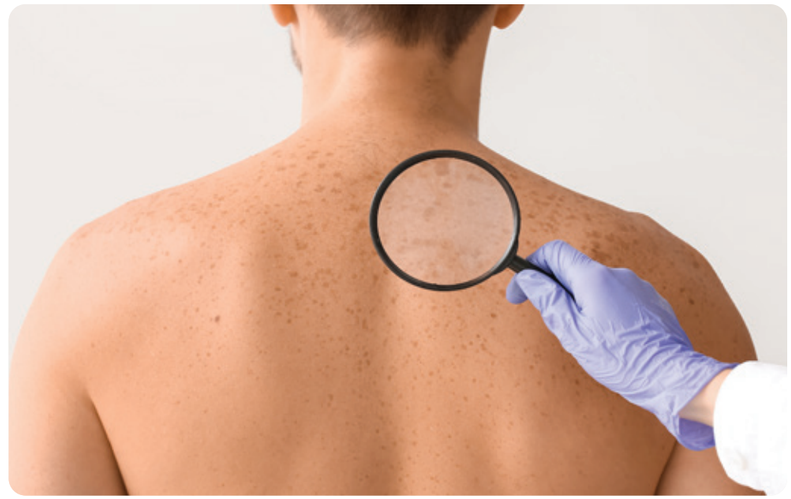

18

What People With Eczema Need to Know About Self-Screening for Skin Cancer

Flaring skin can complicate the process.

Founded in 1988, the National Eczema Association (NEA) is a 501(c)(3) nonprofit and the largest patient advocacy organization serving the over 31 million Americans who live with eczema and those who care for them. NEA is supported by individual and corporate donations. Advertising is accepted for publication if they are relevant to people with eczema and meet certain standards. NEA Magazine provides health information from a variety of sources, but this information does not dictate an exclusive treatment course and is not intended as medical advice. Persons with questions regarding specific symptoms or treatments should consult a professional healthcare provider. Opinions expressed by NEA Magazine do not necessarily reflect the views of the National Eczema Association, its Board of Directors, its Scientific & Medical Advisory Council or its contributors.

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Letter from Julie

Welcome to the summer issue of NEA Magazine!

By the time you read this, we will have kicked off Eczema Expo in Seattle and maybe you're there with us! It's been too long since we gathered as a community in person and I can't wait to make up for lost time.

Also making up for lost time is the NEA Advocacy team, making waves on Capitol Hill. We hosted our first ever Virtual Hill Day on June 8 and spoke with legislative staff members about the importance of step therapy reform for people and families living with eczema. The full NEA team, myself included, joined dozens of NEA Ambassadors, as we presented on the Safe Step Act (S464/HR2163), a bill intended to reform step therapy which Congress will review and vote on later this year. Read more on page 23 about how step therapy stops patients from getting the right medication at the right time.

Congratulations to recent graduates in our NEA community. If that's you (or a loved one), check out our "High School Graduate Checklist" on page 24 for tips on managing eczema on your own. On page 12, we've got you covered with everything you need to know about sunscreen, and in case you need reminding why, check out page 18 for the early warning signs of skin cancer.

On page 20, we've included another impressive showcase of new artwork from you, our eczema community. As always, I am awed by the courage and power of your creative expression. Keep it up!

With warmth & gratitude,

Julie Block - President & CEO

Our Mission: NEA is the driving force for an eczema community fueled by knowledge, strengthened through collective action and propelled by the promise for a better future.

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National Eczema Association

NEA NEWS

Eczema Expo 2022, Itching for a Cure, Virtual Hill Day, NEA Ambassadors

Eczema Expo 2022

We're thrilled to be back in person this year July 7-10 in Seattle, Washington. Maybe you're here with us as you read this. For those of you who couldn't attend in person, we're excited to share our hybrid platform of presentations and educational seminars available virtually, too. Many of our sessions will be available online throughout the rest of the year, so be sure to check out our Expo website: EczemaExpo.org.

Itching for a Cure

Thanks to everyone who made this year's Itching for a Cure campaign a resounding success! We're thrilled to report that thanks to YOU, our NEA community, we raised more than $40,000 for the NEA Research Fund. Donations to the NEA Research Fund directly support research grants for eczema doctors and scientists who put the voice of the eczema patient front and center in their work. Congrats and thank you to all who helped make this year's campaign a success!

NEA Welcomes Jessica Johnson

On June 6, NEA welcomed Jessica Johnson, NEA's new associate director of community research. Jessica comes to NEA after 10 years of growing experience and leadership in public health and community research program management in the Center of Community Health at Feinberg School of Medicine at Northwestern University. She has a strong background and passion for patient-centered research (including a PCORI award!), real-world data and their intersection with diversity, equity and inclusion efforts. Welcome, Jessica!

Virtual Hill Day

NEA's first-ever Virtual Hill Day on June 8, 2022, was a success! Just look at the stats: 38 NEA Ambassadors from 22 states + 20 NEA staffers met with 44 senators and 38 representatives in a total of 55 meetings. Perhaps more important than the quantity of conversations with legislators were the quality of conversations. The legislative staff were engaged, and many had a direct connection to eczema. We were encouraged to see the serious consideration of our policy requests. Learn more about one of primary policy priorities, step therapy, on page 23. Join us as we continue our advocacy efforts throughout the year: NationalEczema.org/Advocacy

NEA Ambassadors join the NEA staff in preparation for Virtual Hill Day

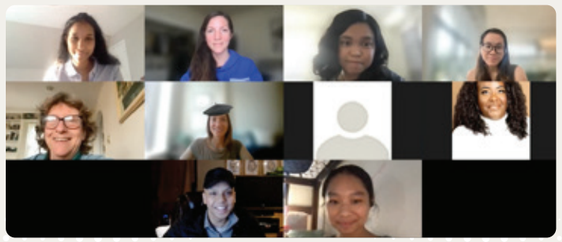
NEA Ambassadors' Corner

The dedication of NEA Ambassadors has helped to raise awareness, improve access to eczema care and increase the investment in groundbreaking eczema research. That is a lot to be proud of! In the last couple of months alone, NEA Ambassadors have:

- Met with legislators to raise awareness and advocate for improved access to eczema care during NEA's biggest advocacy event of the year, Virtual Hill Day on June 8, 2022.
- Participated in NEA's Itching for a Cure fundraising campaign, which raised over $40,000 for the NEA Research Fund!
- Launched a Research Journal Club, where Ambassadors learn about cutting edge research and build skills to understand and present on scientific articles.

With NEA's Ambassadors representing over 35 states, their impact to date has been significant. Join NEA Ambassadors to make sure your voice is heard and begin making a difference today.

NEA Ambassadors active around the United States



Research Journal Club

NEA Ambassador Alex Dawkins is Making Waves

Photo courtesy of Alex Dawkins

Back in 2021, NEA Ambassador Alex Dawkins shared her story of enlisting in the U.S. Navy. She was initially rejected because of her atopic dermatitis, but with a letter from her dermatologist and an unrelenting spirit of determination she eventually passed her exams and was admitted to serve. We followed up with Alex, now a full year into her service, to see how she's doing so far.

NEA: How does it feel to be living your dream of serving in the U.S. Navy?

Alex Dawkins: It feels unbelievable. I recently reported to my first command and was able to have a tour of the ship that I'll be working on. I've met some amazing people from all over the world and it's incredible to interact with people from different backgrounds. Also, it feels good to wear the uniform, I didn't think I would ever get the chance.

NEA: How has your eczema skin care routine changed or evolved since your service began?

Alex Dawkins: In boot camp I didn't have any flares; my skin was clear. I did experience a seafood allergy, but I fought my case to come back to training after my flares cleared up. In boot camp I was using Eucrisa on my arm just about everyday, and it worked for the most part.

NEA: Have you had to educate any of your peers about eczema, or is it a non-issue?

Alex Dawkins: I actually haven't had to educate too many of my shipmates about eczema. Most of them were and still are welcoming and understanding about it. I haven't gotten any weird stares or comments in a while, more so "your skin looks cool and it's beautiful." Some of them know someone with eczema or have eczema themselves.

NEA: Any advice for future cadets?

Alex Dawkins: Always, always ask questions! If not you'll be lost. In boot camp they control everything, but after that you're on your own. Don't wait until a couple of weeks to start exercising, do it way in advance and run. Enjoy every moment of freedom and life because it can be taken away at any moment. Bring an extra travel-size supply of eczema products to boot camp.

TALK TO YOUR ECZEMA SPECIALIST AND GO TO DUPIXENT.COM TO FIND OUT MORE

INDICATION

DUPIXENT is a prescription medicine used to treat adults and children 6 years of age and older with moderate-to-severe atopic dermatitis (eczema) that is not well controlled with prescription therapies used on the skin (topical), or who cannot use topical therapies. DUPIXENT can be used with or without topical corticosteroids. It is not known if DUPIXENT is safe and effective in children with atopic dermatitis under 6 years of age.

IMPORTANT SAFETY INFORMATION

Do not use if you are allergic to dupilumab or to any of the ingredients in DUPIXENT®.

Before using DUPIXENT, tell your healthcare provider about all your medical conditions, including if you: have eye problems; have a parasitic (helminth) infection; are scheduled to receive any vaccinations. You should not receive a "live vaccine" right before and during treatment with DUPIXENT; are pregnant or plan to become pregnant. It is not known whether DUPIXENT will harm your unborn baby. A pregnancy registry for women who take DUPIXENT during pregnancy collects information about the health of you and your baby. To enroll or get more information call 1-877-311-8972 or go to https://mothertobaby.org/ongoing-study/dupixent/; are breastfeeding or plan to breastfeed. It is not known whether DUPIXENT passes into your breast milk.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins and herbal supplements. Especially tell your healthcare provider if you are taking oral, topical or inhaled corticosteroid medicines or if you have atopic dermatitis and asthma and use an asthma medicine. **Do not** change or stop your corticosteroid medicine or other asthma medicine without talking to your healthcare provider. This may cause other symptoms that were controlled by the corticosteroid medicine or other asthma medicine to come back.

DUPIXENT can cause serious side effects, including:

Allergic reactions. DUPIXENT can cause allergic reactions that can sometimes be severe. Stop using DUPIXENT and tell your healthcare provider or get emergency help right away if you get any of the following signs or symptoms: breathing problems or wheezing, swelling of the face, lips, mouth, tongue, or throat, fainting, dizziness, feeling lightheaded, fast pulse, fever, hives, joint pain, general ill feeling, itching, skin rash, swollen lymph nodes, nausea or vomiting, or cramps in your stomach-area.

Eye problems. Tell your healthcare provider if you have any new or worsening eye problems, including eye pain or changes in vision, such as blurred vision. Your healthcare provider may send you to an ophthalmologist for an eye exam if needed.

Joint aches and pain. Some people who use DUPIXENT have had trouble walking or moving due to their joint symptoms, and in some cases needed to be hospitalized. Tell your healthcare provider about any new or worsening joint symptoms. Your healthcare provider may stop DUPIXENT if you develop joint symptoms.

The most common side effects in patients with atopic dermatitis include injection site reactions, eye and eyelid inflammation, including redness, swelling, and itching, sometimes with blurred vision, and cold sores in your mouth or on your lips.

Tell your healthcare provider if you have any side effect that bothers you or that does not go away. These are not all the possible side effects of DUPIXENT. Call your doctor for medical advice about side effects. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

Use DUPIXENT exactly as prescribed by your healthcare provider. It's an injection given under the skin (subcutaneous injection). Your healthcare provider will decide if you or your caregiver can inject DUPIXENT. **Do not** try to prepare and inject DUPIXENT until you or your caregiver have been trained by your healthcare provider. In children 12 years of age and older, it's recommended DUPIXENT be administered by or under supervision of an adult. In children under 12 years of age, DUPIXENT should be given by a caregiver.

Please see Brief Summary on next page.

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YOU MAY BE ELIGIBLE FOR AS LITTLE AS A $0 COPAY.* CALL 1-844-DUPIXENT (1-844-387-4936)

***THIS IS NOT INSURANCE.** Not valid for prescriptions paid, in whole or in part, by Medicaid, Medicare, VA, DOD, TRICARE, or other federal or state programs, including any state pharmaceutical assistance programs. Program has an annual maximum of $13,000. Additional terms and conditions apply.

Brief Summary of Important Patient Information about DUPIXENT® (dupilumab)
(DU-pix'-ent)
injection, for subcutaneous use

Rx Only

What is DUPIXENT?
- DUPIXENT is a prescription medicine used:
  - to treat adults and children 6 years of age and older with moderate-to-severe atopic dermatitis (eczema) that is not well controlled with prescription therapies used on the skin (topical), or who cannot use topical therapies. DUPIXENT can be used with or without topical corticosteroids.
- DUPIXENT works by blocking two proteins that contribute to a type of inflammation that plays a major role in atopic dermatitis.
- It is not known if DUPIXENT is safe and effective in children with atopic dermatitis under 6 years of age.

Who should not use DUPIXENT?
Do not use DUPIXENT if you are allergic to dupilumab or to any of the ingredients in DUPIXENT. See the end of this summary of information for a complete list of ingredients in DUPIXENT.

What should I tell my healthcare provider before using DUPIXENT?
Before using DUPIXENT, tell your healthcare provider about all your medical conditions, including if you:
- have eye problems
- have a parasitic (helminth) infection
- are scheduled to receive any vaccinations. You should not receive a "live vaccine" right before and during treatment with DUPIXENT.
- are pregnant or plan to become pregnant. It is not known whether DUPIXENT will harm your unborn baby.
  - **Pregnancy Exposure Registry.** There is a pregnancy exposure registry for women who take DUPIXENT during pregnancy. The purpose of this registry is to collect information about the health of you and your baby. Your healthcare provider can enroll you in this registry. You may also enroll yourself or get more information about the registry by calling 1 877 311-8972 or going to https://mothertobaby.org/ongoing-study/dupixent/.
- are breastfeeding or plan to breastfeed. It is not known whether DUPIXENT passes into your breast milk.

Tell your healthcare provider about all of the medicines you take including prescription and over-the-counter medicines, vitamins, and herbal supplements.

Especially tell your healthcare provider if you:
- are taking oral, topical, or inhaled corticosteroid medicines
- have atopic dermatitis and asthma and use an asthma medicine

Do not change or stop your corticosteroid medicine or other asthma medicine without talking to your healthcare provider. This may cause other symptoms that were controlled by the corticosteroid medicine or other asthma medicine to come back.

How should I use DUPIXENT?
- **See the detailed "Instructions for Use" that comes with DUPIXENT for information on how to prepare and inject DUPIXENT and how to properly store and throw away (dispose of) used DUPIXENT pre-filled syringes and pre-filled pens.**
- Use DUPIXENT exactly as prescribed by your healthcare provider.
- Your healthcare provider will tell you how much DUPIXENT to inject and how often to inject it.
- DUPIXENT comes as a single-dose pre-filled syringe with needle shield or as a pre-filled pen.
  - The DUPIXENT pre-filled pen is only for use in adults and children 12 years of age and older.
  - The DUPIXENT pre-filled syringe is for use in adults and children 6 years of age and older.
- DUPIXENT is given as an injection under the skin (subcutaneous injection).
- If your healthcare provider decides that you or a caregiver can give the injections of DUPIXENT, you or your caregiver should receive training on the right way to prepare and inject DUPIXENT. **Do not** try to inject DUPIXENT until you have been shown the right way by your healthcare provider. In children 12 years of age and older, it is recommended that DUPIXENT be given by or under supervision of an adult. In children younger than 12 years of age, DUPIXENT should be given by a caregiver.
- **If your dose schedule is every other week and you miss a dose of DUPIXENT:** Give the DUPIXENT injection within 7 days from the missed dose, then continue with your original schedule. If the missed dose is not given within 7 days, wait until the next scheduled dose to give your DUPIXENT injection.
- **If your dose schedule is every 4 weeks and you miss a dose of DUPIXENT:** Give the DUPIXENT injection within 7 days from the missed dose, then continue with your original schedule. If the missed dose is not given within 7 days, start a new every 4 week dose schedule from the time you remember to take your DUPIXENT injection.
- If you inject too much DUPIXENT (overdose), get medical help or contact a Poison Center expert right away at 1-800-222-1222.
- Your healthcare provider may prescribe other medicines to use with DUPIXENT. Use the other prescribed medicines exactly as your healthcare provider tells you to.

What are the possible side effects of DUPIXENT?
DUPIXENT can cause serious side effects, including:
- **Allergic reactions. DUPIXENT can cause allergic reactions that can sometimes be severe.** Stop using DUPIXENT and tell your healthcare provider or get emergency help right away if you get any of the following signs or symptoms: breathing problems or wheezing, fast pulse, fever, general ill feeling, swollen lymph nodes, swelling of the face, lips, mouth, tongue, or throat, hives, itching, nausea or vomiting, fainting, dizziness, feeling lightheaded, joint pain, skin rash, or cramps in your stomach-area.
- **Eye problems.** Tell your healthcare provider if you have any new or worsening eye problems, including eye pain or changes in vision, such as blurred vision. Your healthcare provider may send you to an ophthalmologist for an eye exam if needed.
- **Joint aches and pain.** Joint aches and pain can happen in people who use DUPIXENT. Some people have had trouble walking or moving due to their joint symptoms, and in some cases needed to be hospitalized. Tell your healthcare provider about any new or worsening joint symptoms. Your healthcare provider may stop DUPIXENT if you develop joint symptoms.

The most common side effects of DUPIXENT in patients with atopic dermatitis include: injection site reactions, eye and eyelid inflammation, including redness, swelling, and itching, sometimes with blurred vision, cold sores in your mouth or on your lips, and joint pain (arthralgia).
The following additional side effects have been reported with DUPIXENT: facial rash or redness.
Tell your healthcare provider if you have any side effect that bothers you or that does not go away.
These are not all of the possible side effects of DUPIXENT. Call your doctor for medical advice about side effects. You may report side effects to FDA.
Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

General information about the safe and effective use of DUPIXENT.
Medicines are sometimes prescribed for purposes other than those listed in a Patient Information leaflet. Do not use DUPIXENT for a condition for which it was not prescribed. Do not give DUPIXENT to other people, even if they have the same symptoms that you have. It may harm them.
This is a brief summary of the most important information about DUPIXENT for this use. If you would like more information, talk with your healthcare provider. You can ask your pharmacist or healthcare provider for more information about DUPIXENT that is written for healthcare professionals.
For more information about DUPIXENT, go to www.DUPIXENT.com or call 1-844-DUPIXENT (1-844-387-4936)

What are the ingredients in DUPIXENT?
Active ingredient: dupilumab
Inactive ingredients: L-arginine hydrochloride, L-histidine, polysorbate 80, sodium acetate, sucrose, and water for injection

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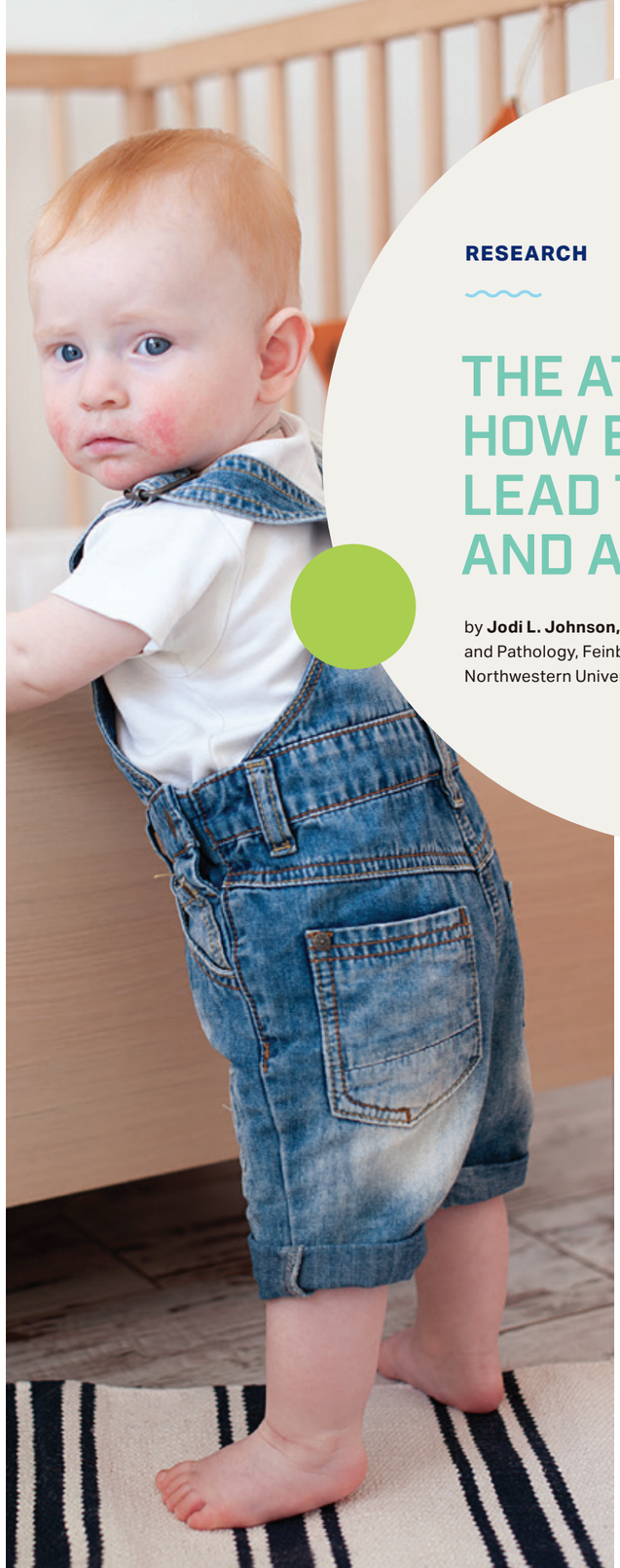

RESEARCH

THE ATOPIC MARCH: HOW ECZEMA CAN LEAD TO ALLERGIES AND ASTHMA

by **Jodi L. Johnson, PhD,** Departments of Dermatology and Pathology, Feinberg School of Medicine, Northwestern University

INTRODUCTION TO ATOPIC DISEASES

The Oxford Dictionary defines the term "atopic" as "a form of allergy in which a hypersensitivity reaction may occur in a part of the body not in contact with the allergen." These reactions on the skin cause dermatitis, while reactions in the airway can cause asthma or rhinitis (sometimes called hay fever). After allergen exposure at a site like the skin, some of these immune reactions can be local, such as allergic (contact) dermatitis, but others can happen in the lungs in the case of asthma, gut in the case of food allergies and nose in the case of allergic rhinitis.

Population, statistical and mechanistic studies have repeatedly shown that atopic dermatitis (AD), asthma and allergic rhinitis often co-occur in the same individual.[1] One in three children with AD will additionally develop asthma or allergic rhinitis. The risk of developing asthma increases with AD severity as more than 50% of children with severe AD also develop asthma.[1] AD patients also have a high incidence of accompanying food allergies. The earlier in life AD begins and the more severe it is, the higher the association with food allergies.[2] In a large study using a database of 244,776 AD and matched non-AD patients, the prevalence and incidence of other Type 2 inflammatory diseases (including

asthma and rhinitis) more than doubled among children aged 0-2 years with AD compared to those without.[3] A recent study of 212 AD patients aged 12-76 indicated that 69% also had rhinitis, 33% also had allergic conjunctivitis (eye-related allergies) and 29% also had asthma.[4] The connectivity of AD, food allergies, asthma and rhinitis is often referred to as the atopic march.

WHAT IS THE ATOPIC MARCH?

Considerable research has been done to investigate all forms of atopic diseases and how they may be linked together. One concept of how these diseases are interconnected is that disruption of the skin barrier in AD leads to allergen sensitization in the skin, which can trigger inflammation at other epithelial (skin-like) body surfaces including the gastrointestinal tract (food allergy), upper respiratory tract (allergic rhinitis) and lower respiratory tract (asthma).[5] It has been long thought that AD is the first of these related diseases to arise followed by a "march" toward the other diseases. Indeed, studies have shown that AD typically has the earliest onset, followed by food allergies, both of which come before the airway diseases (asthma and rhinitis) and all four of which often arise before a person is 5 years old (**Figure 1**).[6] However, two long-term studies of over 20[7] and 40[8] years have led researchers to begin to focus less on the order of disease progression (the march), which might not be as clear-cut as originally thought, and more on the associations between these diseases and the genetic and environmental factors that may contribute to the relationships between them.[5]

Dr. Candrice Heath, of Temple University, said, "We are taught very early in our medical training that AD, allergic rhinitis and asthma are part of the atopic triad. Explaining to parents that their child with AD may go on to develop asthma or allergic rhinitis is commonplace. However, recent research suggests that a patient's demographics and genetics may be associated with a specific trajectory of the atopic march from AD to other conditions. To help us better understand exactly how these diseases are linked, it is important that patients share information about their experiences with AD and the atopic march with clinicians and researchers. Our current research conclusions may focus only on associations, but we hope that in the future we may be able to make specific predictions about what to expect in one's personal journey with AD."

BIOLOGICAL UNDERPINNINGS OF THE ATOPIC MARCH

Research continues to examine what causes atopic reactions that originate in the skin and also occur at multiple body sites. Dr. Lawrence Eichenfield, at the University of California San Diego, said, "So much has happened in the field of AD in the past 10 years. We now have better studies that have looked at the course of AD in terms of onset in childhood or beyond the early childhood years, persistence and spontaneous resolution, all of which have given us new information into the development of allergies. Milder AD patients have around a 15% rate of having a true food allergy (an allergic clinical reaction consistently on ingestion of a food), while those with more severe AD have a 40% chance of having at least one food allergy. Allergic rhinitis occurs in about a third of individuals with AD within the first few years of life and asthma is very common in children with AD, developing in later childhood. What is not yet known is if earlier aggressive therapy, either topically or systemically, will change the development of these conditions." New insights into some of the mechanisms are beginning to emerge, including how skin barrier defects, genetics and environmental factors trigger full-body immune responses.

HOW SKIN BARRIER DISRUPTION PLAYS A ROLE IN THE ATOPIC MARCH

In AD the skin barrier is disrupted and skin exposure to allergens can induce the skin's immune response. Mechanistic links between AD, allergen exposure and asthma involve a molecule called thymic stromal lymphopoietin (TSLP) that is secreted by keratinocytes, the main cells that make up the skin structure. TSLP secretion by keratinocytes after allergen exposure has been shown to sensitize mice[9-11] and humans[12] to asthma. TSLP inhibitors are under development as a therapy for asthma[12] and TSLP is among the targets of biologic-based therapies also being studied for AD.[13] Links between AD and food allergy have been studied in mice, showing that application of egg or peanut allergens onto skin with a barrier defect increased the presence of allergy-related immune signals like the antibody IgE and TSLP.[14] In humans, increased loss of water from the skin (transepidermal water loss) at two days of life was predictive of food allergy development at the age of 2 years old.[14]

Current research supports a significant link between the skin and its protective barrier and the development of immune reactions that can promote body-wide allergic responses leading to other atopic diseases.

ON THE ROLE OF GENETICS AND THE ATOPIC MARCH

The most widely studied genetic mutation in AD is *filaggrin*, which is also associated with increased risk for asthma with or without association with AD.[15] *Filaggrin* mutations are also associated with increased risk of food allergy.[15] A recent study found 227 different types of *filaggrin* variants or mutations associated with asthma, atopic dermatitis, rhinitis and other atopic diseases.[16]

A few studies have also examined common genetic alterations that can be found in AD, asthma and allergic airway disease using a genome-wide approach, and a few genetic factors were found to be in common between all these atopic diseases.[15] The contribution of personal (race, ethnicity) and genetic factors influencing associations between atopic march diseases has also been investigated. A recent study used computer programming to analyze 15 years of medical records (2001-2016) from a cohort of 158,510 children who are part of the Children's Hospital of Philadelphia network, combined with a large genetic study called a Genome Wide Association Study (GWAS).[17] The study sought to identify associations between atopic diseases and other demographic information like race or ethnicity from the medical records and subsequently try to determine genetic components influencing these associations.[17] Self-identified Black race associated with progression from AD to asthma. Asian or Pacific Islander race associated with progression from AD to allergy (IgE)-mediated food allergy. White race associated with progression from AD to rhinitis. The study also pinpointed specific genetic differences between individuals of African and European ancestry that correlated with the type of allergic disease an individual may go on to exhibit.[17] Another analysis of 8,014 Black (52%) and white (37.7%) children with AD found that children with the longest duration of AD had greater levels of other allergic diseases, but that there was not one progressive pathway from one disease to another.[18] Together, these results suggest that there is not one overall atopic march, but potentially many depending on individual identities.

Research like this evaluates an individual's characteristics in order to better understand what a patient's disease course might look like and guide treatment decisions. However, Dr. Heath cautions, "I believe that racial self-identification and genetic mutations do not tell the entire story of the atopic march. Health inequities, environmental factors and living conditions impact all AD patients and likely the atopic march. A multidisciplinary approach to looking at this big picture is required."

INFLAMMATION AND TYPE 2 IMMUNITY

Since inflammation is the body's defense against infection or injury, it is tightly regulated and there are different types of immune reactions involving different cells and different signals between cells (called cytokines or interleukins). Type 1 immunity protects against microbes

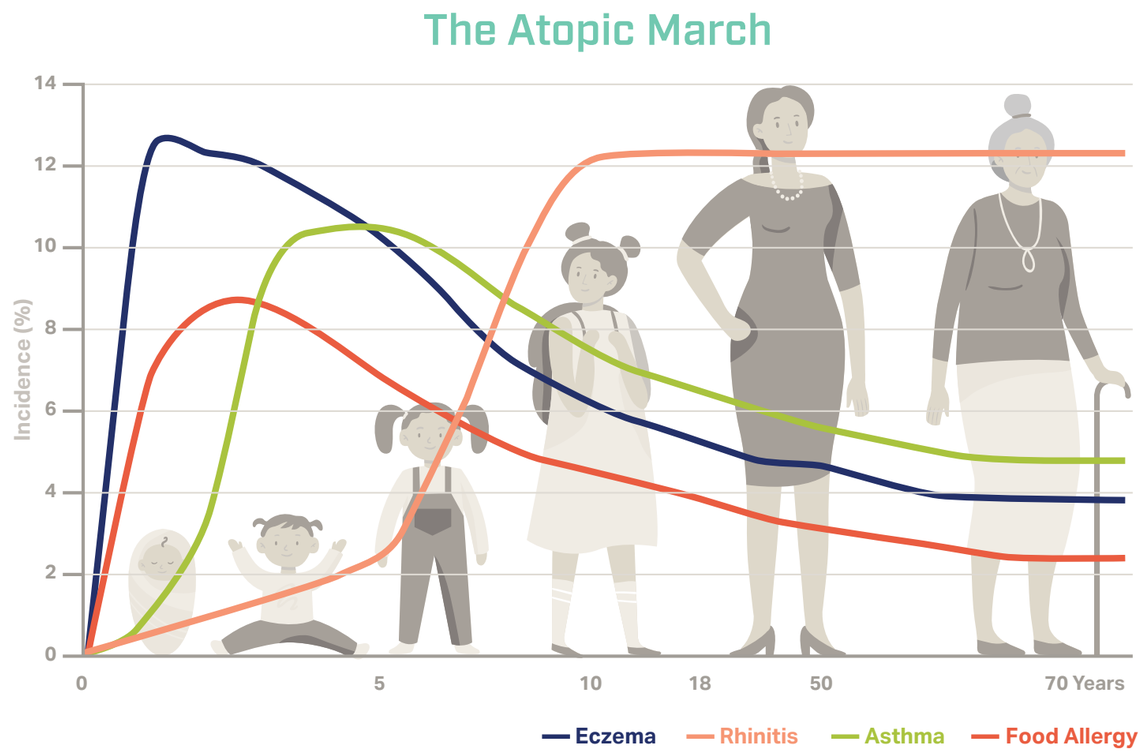

Figure 1: A graphical representation of timing and overlap of the various related immune-mediated allergic diseases eczema (AD) in blue, food allergy in red, asthma in green and rhinitis in orange. This shows the generalized time of onset and duration of each disease.[6]

inside cells, Type 2 immunity protects against parasites and Type 3 immunity protects against bacteria and fungi outside of cells.[19] However, all three of these beneficial immune reaction types can also cause diseases if they inappropriately respond to the wrong things and become dysregulated. For example, Types 1 and 3 immunity can underlie diseases such as rheumatoid arthritis, multiple sclerosis, and inflammatory bowel disease, among others. Cells involved in Type 2 immunity produce interleukins (IL-4, IL-5, IL-9, and IL-13) and an antibody called IgE, all of which are involved in allergic reactions such as mucus secretion, airway reduction, itchiness and redness of the skin and eyes and other symptoms. All the interrelated atopic march reactions and diseases are part of the Type 2 immune response.[19]

Further, the types of immune reactions can differ between children and adults with a more complex range of cells and cytokine signals involved in childhood compared to adulthood AD.[6] While AD symptoms may disappear after childhood, an adult patient who had AD may still be at risk for the other atopic conditions to develop throughout life. New treatments under development for atopic diseases target various components of Type 2 inflammation including specific biologics like dupilumab which is approved for AD, asthma and chronic rhinosinusitis (targets IL-4)[20], tralokinumab (targets IL-13), oral and topical JAK inhibitors and other biologics under development to target various components of the Type 2 immunity pathway (other interleukins and IgE)[21-23].

ENVIRONMENTAL EXPOSURES AND MICROBIOME CHANGES

An individual's environment from birth onward can also be associated with whether they are at higher risk to develop allergic diseases. The method of birth (vaginal vs. Cesarean section) is the first factor that influences the establishment of the entire system of bacteria and other organisms that live on our skin, in our airways and in our gut (called the microbiome). The microbiome and the immune system develop together in infants, so the microbiome impacts a child's immune system for life. Diet and early exposure to medicines such as antibiotics can also influence the microbiome and formation of immune reactions.[24] A recent study of medical records of 158,510 births found associations between vaginal delivery, exclusive breastmilk feeding and reduced cumulative allergic burden. Antibiotic and antacid exposure associated with increased cumulative allergic burden during childhood.[24] The delicate balance of the microbiome is important in development of food allergies with a direct correlation between *Staphylococcus aureus* colonization and sensitization to eggs or peanuts, regardless of AD severity.[25] Early and frequent exposure to environmental allergens (dust, pet dander) can also result in rhinitis and asthma.[26]

COMPREHENSIVE TREATMENT PLANNING AND CARE

AD, food allergies, asthma and rhinitis all typically arise early in life, before 5 years old.[6] However, associations between AD and these other atopic comorbid diseases can remain into adulthood.[27]

Additionally, while incidence of AD, asthma and food allergy symptoms decrease to below 5% of the adult population, the types of intersecting comorbidities expand to include eosinophilic chronic rhinosinusitis (**Figure 1**).[6]

Much work is being done to understand whether early intervention to prevent AD could lead to reduced incidence of the other atopic march diseases. Researchers are focusing on strategies to facilitate barrier repair, early proactive treatment for AD, and reduction in environmental food allergen exposure in the prevention of food sensitization and allergy.[2] AD patients are often advised to avoid irritants including soaps and detergents and to use moisturizers to reduce trans-epidermal water loss and improve the skin barrier as an important line of defense against allergen exposure.[28] Several emerging therapeutics for AD may work to prevent development of the other atopic diseases, or treat multiple atopic conditions simultaneously.[19]

Dr. JiaDe (Jeff) Yu, of Massachusetts General Hospital said, "AD is much more than skin deep. While AD tends to decrease as kids get older, a subset of children maintains moderate to severe eczema into adulthood. Research should be focused on preventing AD in the first place, and also prevention of the atopic march. I hope that if we know exactly how these co-conditions start, we can prevent or halt progression of the atopic march."

Dr. Eichenfield and colleagues published 20 years ago[28] that "treatment of AD requires a comprehensive approach that includes evaluation of potential triggers and education of the patient and family regarding proper avoidance measures. Hydration of the skin and maintenance of an intact skin barrier remain integral to proper management. Studies aimed at defining optimal combination therapy and early intervention might change the treatment paradigm for AD." When asked how he feels these truths have changed over the years he responded, "I think the statement still holds true. While we've markedly improved our armamentarium for treatment of inflammatory disease, we're just beginning longer-term assessment of how early intervention may impact the disease over time."

However, not every person that will develop atopic disease seeks medical treatment for AD. In cases of mild AD, the childhood disease may resolve but later manifest as food allergies, asthma or rhinitis. Further, AD may never develop – practicing allergists know the considerable variability in the number and sequence of allergic conditions that individuals develop even though the basis for these allergic march pathways, or trajectories, is not yet well understood.[29] Patients need holistic approaches to look at the big picture in order to be properly treated no matter whether their initial medical visit is with a dermatologist, pulmonologist, or allergist. New guidelines from the American Academy of Dermatology (AAD) are also helping to bring together information on all the co-morbidities (associated diseases) of AD to be sure that physicians are aware of them and use this information to inform dialogue with patients and care decision-making.[5]

Additionally, multidisciplinary approaches and centers are being initiated worldwide to bring together experts to help patients navigate the range of atopic co-occurring conditions in one place.[20] Dr. Eichenfield said, "Our experience with multidisciplinary care of patients with AD at Rady Children's Hospital has been quite rewarding and insightful. Allergy, dermatology, clinical pharmacy and research associates see our patients, and we've seen that more comprehensive and holistic management improves the lives of affected individuals and families. We have had experiences with patients who are prescribed a medication for their AD but wind up with tremendous secondary benefits to their asthma. The most exciting research questions relate to whether early intervention can modulate the development and/or course of allergic comorbidities. As our systemic medicines improve, we are looking forward to assessing the impact of treatment on the immunologic status of the individuals, as well as the clinical course."

TAKE HOME POINTS:

- AD often does not occur in isolation but can co-occur with several other atopic diseases like food allergies, asthma, and rhinitis (hay fever) in a single patient.
- The atopic march typically occurs in a sequential manner, although there can be variation in timing, age of onset and risk depending on the severity of AD.
- Understanding the environmental, genetic, immune system and personal factors contributing to these linked diseases is an area of active research in children and adults.
- As a patient, understanding other diseases and symptoms co-associated with AD can help with shared decision making, treatment planning and managing overall health and care.
- Multidisciplinary care centers exist to assist with and manage whole-patient care. Where these are not available, an individual may need to coordinate care between multiple healthcare providers to manage different diseases.

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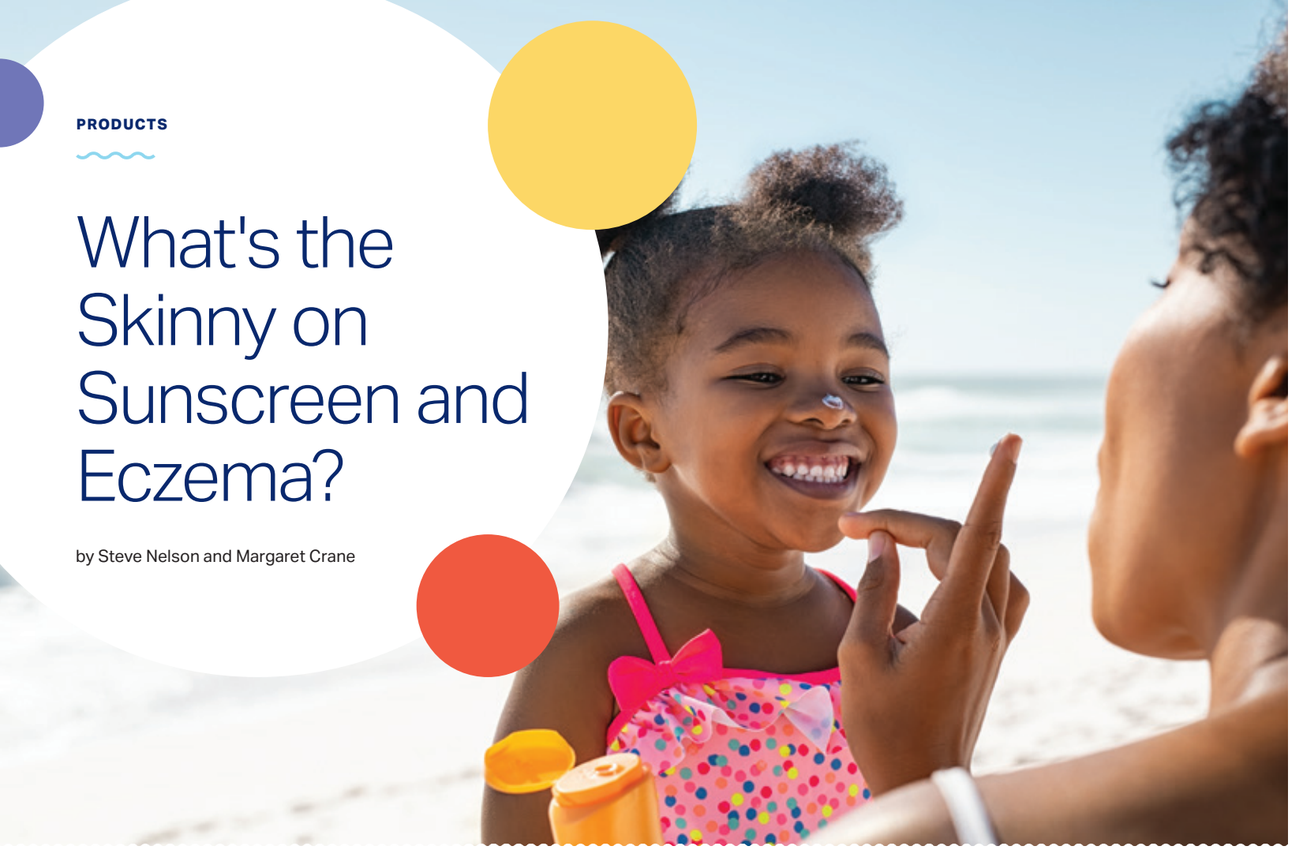
PRODUCTS

What's the Skinny on Sunscreen and Eczema?

by Steve Nelson and Margaret Crane



Unfortunately, not all sunscreen is created equally. What works for one person may not work for someone else. Finding the right product can be complicated and the task becomes even more challenging if you or your child has eczema. To help you keep your skin protected, we connected with board-certified dermatolgoist Dr. JiaDe "Jeff" Yu at Massachuetts General Hospital and asked our eczema community's most frequently asked questions about choosing the right sunscreen.

How do I choose the right sunscreen?

With so many options, take time to read that sunscreen label carefully, said Dr. Yu. Check for all potential active ingredients. And consider the following guidance as you search for the perfect eczema-friendly sunscreen to suit your body's individual needs:

- Read the label carefully to see if it contains any potential known allergens
- Look for sunscreen that has a sun protectant factor (SPF) of 30 or greater; Dr. Yu explained that "anything over SPF-50 probably doesn't make that much more of a difference since SPF-50 blocks 98% of the sun's UV rays."
- Look for a product with mineral-based ingredients such as titanium dioxide (TiO2) and zinc oxide (ZnO); Dr. Yu added that people with eczema should "avoid any sunscreen whose active ingredients are NOT titanium or zinc."
- Make sure the product offers broad-spectrum SPF from both UVA and UVB rays;
- Choose a product that's alcohol-free and fragrance-free; Dr. Yu said that sunscreens labeled "for sensitive skin" have been shown to have fewer potentially allergenic ingredients than those not labeled as such.

Should I test a sunscreen product before I use it?

A small number of people are prone to photoallergic contact dermatitis, a skin reaction that occurs when the sun activates an ingredient found in sunscreen, perfume or medication. If you experience such a reaction, you can request a patch test from an allergist or dermatologist to identify the problematic ingredient and avoid products that contain it.

To test a sunscreen product, apply a small amount (about the size of a pea) to the inside of your wrist or the crook of your elbow. Don't wash the area for 24-48 hours and watch for any allergic reaction such as itchiness, redness, flaking, pain, a rash or breakout of any kind. Dr. Yu explained that oxybenzone and avobenzone are two common allergens in sunscreen that "have been linked to allergic contact dermatitis," so it's best to avoid products with those ingredients.

How much sunscreen should I use?

To ensure that you maximize a sunscreen's full potential, apply one ounce – about a shot glass full – to your face and the exposed parts of your body. Most people tend to apply only half or a quarter of that amount, which means the SPF they're getting is lower than it should be. During a long day at the beach, use around a quarter to a half of an eight ounce tube or bottle.

> Dr. Yu advised that liberal application is important, especially since a "sunburn can potentially worsen atopic dermatitis, provoking the itch–scratch cycle."

Where exactly should I apply it?

Apply sunscreen evenly to all uncovered skin, paying special attention to your lips, nose, ears, neck, hands and feet. If you don't have much hair, apply some to the top of your head, or wear a hat. And remember, never apply sunscreen to damaged or broken skin. Instead, wear bandages or protective clothing over those areas to avoid infection, while still protecting the skin from sun rays.

How often should I use it?

Apply sunscreen about 30 minutes before sun exposure to allow the ingredients to fully bind to your skin. Make sure to reapply the same shot glass dose every two hours — and also immediately after swimming, toweling off or working up a sweat. Dr. Yu explained that "what most people don't understand is that REAPPLICATION of sunscreen is what's important. Most sunscreens have a water-resistant time on the bottle. It's either 40 minutes or 80 minutes. That means after 40 or 80 minutes, you have to reapply otherwise the sunscreen is no longer protecting you."

Can't I just use a moisturizer with sunscreen in it?

For everyday use, aftershave lotions and moisturizers containing sunscreen are fine. As long as you plan to spend just a few minutes here and there in the sun, your favorite lotion containing SPF-15 sunscreen may be enough. But if you're at the beach, on a picnic or playing outdoor sports, use a serious, water-resistant sunscreen that's up to the job of protecting you from the sun's potentially harmful rays.

Do I need to apply sunscreen when it's cold or cloudy outside?

You can develop UV-related sun damage in the winter. And even on a cloudy day, up to 40% of the sun's UV rays come through. If you work and play outside, it's a good idea to use sunscreen all year long. Dr. Yu advised people with eczema to remember that "sunscreen is always secondary protection from sunburns. UV-protecting hats and shirts (labeled as having UPF) are always better since they don't wash off and don't depend on you making sure you did a good job of applying it."

Is there any way to narrow down the search?

Here's a list of sunscreen products that have already earned the NEA Seal of Acceptance™:

- AVEENO® Baby Natural Protection Lotion Sunscreen
- AVEENO® Baby Natural Protection Face Stick Sunscreen
- AVEENO® Natural Protection Lotion Sunscreen
- CeraVe® SPF 50 Sunscreen Body Lotion
- CeraVe® SPF 50 Sunscreen Face Lotion
- CeraVe® Baby Sunscreen SPF 45
- Neutrogena® Pure & Free® Liquid Sunscreen
- Neutrogena® Sensitive Skin Sunscreen Lotion SPF 60+
- Neutrogena® Pure & Free® Baby Sunscreen Lotion SPF 60+
- Neutrogena® Pure & Free® Baby Faces Ultra Gentle Sunscreen
- Neutrogena® Pure & Free® Baby Sunscreen Stick SPF 60

To find the sunscreen that best meets your individual eczema skin care needs, consider looking through the Seal of Acceptance™ Product Directory.

Keep those babies in the shade

Don't forget that children under six months of age should have very limited exposure to the sun, as their skin is extremely sensitive to the sun's rays and to the ingredients in sunscreen itself. Shade and protective clothing are the best ways to sunproof your infant's skin. But for the rest of us, sunscreen is a must.

Ready to head outside?

Sunscreen alone isn't enough to protect your skin against ultraviolet rays. It's just one part of a sun protection program that includes wearing protective clothing and staying out of direct sunlight between 10 a.m. and 4 p.m., especially during the summer months.

So, choose, test and use sunscreen wisely, and from all of us at NEA, enjoy your summer in the sun.

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FROM THE COMMUNITY

I'm an Eczema Caregiver and This Is How I Still Make Time For Myself.

by Nitin Dogra

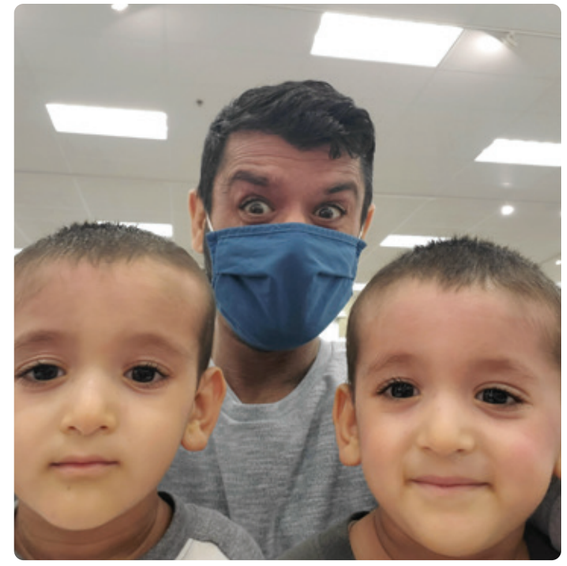


Photo courtesy of Nitin Dogra

My name is Nitin Dogra and, in addition to living with eczema myself, I am the parent of two young boys with eczema. What I've learned is that making time for myself is important not only for me but also for my sons.

How meditation helps me juggle the needs of everyone in our family

Meditation helps me to put wisdom into practice. It guides me to make every moment of the day a meditative act. I'm not able to do that all the time, but putting an effort to be more aware and mindful has led me to make changes in how I think, act, speak and perform my daily duties. It teaches me to be a more conscious dad and remember that I can only teach my kids what I practice. They will not follow what I say or instruct to them to do. They will follow my behaviors. So in a way, meditation helps me to juggle the needs of my kids and my wife in a better way.

These are the times of day when I find it helpful to meditate

I try to get at least 30 minutes of daily meditation time. I try to do a short meditation as soon as I wake up; next I try to meditate for 10-15 minutes after dropping them off at day care and starting work; and I end my day by meditating lying down and going to sleep. I usually also squeeze in another short 10-minute session during the day as well.

For parents who say, "I don't have time to meditate," this is what I tell them

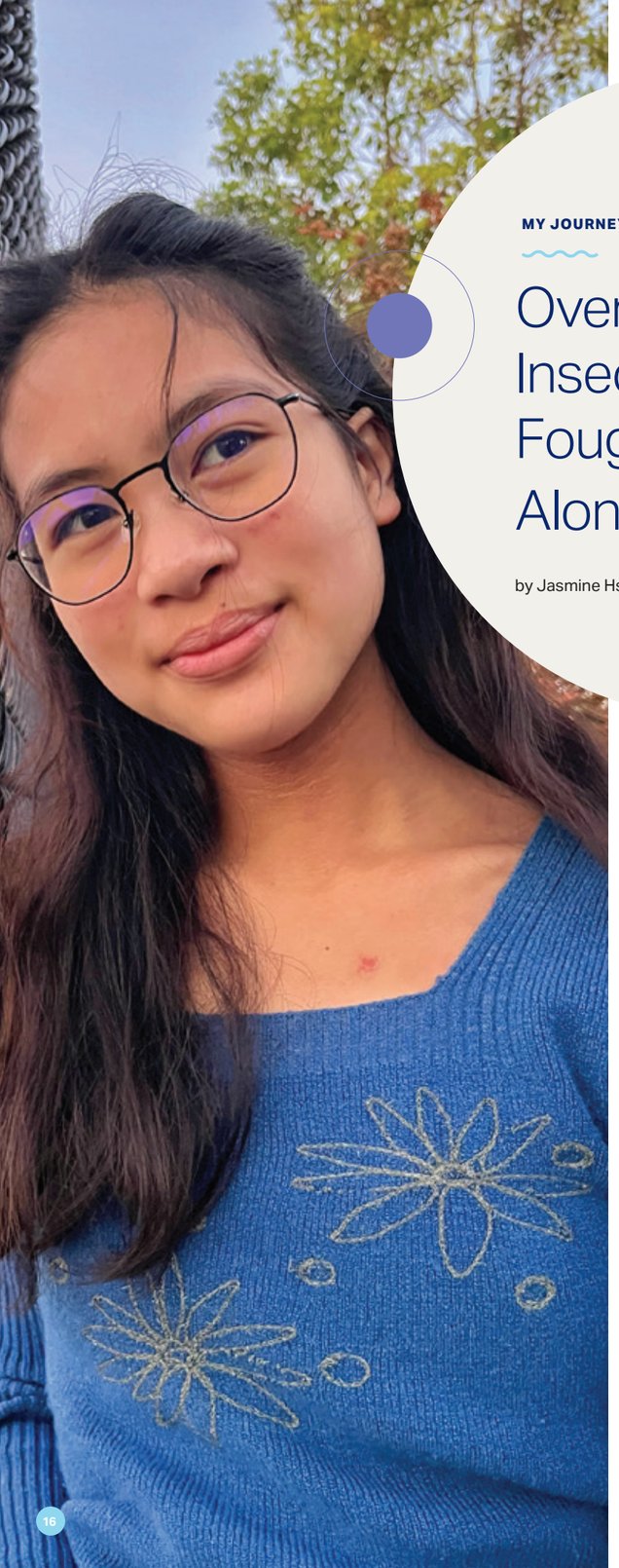
We all find time for things that really matter to us. Say brushing your teeth, eating your meals or going to work. Once you understand why, making time becomes easier. It's quite possible you will have to drop another activity off your calendar, but then you are making time for something that will give you rich dividends in the long run. It will help both your mental and physical health. There is a very famous Zen quote: "Meditate for an hour every day unless you are too busy. In that case meditate for two hours." Once you learn the art of meditation, you can meditate as you walk or clean your dishes or drive your car with absolute attention and awareness.

I wish more parents knew this about taking care of children with eczema

We need to make sure we're taking care of our own mind and body in order to care for our children. And it starts with good nutrition and becoming more aware of what we put into our mind and body all day long. We don't have to be enslaved to our existing conditioning of the mind and body; we can take charge of our mind so that we can be more present for our children in their daily needs and activities.

These are my favorite things about being a dad

I love kissing and hugging my twin boys. I love to hear their crazy imaginative stories and answers to my questions. I love when they say "bye" to me while dropping them off at the daycare. I love waking them up in the morning, and I also love hearing to how their day went as we go to sleep.



MY JOURNEY

Overcoming Insecurities: How I Fought My Eczema Alone for 15 Years

by Jasmine Hsieh

For most people, showers are relaxing. To me, showers feel like needles, raining from the sky.

For most people, beds mean relaxation. To me, beds mean restlessness, bloodstained sheets and a landfill of skin flakes.

For most people, sports are a fun outlet for exercise. To me, exercise comes at the cost of sweating, inflammation and an irresistible itch that leaves my body covered with open wounds.

For most people, school is a place for learning and making friends. To me, school is an unrelenting reminder that because of my cracked skin looking like a festering disease I am treated as an outcast.

My name is Jasmine Hsieh, and I have atopic dermatitis. I was first diagnosed with eczema when I was 3 years old, and I have been battling my skin ever since. Today, I am a 15-year-old high school student living in San Diego, California.

Now, let me take you through a trip down memory lane. When I was 10, my dermatologist took one look at my skin and recommended hospitalization because my skin was negatively impacting my ability to partake in daily activities; it was affecting my ability to play on the playground, shower, make friends or even just sit still in class. Wounds covered my body, leading to a risk of infection. However, my family's health insurance did not cover hospitalization and we couldn't afford it. As a result, the dermatologist prescribed all kinds of steroids that I was supposed to lather over my eyelids, back, knees, chest, heels, midriff, neck, armpits, wrists, shoulders, ankles and elbows. In some parts of my body, the steroids caused my skin to become thin like paper, brittle and translucent to the point where you could see my blood vessels.

All photos courtesy Jasmine Hseih

Flashback to entering a new school as a 7-year-old: all I wanted was to make new friends. Whenever I approached the kids in my class, they saw my lichenification and excoriations before they saw my glowing smile. They pointed out my rashes and asked me if I had skin cancer and if I was contagious.

Later in that same year, I had a large wound on my neck from my eczema that was encrusted with blood. One of my classmates asked me if I was hurt. I was too ashamed to tell her that it was eczema, so I lied and said that I had an accident in the kitchen. It didn't seem very believable, but I never wanted to admit that I had eczema – I was so ashamed of something I could not control.

Although rashes covered my whole body from my heels to my face, I felt the most embarrassed about eczema on my eyelids. The inflammation would cause my eyelids to swell up to the size of two cherry tomatoes. The itchiness caused me to scratch off half of my left eyebrow. When I was 9 years old, my skin worsened to the point that a boy I liked turned to me one day and said: "Why is your face so jacked up?"

I will never forget how broken I felt.

During the peak of a flare, I was struggling both physically and emotionally. I asked my parents, "why me? Why do I have to deal with such a disease? Why does it keep coming back?"

I couldn't handle the pain anymore. One night, I remember crying my eyes out from not being able to fall asleep because of my irritating skin. It was like I was wearing an itchy sweater in the dead of summer that I couldn't take off my body. Seeing me drenched in tears and bloodied sheets, my older sister whispered to me, "The hardest battles are given to the strongest soldiers."

I suddenly realized that even though living with eczema is tough, I am stronger.

After spending so many years feeling insecure about my skin, I have decided that I don't have to be.

I slowly started to realize that my eczema was not something that I should hide. Instead, the scars on my skin resemble my strength and perseverance through the worst of my flares. The beautiful terrain on my skin represents trophies from the flare-ups I had overcome. I could choose between being insecure about my eczema, or being confident in my own skin. At the end of the day, people will judge me, but I won't let them get under my skin.

If I were given the option to live without eczema, I would decline it. Eczema has taken a toll on my physical and social life, but it is a part of who I am. Without eczema, I would not be who I am today. Although eczema seems like a curse, it is a blessing in disguise. I learned about self-love and how to be confident. Today, I don't see eczema as something I should cover up with long sleeves. Instead, I wear my lichenification and discoloration with pride.

Since joining the NEA community, I've started working to raise awareness about the 31.6 million people living in the US with eczema. I have built a website to raise awareness, educate and remove the stigma behind this widespread chronic disease.

I found other people in my community that also suffered from eczema and put their testimonies on my website. Reading their testimonies felt unreal. I finally found people who understood what I was going through. I am not an emotional person, but their testimonies made me tear up with pride.

Eczema is a disease that no one can understand fully unless they have experienced it themselves. For 15 years of my life, I have battled this disease by myself. But I'm starting to realize I don't have to endure this fight all alone. I have found people in my community that are going through the same thing. I have my sisters that will support me no matter what.

I am what NEA would call an Eczema Warrior.

Instead of labeling those with eczema as victims of an integumentary disease, we should be perceived as warriors. Eczema warriors have persevered through their worst flares in times of isolation. Eczema Warriors have pulled through the sleepless nights, constantly resisting the irresistible urge to itch. Eczema Warriors have suffered the feelings of raw flesh, stinging pain and flaking rashes. Every wound symbolizes the physical and mental anguish that we are overcoming. Every rash shows our strength in pushing through hard times. Every scar or discolored patch of leather represents the battles that we have won.

I am an Eczema Warrior. I have won many battles against eczema and will press forward with unrelenting perseverance and pride to win the war.

PREVENTATIVE CARE

What People With Eczema Need to Know About Self-Screening for Skin Cancer

By Angela Ballard, RN

According to the American Academy of Dermatology (AAD), rates of skin cancer are on the rise in the United States. The good news is that having eczema does not necessarily make you more likely to develop skin cancer. However, severe eczema – especially when it's actively flaring – can sometimes make it harder to recognize the early warning signs of certain types of skin cancer. This means that if you have eczema, getting to know your own skin, doing regular screenings and following up with your dermatologist if you see anything unusual is particularly important.

"Though skin cancer typically looks similar for people with and without eczema," said Dr. Benjamin Ungar, assistant professor of dermatology at Mount Sinai Medical Center, "active eczema may 'hide' skin cancers to some extent, obscuring the ability to detect them. This is particularly true for sun-exposed areas such as the face, neck and forearms."

Susan Tofte, assistant professor of dermatology at Oregon Health & Science University, added that skin cancers can sometimes be tender and bleed, much like severe eczema, so it's important to relieve eczema-related inflammation as much as possible in order to effectively screen for skin cancer. But everyone, she says, should look for skin cancer regardless of whether they have eczema.

To help yourself screen for any irregularities, examine your skin regularly (monthly, as per the Skin Cancer Foundation) and look for anything that's different or suspicious. Self-exams are the most practical way to find skin cancer early, says the American Academy of Dermatology, when it's still highly treatable.

The challenge? You might need a couple mirrors and a loved one to help you. And, of course, if you notice anything that's new or changing, you'll want to contact your care provider right away.

How to Perform a Skin Cancer Self-Exam

As a best practice, the Skin Cancer Foundation recommends you check everywhere for signs of skin cancer: under the hair on your scalp, on both sides of your hands, on the tops and bottoms of your feet, and even around your anus and genitals.

Look for anything out of the ordinary to you, or that's evolved since your last self-check. If you see something that fits this profile, talk to a knowledgeable healthcare provider as soon as possible.

This is what to watch for:

- A growth that has increased in size and looks pearly, transparent, tan, brown, black, or multicolored.
- A mole, birthmark or brown spot that has grown in size or thickness, changed color or texture, or is bigger than a pencil eraser. Moles that are multicolored, asymmetrical, uneven around the edges, itchy, crusty, bleeding, or bigger than 6 mm (1/4 inch) should be checked out by a professional.
- A spot or sore that continues to itch, hurt, crust, scab, or bleed, or an open sore that doesn't heal within about three weeks.
- Dark lesions on your palms, soles, fingertips or toes, or on mucous membranes lining your mouth, nose, vagina or anus.
- Scaly patches that are different from your usual eczema symptoms
- A brown or black streak under a nail
- A mole or spot that looks different from others on your body, these are sometimes called "ugly ducklings."

> "Though skin cancer typically looks similar for people with and without eczema, active eczema may 'hide' skin cancers to some extent, obscuring the ability to detect them. This is particularly true for sun-exposed areas such as the face, neck and forearms."
>
> ~ **Dr. Benjamin Ungar**, assistant professor of dermatology at Mount Sinai Medical Center

Skin Cancer & Skin of Color

Although skin cancer can often look similar regardless of skin tone, Dr. Ungar noted that individuals with darker skin are more likely to develop skin cancer on the palms of the hands and soles of the feet as opposed to on sun-exposed areas where skin cancer tends to appear on lighter skinned people (i.e., on the scalp, ears, face, neck, chest, shoulders, forearms, or lower legs.)

Step-by-Step Self-Exam

1. Examine your face including your lips, mouth and the tops, lobes, and backs of your ears.
2. Check out your scalp. A hair dryer can help part the hair for this, or a friend.
3. View your palms, as well as the top of your hands. Check between the fingers and under your nails (remove fake nails and polish).
4. Scan all sides of your arms and don't forget your armpits.
5. Stand in front of a mirror and check your torso and sides. Lift breasts to check underneath.
6. Inspect your back with mirrors or a friend's help. Check the tops of your shoulders, as well.
7. Using mirrors, look at your buttocks and the backs of your legs, move your butt cheeks if necessary and, yes, check in between, too.
8. A stool or chair can help when you're viewing your legs and genitals. Put one foot up on the chair and examine the front of your leg and top of the foot. Use a mirror to check your private parts. Repeat for the second leg and don't forget the soles of your feet and your toenails (without polish).

To help prevent skin cancer, Tofte reminds us to use sunscreen or sun protective clothing and hats, saying: "It's just good practice for preventing damage from the sun which may lead to skin cancer." If you are at particular risk, such as if there's a history of skin cancer in your family member or you have naturally pale skin that burns easily (particularly with red hair and blue or green eyes), she recommends a professional skin cancer screening yearly.

Want to learn more about what skin cancer can look like? The Skin Cancer Foundation and American Cancer Foundation have useful pictures. But remember, everyone's skin looks different, if you see something concerning or atypical, even if it doesn't match skin cancer photos, get it checked by a professional. Finding and treating skin cancer early can save your life.

NEA ARTISTS

Original Artwork From Our NEA Community

We asked members of our eczema community to submit original artwork. We're pleased to share the latest collection of art from our community of NEA artists. To submit your work for an upcoming issue, email editor@nationaleczema.org.

Patches

Chiz Okafor

Hyperpigmentation and jagged edges.

AMERICA

Rose Ribbeck

I'm an illustrator, painter and video-editor living with severe eczema. I have always suffered from eczema, yet it has become increasingly worse in my late 20s. I have just begun a methotrexate program and I'm really hoping this will finally start to improve my condition! I've always believed art is an important and necessary way for people to share their stories and experiences.

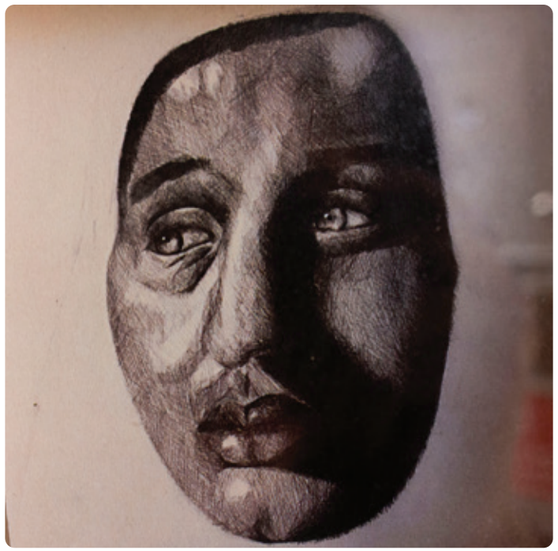
Trying But Failing to Get Back Into Exercise

Suzanne Golden

My arts practice is a personal study of motherhood, mental health, language, behavior and the social perception of body image from a female perspective. My starting point is photography of a muse which I reinterpret by manipulating perspective and scale using traditional techniques such as drawing, printmaking, collage and clay. The work is often naive in parts, simple but bold, putting on a front or wearing a mask. My interest is to capture the emotion of people and the vulnerability and fragile nature of social acceptance and belonging.

My Skin Hurts

Morgan Banks



Rage

Hadiyah Le

Experiencing youth in the midst of eczema.

Mind Curves

Chiz Okafor

My Husband is My Cheerleader Who Makes Me Smile

Cindy Sullivan

I have had eczema off and on since I was a child. I had eczema on my right hand when I did this painting. My husband supports me by doing household chores that involve working with cleaning products and chemicals that could irritate my skin. He washes the dishes, cleans bathrooms and does laundry! He doesn't care that I don't wear cosmetics or perfume. I call him my cheerleader.

What is Step Therapy and Do You Need to Worry About It?

By Melissa Haller Tanoko

Scan the QR code to send an email to your legislator asking them to cosponsor a new law that will help people with eczema get the treatments they need.

When you have eczema, the right medication is everything. But what if your insurance company won't cover it unless you try a less expensive alternative first? This process is called "step therapy" – it's when a doctor prescribes a specific treatment for a patient, but the insurance company denies coverage until the patient "steps" through a series of alternative treatments first. NEA is working to combat this roadblock by influencing insurance legislation on both the state and federal levels. You can help NEA right now – in as little as 30 seconds – by sending an email to your legislator and asking them to cosponsor a new law that will help people with eczema get the treatments they need. Scan the QR code above and send an email!

What to do if you get stuck in step therapy

Patients may first realize that step therapy is impacting them when their prescription is denied by their insurance company. When faced with step therapy, some patients decide to pay for their medications out-of-pocket, while others give up on receiving the intended treatment altogether. Neither of these solutions is ideal. If you and your doctor believe a new medication may be denied on the basis of your insurer's step therapy policies, you can talk to your doctor about prior authorization. This involves having your doctor's office submit information about your medical history to the insurance company before sending in the prescription.

Another option is to file an appeal. Appeals can be internal (made to the company) or external (made to state departments or the Department of Health and Human Services at the federal level). If you are starting out with this process, the first step is to file an internal appeal with the company. If that appeal is denied, you can then submit an external appeal. Visit NationalEczema.org/appeals for more information on filing an appeal.

What NEA is doing to help

NEA has supported legislative bills at the state and federal levels that require insurers to create step therapy policies that allow exceptions, are transparent and based on sound clinical evidence. If you are passionate about step therapy reform and would like to help promote it, consider becoming a NEA Advocacy Ambassador. And remember that in as little as 30 seconds you can add your voice to the growing chorus of people with eczema who are actively fighting to help people get the treatment they need the first time around.

COMMUNITY TIPS

High School Graduate Eczema Checklist

By Melissa Haller Tanoko

Finishing high school means dealing with all kinds of major life transitions, including taking charge of your own skin care routine for good.

We spoke with Dr. Anna Fishbein, associate professor of pediatrics (allergy and immunology) at Northwestern University Feinberg School of Medicine, and NEA Ambassador Jeremy Paredes, who just completed his freshman year at the Georgia Institute of Technology, to identify a few key eczema care tips that are easy to overlook when moving out of the house and into your own space for the first time.

1 Take charge of your skin care routine

The first step to owning your skin care is internalizing your routine and sticking to it consistently. Mom and Dad can't remind you forever.

Start an eczema journal (yes, you can do this on your phone) and write your routine down. Paredes explained it's also important to know what steps to take if you have a flare up. If you're unsure, ask the adults in your life.

The next step is managing your products and keeping them stocked. Paredes recommended, "Always have extra lotion on hand in case you run out." Make a list of skin care must-haves in your journal, and think about how often you will need to refill them. Check if they are sold in your new town. If not, it might be possible to source them online.

Expenses for specialized lotions can add up. Find out how much they cost, then add them to your budget. When you are packing your lotions, consider how to keep them organized. Paredes suggested keeping lotions and medications together in one box for easy access.

All photos courtesy Jeremy Paredes

2 Plan your medical care

Schedule your first check-up before you leave home. Dr. Fishbein explained, "Frequently my college kids flare with all the change, and we usually schedule a visit via telemed or in person shortly after they start, to touch base." Once the appointment is set, put it in your calendar.

If you are moving to a new town, you may need to find a new care provider. However, many clinicians now offer online appointments, so staying with your hometown doctor, who knows you and your history, may be easier than you think. If you do need to switch providers, ask your current physician for a referral.

And remember this is a learning process, you don't have to do it alone. "Learn from an adult how to manage your health and appointments, whether that's your parents or an older sibling. College will teach you how to be independent and self-sufficient, and this is part of it," said Paredes.

3 Get to know your medications

Make sure you know your medications, and their schedules, as well as you know your best friend's social media feeds.

In your eczema journal, write down how much to take and when. Find out what to do if you miss a day, or have a bad flare. If you take medications daily, set reminders on your phone so you don't forget them – no matter how late you stay up studying.

Getting refills for prescriptions isn't always easy. Work with the adults in your life to figure out how to access refills when you need them, and don't forget to include them in your budget.

4 Plan to meet (and educate) new people

Expanding your social circle can be thrilling, but if you have eczema making new acquaintances can also be challenging.

Paredes faced a potentially awkward situation with a new roommate.

"It was important for me to tell my roommate," Paredes said. "I told him I had a specific skin care routine after waking up, after showering and before sleeping." Ultimately, this first conversation helped Paredes in ways he hadn't considered. "Since we shared the same room, he would sometimes hear me scratch, and even tell me to stop scratching – for my own benefit."

Having an open conversation up-front, like Paredes did, helped build strong communication between the two roommates. Leaving things unsaid for too long can lead to misunderstandings.

If your eczema is severe, find out if your school has a disability services office. These offices can help you inform professors of your condition and keep up with assignments if you are absent due to serious flares or infections.

5 Eczema-proof your new digs

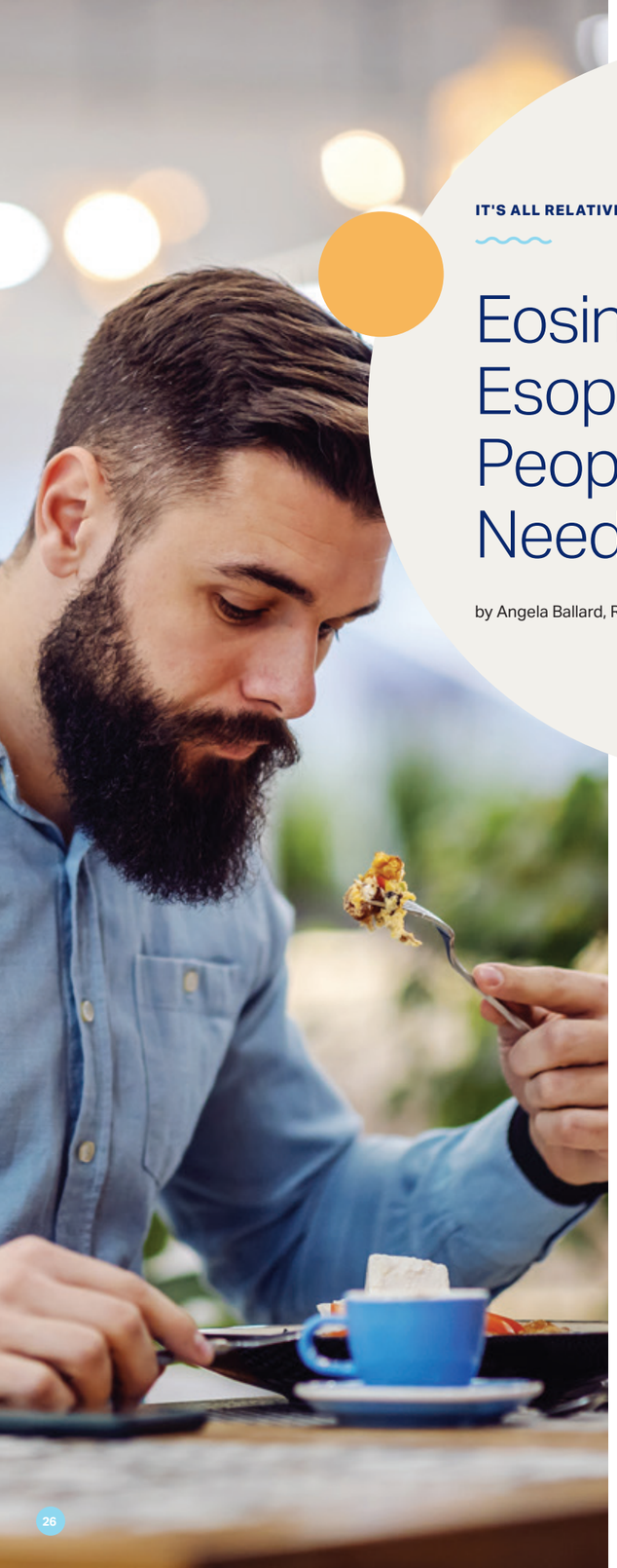
Living in a new environment will expose you to triggers such as foods, dust or harsh cleaning chemicals. If you do have flares, use your eczema journal to track your triggers, or download NEA's EczemaWise app.

Dr. Fishbein recommends bringing dust-mite covers for your bed to reduce exposure. Packing your own laundry detergent, cleaning supplies, soaps, shampoos and conditioners can also make a difference. Not sure if something is eczema-friendly? Check our Seal of Acceptance™ Product Directory at EczemaProducts.org.

In the laundry room, using fragrance-free detergent is a must, but if you share facilities, you may be exposed to chemicals from other people's loads. Look for designated "fragrance-free" washers and dryers. If there aren't any, plan to do an extra rinse cycle before adding your own clothes and detergent to the washer.

Bonus Tip

Stay connected to your family. Just because you're moving away doesn't mean you won't need them anymore. On the contrary! Take some time to chat with your folks about how to keep in touch once you move. Will you schedule a weekly video call, or text every day? And remember you're never too grown-up to ask for help. Everyone needs it sometimes.



IT'S ALL RELATIVE

Eosinophilic Esophagitis: What People With Eczema Need to Know

by Angela Ballard, RN

Researchers are learning more about eczema every day. The good news is that many new studies lead to new treatment options; the more challenging side of new research is that we discover conditions that co-occur with eczema. One such associated condition is called eosinophilic esophagitis (or EoE) and it's especially troubling for children who live with atopic dermatitis.

What is EoE and how common is it?

Eosinophilic esophagitis (pronounced e-o-sin-o-FILL-ik uh-sof-uh-JIE-tis) is a disease that leads to inflammation and narrowing of the esophagus, causing food to get stuck or difficulty swallowing.[1] The challenge for someone living with eczema, or for parents of young eczema warriors, is that the early symptoms of EoE can deceptively resemble a milder, more common condition – acid reflux.

Dr. Neal Jain is an Arizona-based pediatrician who specializes in allergies, asthma and immunology. "If a child with severe eczema or allergies is also having gastrointestinal symptoms such as loss of appetite, vomiting, acid reflux, or weight loss," said Dr. Jain, "they should see an allergist and a gastroenterologist to determine if they have EoE."

According to the journal *Immunology and Allergy Clinics of North America*, EoE is a relatively "new" condition that was first identified in the 1990s and has dramatically increased in prevalence in the last several decades. Dr. Jain added that the symptoms of EoE are easily mistaken for gastroesophageal reflux disease (also known as GERD).

> "We estimate that eosinophilic esophagitis occurs in about 1 out of every 1,000 – 2,000 people, but it's likely far more common than recent reports."
>
> **~ Dr. Jain**

Dr. Abha Kaistha, pediatric gastroenterologist at the NYU Grossman School of Medicine, echoed Dr. Jain's observation about the increased frequency of EoE in children, noting that "as many as 20-55% of children with EoE also have atopic dermatitis." Dr. Kaistha also pointed out that research data corroborate her observations that children with severe eczema, food allergies and respiratory allergies are at significantly higher risk for EoE.[2] Dr. Jain advised any adult with these symptoms, or someone who has trouble swallowing food, to "seek out a diagnosis with an endoscopy and see an allergist as well."

What causes EoE?

The exact cause of EoE is not fully understood, but studies suggest that an interaction of allergies, immune system and a genetic predisposition are at work in this disease. Dr. Kanwaljit Brar, a pediatric allergy specialist at NYU Grossman School of Medicine, said the most common dietary allergies triggering EoE are cow's milk and wheat, as well as eggs and soy. Peanuts, tree nuts, fish and shellfish are not as commonly related to EoE but can sometimes be involved. Dr. Jain added that pollen and animal dander along with chemicals, plastics, and pesticides that make their way into our foods can trigger EoE.

Other risk factors include: being white and/or male; living in a cold, dry climate; the seasons (with EoE more likely to flare in fall or spring); and family history. Abnormalities in the types of bacteria living in and on our bodies (dysbiosis) may be a factor, too. Also, researchers are investigating if EoE in people with eczema (especially children) could be related to the atopic march: the development of atopic conditions, often in sequence from eczema, to food allergies, to allergic rhinitis and asthma.

How to spot the symptoms of EoE

There is some debate about whether cases of EoE are increasing or being diagnosed more often.

The most common symptoms of EoE are:

- coughing while eating
- trouble swallowing
- needing frequents sips of water with meals
- using lots of dipping sauces to lubricate food
- avoiding certain food textures
- "picky" eating
- slow eating
- choking on meat or bread
- chest pain, abdominal pain, heartburn
- vomiting or regurgitation of undigested food
- failure to thrive (malnutrition, weight loss, or stunted growth in children).

How is EoE treated?

Dr. Jain explained that while an allergist can test for food and environmental allergens, these tests are not always accurate at predicting which foods may be contributing to EoE. Similarly, EoE is not easy to diagnose with just an allergy test.

In the event of a diagnosis of EoE, Dr. Jain described three possible treatments for EoE:

1. **Proton pump inhibitors** taken at high doses to reduce acid in the esophagus and stomach and which may have anti-inflammatory properties, as well.
2. **Steroid medications** that are swallowed to coat the throat. These include fluticasone, ciclesonide, or budesonide. They are used "off-label" and work like topical steroids for eczema to reduce inflammation on the mucosal surface of the esophagus and help restore esophageal barrier function.
3. **Dietary avoidance measures**, such as avoiding foods known to potentially trigger EoE. Or, in some cases, an elemental diet (a prescribed liquid meal replacement program) may be recommended to "calm" the GI system and bring down inflammation.

Other treatment options may also be on the horizon. For instance, there are reports, said Dr. Jain, of patients being treated for allergic rhinitis with allergy shots and having their EoE improve. Similarly, some patients receiving dupilumab for severe eczema or asthma say their EoE also improved. More research in these areas is needed.

If all this gives you a lump in your throat, don't worry. Although EoE can have serious impacts if left untreated, most people with EoE do well with proper care and can manage their symptoms for good quality of life.

1. The Mayo Clinic Staff. "Diseases & Conditions: Eosinophilic Esophagitis." MayoClinic.org. https://www.mayoclinic.org/diseases-conditions/eosinophilic-esophagitis/symptoms-causes/syc-20372197; Accessed 4/29/22. 2. Benninger MS, Strohl M, Holy CE, Hanick AL, Bryson PC. Prevalence of atopic disease in patients with eosinophilic esophagitis. Int Forum Allergy Rhinol. 2017 Aug;7(8):757-762. doi: 10.1002/alr.21968. Epub 2017 Jun 14. PMID: 28614630.

GET THE FACTS

Almond Oil

by Clare Maloney

From cooking to skin care, plant oils – like coconut, almond and avocado oils – have become a favorite household staple in recent years.

Almond oil is one of several plant oils currently being studied for its potential to soothe eczema skin. You might be wondering, how safe is it? And what sets it apart from other topical oils? Is this the beginning of a new trend, like that time we all couldn't stop talking about almond milk? Here are the facts.

A tale of two almonds: Which type of almond oil is best for skin with eczema?

There are two main types of almond oil, bitter and sweet, which come from the Prunus dulcis tree.[1] Bitter almond oil is not recommended for ingestion or topical use on the skin. Sweet almond oil, on the other hand, contains properties that are safer and more suited for the skin. It contains nourishing nutrients like vitamins A and E, which contain retinol to help stimulate cell production and antioxidative properties to help prevent cell damage, including the kind caused by UV radiation.[1]

Sweet almond oil can be refined or unrefined, also known as "cold-pressed."[1] This refers to how the oil is extracted from the almonds and processed for use. Cold-pressed almond oil, or oil that's extracted without the use of high heat or chemical solvents, is thought to be especially beneficial in general since this extraction process helps keep these nutrients intact.[1] However, when it comes to skin specifically, "Unrefined [oil] is a little more risk," said Dr. Anna Fishbein associate professor of pediatrics (allergy and immunology) at Northwestern University Feinberg School of Medicine. Contact reactions have been reported, so it's always wise to talk to your doctor and conduct a patch test first if you think almond oil, or almond oil-containing products, could be the right for you. Of course, if you're allergic to tree nuts, including almonds, almond oil is not recommended.

How does it work with the skin?

Like other topical oils, such as vitamin E or coconut, almond oil is an **emollient**, which helps the skin lock in moisture. This is critical for people with eczema to help relieve and repair flaring skin. When skin is dried and cracking during a flare, this leaves open spaces between the cells

of your skin. Emollients fill these empty spaces with fatty substances, or lipids.[2] Phospholipids, another component of plant oils like almond oil, mainly fuse with the outer lipid layer of the skin, potentially acting to help increase the effectiveness of your skin barrier.[3]

Almond oil also contains **linoleic acid**, which has a direct role in helping maintain skin barrier function.[3] "There are a few small reports about oils that are high in linoleic acid being theoretically better for eczema than others," said Dr. Fishbein. Plant oils, like almond oil, can be an especially helpful emollient in this case because they can have an **occlusive effect**, which means they help the skin stay hydrated for longer by preventing too much water loss.[2] Previous research on plant oils have demonstrated that almond, jojoba, soybean and avocado oils, when applied topically, mostly remain at the surface of skin without deep penetration. This combination of properties creates a hydrating barrier, which is what helps set almond oil apart from other non-plant oils or emollients.[2]

So you're on board with almond oil: Here's how to use it and where to find it

You can "apply it to the skin as a moisturizer," said Dr. Fishbein, or many skin care brands carry products containing almond or similar linoleic acid-containing ingredients. "Cetaphil for example has this as an ingredient: Prunus Amygdalus Dulcis (Sweet Almond) Oil," said Dr. Fishbein. Almond oil that's safe to use on skin is typically labeled as "sweet almond oil", either on its own or as an ingredient in serums or cream moisturizers. The prices range from about $8–$20 per bottle. Some products specifically made for use on the face are sold for up to $50 per bottle.

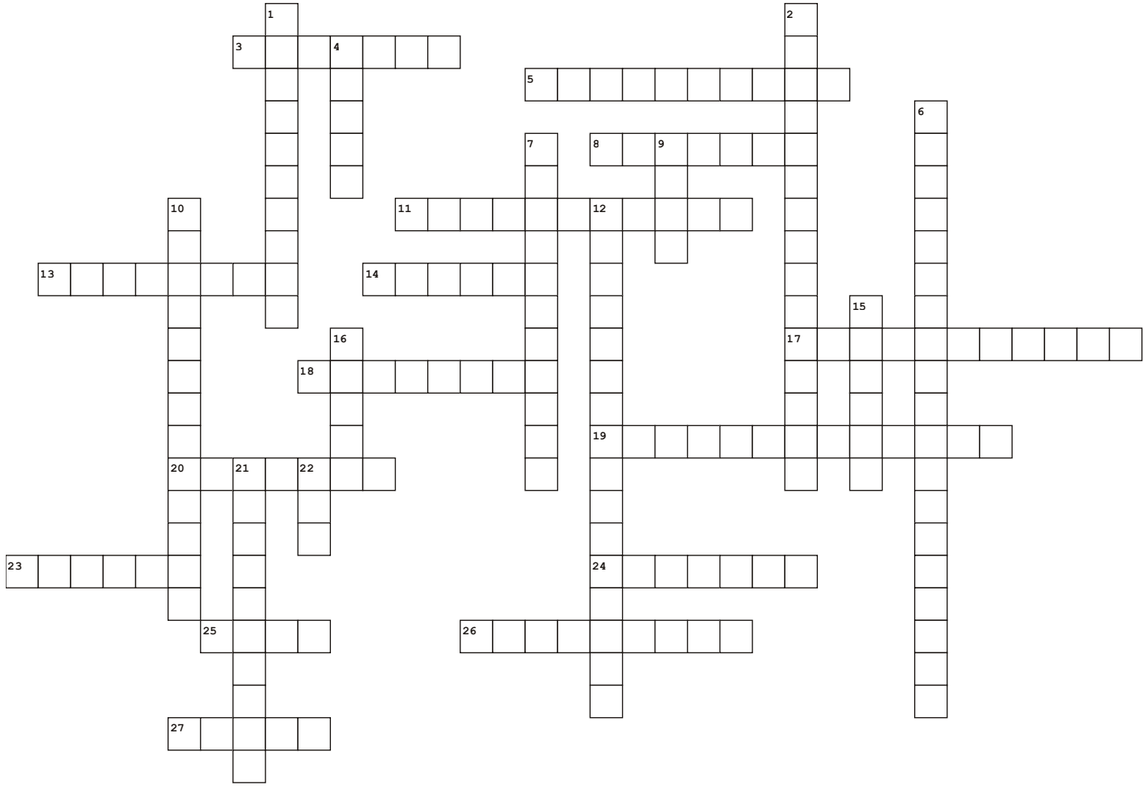
Bottom line

As noted above, almond oil does carry the risk of a contact reaction if you have unknown allergies or sensitivities to almonds. However, if you've assessed and mitigated these risks with your doctor and/or a patch test, almond oil has nourishing and protective properties that help make it a cut above the rest.

1. "Almond Oil for Skin: How to Use It and Benefits." Medical News Today, MediLexicon International, 29 April 2020, https://www.medicalnewstoday.com/articles/almond-oil-for-skin. https://www.medicalnewstoday.com/articles/almond-oil-for-skin. 2. "How Emollients Can Treat Most of Your Skin Issues?" SkinKraft, 10 Nov. 2021, https://skinkraft.com/blogs/articles/emollients-for-skin. 3. Lin, Tzu-Kai, et al. "Anti-Inflammatory and Skin Barrier Repair Effects of Topical Application of Some Plant Oils." International Journal of Molecular Sciences, MDPI, 27 Dec. 2017, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5796020/.

The NEA Crossword Puzzle

Welcome to our first NEA Crossword Puzzle. Let us know if you think it's too easy, too hard or just right! Answers are available online at NationalEczema.org/Summer22-Crossword or scan the QR code.



ACROSS

3. The Itch-_____ cycle
5. Name of NEA's CEO
8. A linear crack in the skin
11. Scratch or wound caused by picking at skin
13. Medical term for itch
14. Approximately 20% of adults with atopic dermatitis also have this condition
17. Progression of eczema, allergies and asthma
18. Areas of the body that bend or curve
19. Name of NEA's Podcast
20. Wet wrap _____
23. Type of honey with antimicrobial properties
24. Something that causes or aggravates your eczema
25. Commonly reported eczema symptom
26. Hormone that helps with sleep
27. Fixed cost patient usually pays for a medical appointment

DOWN

1. App to help track skin flares and triggers
2. Skin thicker and darker than usual
4. Genetic tendency to develop allergies
6. NEA's vision
7. Branch of medicine focusing on skin
9. Largest organ in the human body
10. Research study on new drugs or treatments
12. The most common type of eczema
15. NEA's headquarters are in this California town
16. Parents of itchy newborns never get enough of this
21. NEA annual gathering of the eczema community
22. Non-profit medical assoc. for skin docs

National
Eczema
Association

LOOKING FOR ECZEMA PRODUCTS?

Look for the Seal

EczemaProducts.org