TREAT YOUR ALLERGIES NATURALLY

DARIN INGELS, ND, FAAEM

About Dr. Darin Ingels

Dr. Darin Ingels is a respected leader in natural medicine with numerous publications, international lectures and 30 years experience in the healthcare field. He received his Bachelor of Science degree in medical technology from Purdue University and his Doctorate of Naturopathic Medicine from Bastyr University in Seattle, Washington. Dr. Ingels completed his residency at the Bastyr Center for Natural Health.

Dr. Ingels is a licensed Doctor of Naturopathic Medicine in the State of California. He is a Fellow with the American Academy of Environmental Medicine and Fellow with the Medical Academy of Pediatric Special Needs.

Dr. Ingels has been published extensively and is the author of two books, The Natural Pharmacist: Lowering Cholesterol and Natural Treatments for High Cholesterol. He has also written a chapter on allergy desensitization for autistic children in “Cutting Edge Therapies for Autism” and is the author of the book, The Lyme Solution: A 5-Part Plan To Fight The Inflammatory Autoimmune Response And Beat Lyme Disease.

Dr. Ingels’ practice focuses on environmental medicine with special emphasis on Lyme disease, MS, autism, Pediatric Acute-onset Neuropsychiatric Syndrome (PANS and PANDAS) and chronic immune dysfunction, including allergies, asthma, recurrent or persistent infections and other genetic or acquired immune problems. His practice is comprised of both children and adults. He uses diet, nutrients, herbs, homeopathy, and immunotherapy along with conventional medical therapies to help his patients achieve better health.

WHO HAS ALLERGIES?

- According to the American Academy of Allergy, Asthma, and Immunology, more than 50 million people in the U.S. and **more than 40% of the worldwide population have some form of allergy**
- Allergic diseases affect between 40-50% of all school-aged children.
- Skin allergies (eczema) affect 12-17% of children worldwide.
- In 2012, almost 6% of children had severe food allergies.
- The prevalence of allergies has grown each year for almost 50 years in industrialized nations.
- Allergy symptoms can occur at any age

WHAT IS AN ALLERGY?

- Allergy is defined as a “harmful, increased susceptibility to a specific substance”, also known as hypersensitivity.
- Typically used to describe type I or immediate hypersensitivity reactions, mediated by IgE but may include types II, III, and IV hypersensitivity.
- However, this definition does not encompass the breadth of immune reactions to substances.
- Anyone presenting with recurrent infections or multiple endocrine dysfunctions should be evaluated for allergies

WHY DO WE GET ALLERGIC?

The ability to become allergic or hypersensitive is a multifactorial event that includes heredity, environmental exposures, complex immune mechanisms on recognition of foreign antigens, the diet of the mother, and early-life food exposures. The hygiene hypothesis suggests that the modern sterile world has deprived our immune system of exposure to allergens and microbes that help our immune system develop immune tolerance.

HISTORY OF ALLERGY IN POST-HYGIENE COUNTRIES

Since the introduction of hygiene strategies such as clean water, eradication of helminths, wearing shoes, and separation from farm animals, rates of infection drastically dropped, but the incidence of allergies and asthma has increased significantly.

Asthma in underdeveloped countries is virtually non-existent.

Modern antiseptics and detergents may affect our skin barrier and allow for transdermal sensitization of various proteins.

DATE	RELEVANT CHANGES	EPIDEMIC
1870-1950	Clean water & helminth eradication	Seasonal allergy
1955-current	Onset of indoor lifestyle	Pediatric asthma
1955	Changes in peanut products	Peanut allergy
2005	Increase in tick bites	Delayed anaphylaxis to red meat

Timing and location of when they experience allergy symptoms can guide you on which allergens may be clinically more problematic than others.

1. Are symptoms seasonal or perennial?
2. Do symptoms get better or worse during the times of day or time of year?
3. Are symptoms worse when they change environments or go on vacation?
4. Do they feel better indoors or outdoors?
5. Do they react around pets?
6. Do they have an occupation or hobby that disposes them to allergies or irritants?
7. Have their symptoms changed or worsened?
8. Do symptoms change with the weather?
9. Do they know what triggers their allergy symptoms?

CLASSIC ALLERGY SYMPTOMS

- Anaphylaxis
- Allergic rhinitis (hay fever)
- Sinusitis
- Allergic conjunctivitis
- Otitis media/Otitis interna
- Asthma
- Eczema
- Contact dermatitis
- Hives (urticaria)
- Gastroenteritis

WHAT AFFECTS ALLERGIES

- Frequency of exposure
- Duration of exposure
- Dose of exposure
- Genetics
- Prenatal factors (smoking, alcohol, diet)
- Diet
- Smoking
- Obesity
- Excessive alcohol consumption
- Underlying infection
- Stress
- Occupational hazards (i.e., Nail technician, Mechanic, Dental hygienist, etc.)

COMMON ALLERGENS

Skin Contact

- Poison Plants
- Latex
- Animal Dander
- Jewellery

Ingestion

- Milk
- Medication
- Nuts & Shellfish

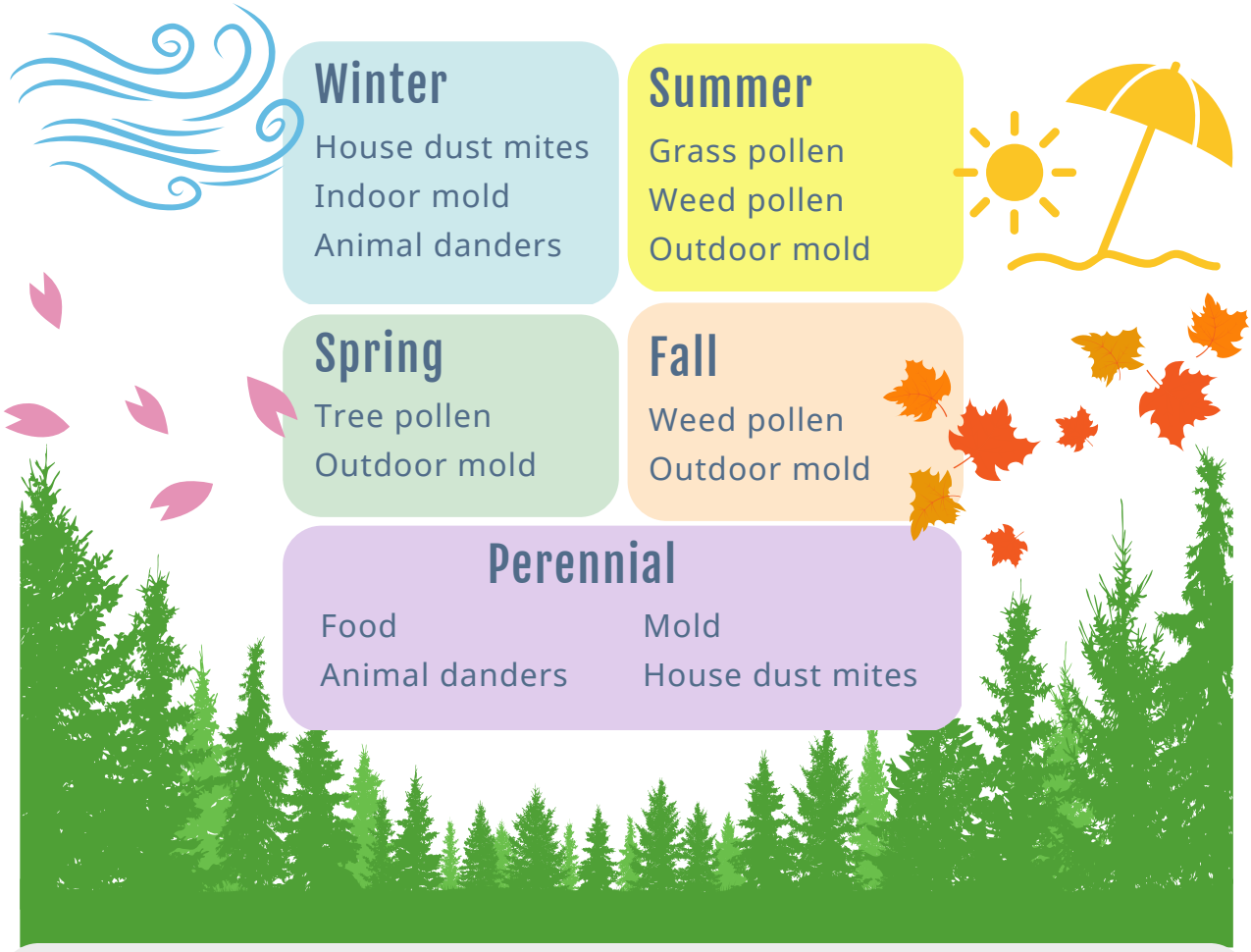
Injection

- Medication
- Bee Sting

Inhalation

- Pollen
- Dust
- Mold & Mildew
- Animal Dander

SEASONAL (NORTHEAST UNITED STATES)



You need to understand your local environment and what exposure your patients may have to understand their potential allergic load.*** NE

SYMPTOMS OF SEASONAL ALLERGIES

- Allergic shiners
- Dennie's Lines
- Allergic "salute"
- Eczema
- Urticaria
- Dermatographism
- Rhinitis
- Post-nasal drip
- Lymphadenopathy (palatine or cervical)
- Serous fluid accumulation in middle ear
- Wheezing

FOOD ALLERGIES

The prevalence of food allergies has increased dramatically over the past several decades. Maybe as high as 8-10% in some Western countries.

The term “food allergy” is often misused to describe any reaction to a food. However, food reactions can be toxic or nontoxic (immunological or nonimmunological). True food allergy (IgE mediated) is a nontoxic immunological response.

Food allergies may develop as a result of impaired gastrointestinal barrier function (aka “leaky gut”), impaired gastric or pancreatic secretions, impaired intestinal motility, reduced intestinal flora, altered mucus secretion, IgA deficiency, or non-specific intestinal inflammation.

SYMPTOMS OF FOOD ALLERGIES/REACTIONS

- Nausea
- Joint pain
- Vomiting
- Anaphylaxis
- GERD
- Chronic otitis media
- Abdominal pain
- Depression
- OAS
- Mood lability
- Constipation
- Anxiety
- Diarrhea
- Heart rate variability
- Itchy anus
- Vasculitis
- Rhinitis
- ADHD
- Urticaria
- Memory or cognitive impairment
- Asthma
- Autism
- Atopic dermatitis
- Chronic infections
- Headaches
- Insomnia
- Migraines

A good medical history with regards to diet and food intake can help pinpoint which foods may be causing a patient’s specific symptoms.

Having the patient keep a detailed diet diary with the timing and quantity of food intake plus recording the timing of their symptoms may be useful in aiding you to find the causative allergen.

ALLERGY TESTING

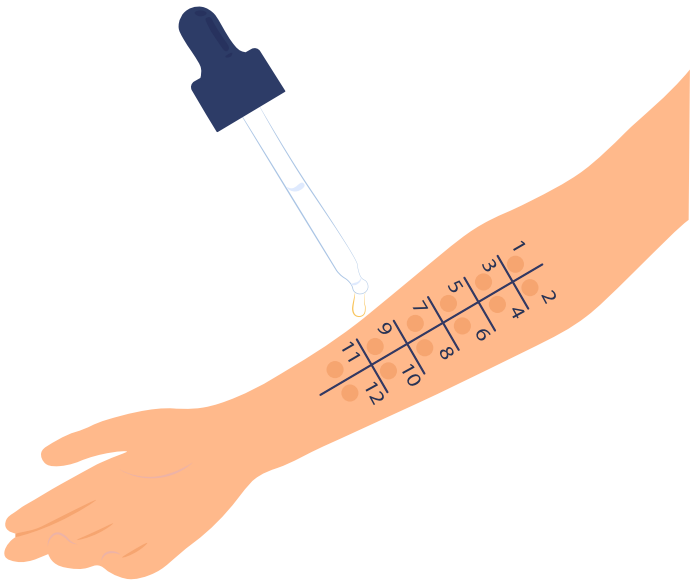
Skin Prick Testing (SPT)

This is the most widely used form of testing by conventional allergists to determine immediate hypersensitivity. A small drop of the suspected allergen is placed on the skin and pricked with a lancet down to 1 mm depth.

Provocation-Neutralization Testing (P/N)

Performed the same way SET is done, except a provoking dilution is given to stimulate an allergic reaction (provocation). The testing continues with subsequent injections every 10 minutes of weaker dilutions until the reactions stop (neutralization).

During the testing, the patient is also questioned about how they physically, mentally and emotionally feel and these symptoms are recorded.



RAST: Radioallergosorbent Test (ImmunoCAP)

Often the first line of allergy testing. Useful in assessing food, pollen, dust mite, animal dander, cockroach and other environmental allergens

Skin Endpoint Titration (SET)

Also called Intracutaneous (IC) or Intradermal testing (ID).

The same allergens are used as in prick testing, but instead of placing a drop of the allergen on the skin and pricking the skin, 0.02-0.05 ml of diluted allergy extract is injected into the intradermal skin layers.

Skin Patch Testing

Standardized test substances are placed is small aluminum wells or on patches of filter paper and adhered to the back. They are taped on and left for 48 hours.

Erythema and swelling at site of skin patch demonstrates reaction of allergen. Are primarily used to identify substances that trigger allergic contact dermatitis, such as nickel, dyes or fragrances.

FOOD ALLERGY TESTING

Less than 1% of the population has actual food allergy by strict definition, but more than 30% of the population believes they have food allergy. (This likely reflects non-IgE mediated reactions that are often never identified.)

The testing method you choose should reflect the type of reaction your are trying to identify.

Some reactions to food can be enzyme deficiencies (such as lactose or gluten intolerance) toxic reactions, physiological reactions (caffeine) or microbiome dysbiosis and do not show up on conventional allergy tests.

RAST Testing

Measures IgE antibodies to specific foods. Like inhalant allergies, it can test for numerous food allergies in one blood sample. This is commonly the first step used by conventional allergists in determining food allergy.

IgG Antibody Testing

Not generally recognized in the conventional allergy world as a valid tool to measure food allergies.

ALCAT (Antigen Leukocyte Cellular Antibody Test) Testing

Does not measure IgE or IgG antibodies, but rather measures platelet aggregation and morphological changes in white blood cells after being exposed to various food antigens.

Elimination and Rechallenge Diet: The Gold Standard

All food allergy tests currently available still do not consistently show how much a food provokes specific symptoms. Elevated antibody levels (IgE or IgG) do not necessarily correspond with patient's symptom severity.

Hidden food allergies can usually be identified or "unmasked" after eliminating them for a period of time and then rechallenging them back to see how the patient responds.

It is still the most reliable and accurate way to identify not only which foods bother patients, but also what specific symptoms the food provokes.

There are a few variations on the Elimination Diet, but I like the modified Dr. William Crook diet developed by Alan Gaby, MD.

The foods eliminated include dairy, wheat, corn, eggs, citrus fruits, refined sugars, coffee, tea, alcohol, food additives, known food allergies, food additives or any food that is normally consumed more than 3 times per week.

Foods are eliminated for 2-3 weeks, depending on how patient feels during the elimination phase.

Foods are added back one at a time every other day. On the day the food is added back, it is consumed in a good quantity to provoke the immune system.

Some foods may cause a delayed reaction, therefore the 48-hour timeline is followed before challenging the next food.

Foods that trigger anaphylactic reactions are never reintroduced as they may trigger serious allergic reactions.

ALLERGY TESTING: SUMMARY

Environmentals

1. RAST
2. Skin prick testing
3. P/N testing
4. Skin scratch testing
5. Patch testing

Foods

1. Elimination diet/Oral challenge-
2. RAST
3. IgG antibody
4. ALCAT
5. Patch testing

LESS COMMON ALLERGENS

- Food components: histamine, tyramine, MSG, phenolics
- Food dyes, especially tartrazine (yellow #5)
- Medications
- Chemicals: perfume, formaldehyde, phenol, petroleum, preservatives, tobacco smoke
- Hormones, neurotransmitters? Do some of the body's proteins stimulate immune reactions?

TREATMENT GOALS FOR ALLERGY & ASTHMA

1. Identify the allergen. Avoid or minimize substance exposure.
2. Reduce the total load. Eliminate other factors that influence the immune system.
3. Improve immune function with non-suppressive means (nutrients, herbs, homeopathy, etc.)
4. Detoxification
5. Immunotherapy: non-injection, isopathy. Can alter the way the immune system responds to an allergen.

CONVENTIONAL TREATMENT/PREVENTION

Antihistamines

H1 receptor antagonists. Cetirizine(Zyrtec®), diphenhydramine (Benadryl®), loratidine(Claritin®), fexofenadine (Allegra®).

Decongestants

pseudoephedrine (Sudafed®).

Nasal Sprays

(Afrin®), cromolynsodium (NasalCrom®).

Steroids

Nasal, inhaled, topical. Triamcinolone(Nasacort®), fluticasone (Flonase®), budesonide(Rhinocort®), hydrocortisone (Cortaid®).

Leukotriene Inhibitors

montelukast (Singulair®).

Immunotherapy

Weekly or monthly allergy shots.

ALTERNATIVE TREATMENT/PREVENTION

Other Nutrients

- Magnesium
- Vitamin E
- Omega-3 Fatty Acids- Diet high in EPA decreased the risk of developing hay fever in adults1.
- Vitamin C has demonstrated in-vitro anti-histamine activity. May have other immune-modulating effects.
- Vitamin B6
- Vitamin B12:
- Vitamin D:
- Selenium:
- Vitamin B3 (niacinamide):
- Quercetin:
- IV Myers cocktail

Thymus Extract

Thymomodulin® is a special preparation of the thymus gland from calves. Studies show thymus extract helps improve symptoms of hay fever and allergic rhinitis, food allergies, and infection. Has modulating effect on T-cells.

Probiotics

Beneficial bacteria are part of the normal flora of the gut, including *Lactobacillus sp*. and *Bifidobacterium sp*.

Digestive Enzymes

Pancreatic enzymes: trypsin, chymotrypsin, lipase, amylase.
May break large, allergenic proteins into smaller non-allergenic proteins.
Bromelain and papain are also useful.

Pycnogenol

Extract of French maritime pine bark (Pinus pinaster) containing bioflavonoids. Inhibits the release of histamine from mast cells and inhibits leukotriene production.

Nettles

Preliminary study showed that freeze-dried capsules of nettles (Urtica dioica) reduced sneezing and itching in those with hay fever. Historical use in botanical medicine for treating cough, TB, and arthritis. In-vitro studies suggest it may have anti-inflammatory effects and inhibit prostaglandins.

Butterbur (Petasites hybridus)

Mild leukotrieneinhibitor. Found to be as effective as 180 mg of fexofenadine. Butterbur is in the ragweed family so should be used with caution in those allergic to ragweed.

Herbs Traditionally Used In Treating Asthma & Allergic Rhinitis

- Ma Huang (Ephedra sinica)
- Marshmallow (Althea off.)
- Eyebright (Euphrasia off.)
- Mullein (Verbascum thapsus)
- Eucalyptus (Eucalyptus globulus)
- Plantain (Plantago lanceolata)
- Red Raspberry (Rubus idaeus)
- Elecampane (Inula helenium)
- Elderberry (Sambucus nigra)
- Coltsfoot (Tussilago farfara)
- Sage (Salvia off.)
- Ivy leaf (Hedera helix)
- Slippery elm (Ulmus fulva)
- Lobelia (Lobelia inflata)
- Tylophora (Tylophora Indica)

Homeopathics Used In Treating Asthma & Allergic Rhinitis

- Allium cepa
- Euphrasia
- Arsenicum album
- Blatta orientalis
- Tuberculinum
- Phosphorus
- Calc carb
- Silica
- Pulsatilla

OTHER MODALITIES USED IN TREATING ASTHMA & ALLERGIC RHINITIS

Yoga

Many studies show yoga can help reduce the frequency and severity of asthma attacks.

Exercise

Especially in overweight children.

Constitutional Hydrotherapy

Can do a home version with hot and cold towels. Easy for parents to do to their children.

TCM: Gua Sha:

It involves palpation and cutaneous stimulation where the skin is pressured, in strokes, by a round-edged instrument, which results in the appearance of small red petechiae.

Sublingual Immunotherapy (SLIT)

Treatment concept same as an injection; different route of administration. Allergy drops taken under the tongue and then swallowed.

TREATMENT PEARLS

1. Alkalinize the body: sodium bicarbonate works well. 1/8-1/4tsp bid-tid can help reduce allergy-like symptoms and wheezing.
2. Steam inhalation for wheezing with or without essential oils, such as eucalyptus, lavender, or wintergreen oils. 1-2 drops in boiling water with the head covered.
3. Nasal irrigation daily.
4. Euphorbium homeopathic nasal spray for allergic rhinitis.
5. Homeopathic histamine/luffa/euphorbium 30C for hay fever.
6. Nebulized glutathione: 60 mg/cc (2 cc ampules). Daily for one month for recurrent asthma.

PREVENTION OF ALLERGIES

Clean Up the Home!

- Dust mite protection: protective covers for mattresses and pillows. Vacuum the mattress regularly. Wash sheets weekly and other bedding regularly. Remove carpet from home.
- No animals in the bedroom.
- Ventilate the home frequently, especially the bedroom.
- Do not smoke in the house. Wash clothes soon after exposure to smoke or other chemicals.
- Use air purifiers: HEPA filter (with UV light if mold allergies). Change filters in the furnace as often as needed.

Tsitoura S, et al. Randomized trial to prevent sensitization to mite allergen in toddlers and preschoolers by allergen reduction and education: one-year results. *Arch Pediatr Adolesc Med* 2002;156:1021-7.

Morgan WJ, et al. Results of a home-based environmental intervention among urban children with asthma. *N Engl J Med* 2004;351:1068-80.

Reduce exposure to mold

- Eliminate sources of water leaking into the home (especially basements). Fix water-damaged areas appropriately. Test home for Stachybotrys (toxic mold).
- Clean mold in bathrooms, etc. with a 10% bleach solution. Clean clothes with Borax if mildew.
- Use dehumidifiers in areas of the home that are oversaturated. Home humidity should be ~40-50%.
- Remove carpet and padding. Padding harbors mold more than carpet, especially if carpets have ever been steam cleaned.

Reduce exposure to chemicals

- Cleaning up your home and work environment.
- Lowering the exposure to chemicals reduces the load on the immune system.

Safe cleaners to use in the home

- Arm and Hammer Baking Soda
- Bon Ami cleanser or Borax
- Water and white vinegar
- 70% isopropyl alcohol

PREVENTION OF ALLERGIES

Clean Up the Diet

- Consume whole foods. Avoid foods that are canned, processed, and refined. These foods may contain additives, preservatives, and dyes.
- Eat organic when possible and available.
- Eat organic foods and foods that do not contain hormones or antibiotics. Our Toxic World by Rapp.
- Avoid known food allergens.
- Mind the gut. Changes in gut microflora may regulate immune responses in the lungs1. Overuse of antibiotics and chronic intestinal inflammation may predispose to microflora imbalances.

1. Noverr MC, Noggle RM, Toews GB, Huffnagle GB. Role of antibiotics and fungal microbiota in driving pulmonary allergic responses. *Infect Immun* 2004;72:4996-5003.

Clean Up the Lifestyle

- If overweight, lose weight. Obesity predisposes to allergies and asthma in children1 and losing weight reduces hypersensitivity2.
- Reduce stress. Stress decreases secretory IgA, which may increase the risk of mucosal infections3.
- Get off the phone? A study found one hour of continuous cell phone use had a significant increase in the allergic skin response to dust and cedar pollen, compared with those who did not use a cell phone4.

1. O'Connell EJ. Pediatric allergy: a brief review of risk factors associated with developing the allergic disease in childhood. *Ann Allergy Asthma Immunol* 2003;90:53-8.
2. Stallone DD, et al. Decline in delayed-type hypersensitivity response in obese women following weight reduction. *Clin Diagn Lab Immunol* 1994;1:202-5.
3. Bosch JA, et al. Differential effects of active versus passive coping on secretory immunity. *Psychophysiology* 2001;38:836-46.
4. Kimata H. Enhancement of allergic skin wheal responses by microwave radiation from mobile phones in patients with atopic eczema/dermatitis. *IntArch Allergy Immunol* 2002;129:348-50

ATOPIC DERMATITIS

Allergy MC 1/25/16:Darin Ingels,ND

Atopic dermatitis (AD) and eczema are ofteninterchangeable used, but dermatitis is typically used todesignate acute inflammation in the skin, and eczemarefers to chronic inflammation of the skin.

AD is characterized by fine papules with central scalingor crusts. The papules will often group together to form larger lesions with irregular borders, lichenification, fissures, or plaques.

Microscopically, AD shows T cell infiltrates in the epidermis, dilated vessels and edema in the dermis, and increased proliferation of keratinocytes in the epidermis.

Types of Eczema

Atopic Dermatitis
Most common form. Found on flexural surfaces.

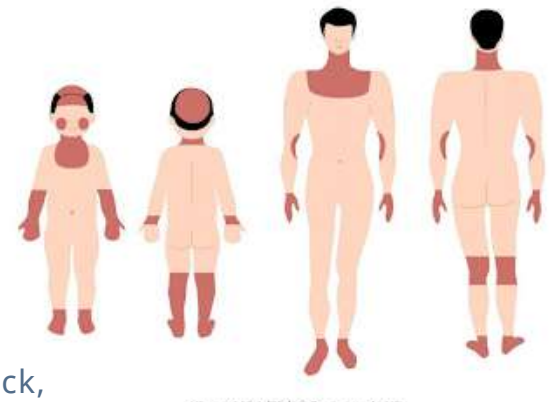
Asteatotic Eczema
Due to dryness of the skin.

Nummular Eczema
(discoid eczema) Coin-shaped lesions, mainly found on extensor parts of the body.

Dyshidrotic Eczema
Blistering type of eczema mostly found on the hands and soles of the feet.

Seborrheic dermatitis
Is most common on the scalp (“cradle cap” or“dandruff”); believed to be an inflammatory reaction to yeast.

Common Sites of Eczema in Children and Adults



Allergy MC 1/25/16:Darin Ingels,ND

Atopic dermatitis (AD) usually starts after 3 months of age and is usually the first manifestation of atopy.

In infants, it tends to involve the face, neck, trunk andflexural regions of the body like the creases of the elbows and knees.

Adolescent AD involves the nape of the neck and flexural areas.

In adults, AD affects primarily the trunk and arms.

TREATMENT OF ECZEMA

Conventional treatment is palliative and there is no acceptedcure for AD.

Avoidance of the allergen is recommended, but the trigger is often unknown and therefore unavoidable.

Treatment with topical corticosteroids is the first-line therapy for AD.
These are often used in conjunction with emollients to keep skin moist or calcineurin inhibitors such astacrolimus (Elidel®) or pimecrolimus (Protopic®). These cannot be used on the face and have black box warnings for causing malignancies such as melanoma and lymphoma.

1. **Address food allergies** (most common food allergies are cow milk, hen's eggs, peanuts, soy, wheat, tree nuts, fish, and shellfish. Avoid foods high in nickel)
2. **Zinc**
3. **Vitamin A**
4. **Pancreatic enzymes and HCL**
5. **Probiotics**
6. **Fatty acids**
7. **Bleach baths**: ½ cup per full bath
8. **Rice starch baths**
9. **Topical emollients**
10. **Wet packs**
11. **Homeopathics**: Sulfur, graphites, Mezereum
12. **Topical herbs**: Symphytum officinalis (Comfrey), Calendula officinalis (Marigold), and Stellaria media(Chickweed)
13. **UV light therapy**: 2-3 times per week

URTICARIA (HIVES)

The name urticaria is used both to describe the disease and the lesions produced (hives).

Exposure to allergen or irritant causes mast cell degranulation, leading to erythematous, edematous swelling of the skin or mucosa with increased vascular permeability and dermal edema. The lesions are highly pruritic and may last days to months.

Most cases of acute urticaria can be traced to a specific allergen, but up to 95% of chronic cases are idiopathic.

Treatment

Do an elimination diet, paying special attention to avoid the previous substances.

Other Therapies That May Help:

- **Myers Cocktail**: IV vitamin C, B complex, B5, B6, B12, Magnesium, Calcium. Give every 2-5 days.
- **Vitamin C** 1000-3000 mg per day. Based on its possible mast cell stabilizing effect.
- **Betaine HCL**: 1-4 caps with each meal. Based on a small uncontrolled study that some patients with CU were hypochlorhydric.

Triggers

Physical
Pressure, Cold, Warmth, Stress, Dermatographism

Psuedoallergenic
Aspirin, Preservatives, RadiologicalContrast Dye

Allergic
Medications, Foods, Microbes

Diet may play a much larger role in the development of chronic urticaria than understood by most allergists and dermatologists.

Specific reactions may be triggered by food additives, food dyes, preservatives, and especially salicylates. These substances may directly activate mast cells and do not involve IgE.

- Tartrazine (Yellow #5)
- Sodium benzoate
- Aspartame
- Potassium sorbate
- BHT
- BHA
- Parabens
- Sulfites and sulfates
- Fluoride
- Penicillin (may be found in cow's milk)
- Nickel

URTICARIA (ANGIOEDEMA)