



Contact Dermatitis Pearls and Pitfalls

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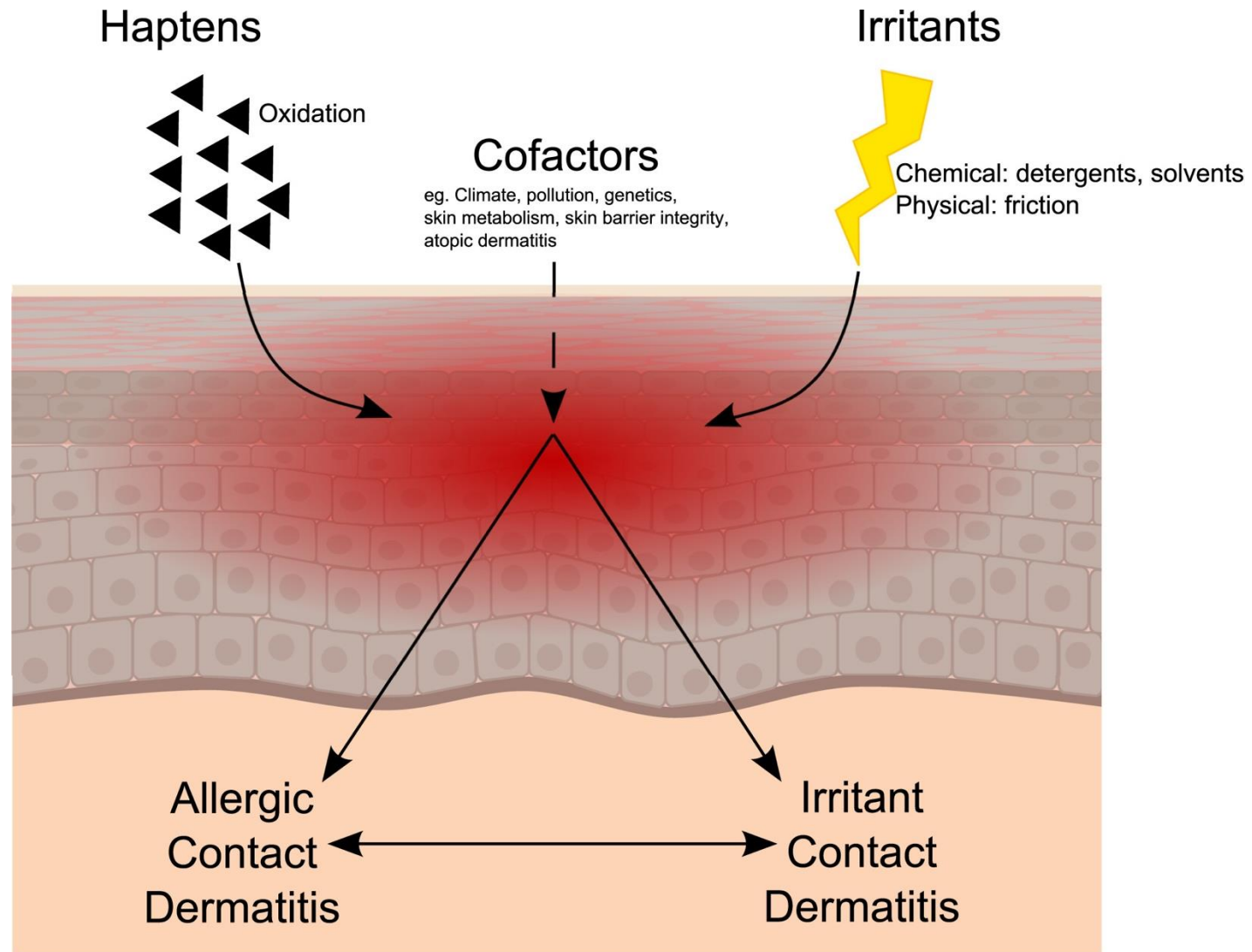
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Goals

- Define allergic contact dermatitis and discuss its prevalence
- Review patch testing options and method
- Describe pitfalls and pearls of managing contact dermatitis

Contact Dermatitis

- Affects > 13 million people in the United States¹
 - Recent meta-analysis of 28 studies showed pooled prevalence in the general population of contact allergy of 20.1% (95% CI = 16.8% to 23.7%)²
 - Affects women > men and childhood cases are rising
 - Comparable rates in skin of color (SOC) proposed but larger scale studies needed
- Annual estimated medical costs exceed \$2 billion in the United States
- There number of providers offering patch testing is low: Access limitations



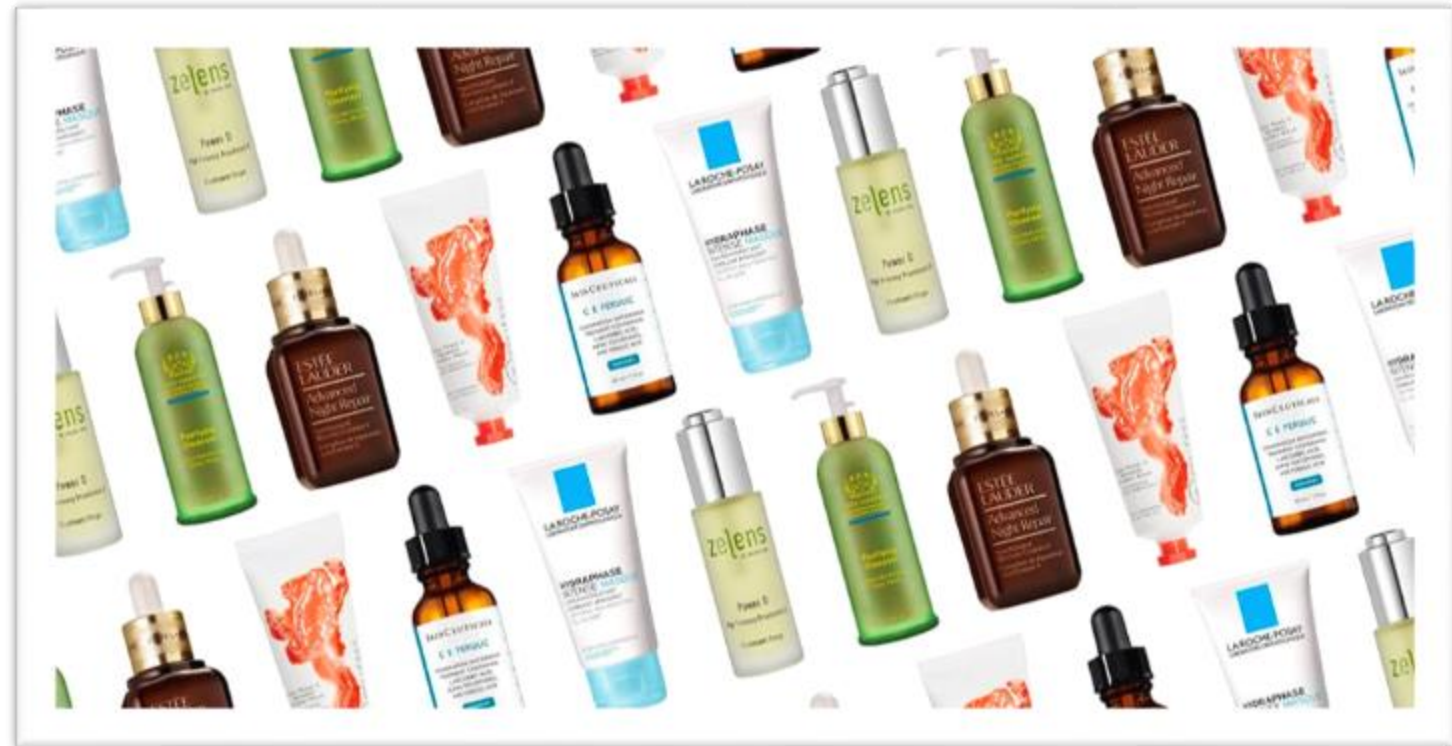
Overview: Contact Dermatitis

- We are exposed to hundreds of allergens daily
 - There are more than 4300 known potential contact allergens
 - Over 82,000 commercial chemicals are used in the United States
 - Any of these could cause sensitization and dermatitis
 - The average individual applies **30 lbs** of skin care products per year!
- Correct identification of contact allergens via patch testing is the gold standard for diagnosing contact dermatitis
 - Avoidance strategies and changing skin care products without patch testing may propagate ACD



YOU: "What products do you use?"

PATIENT: "Which one do you think I should avoid?"



Indications for Patch testing

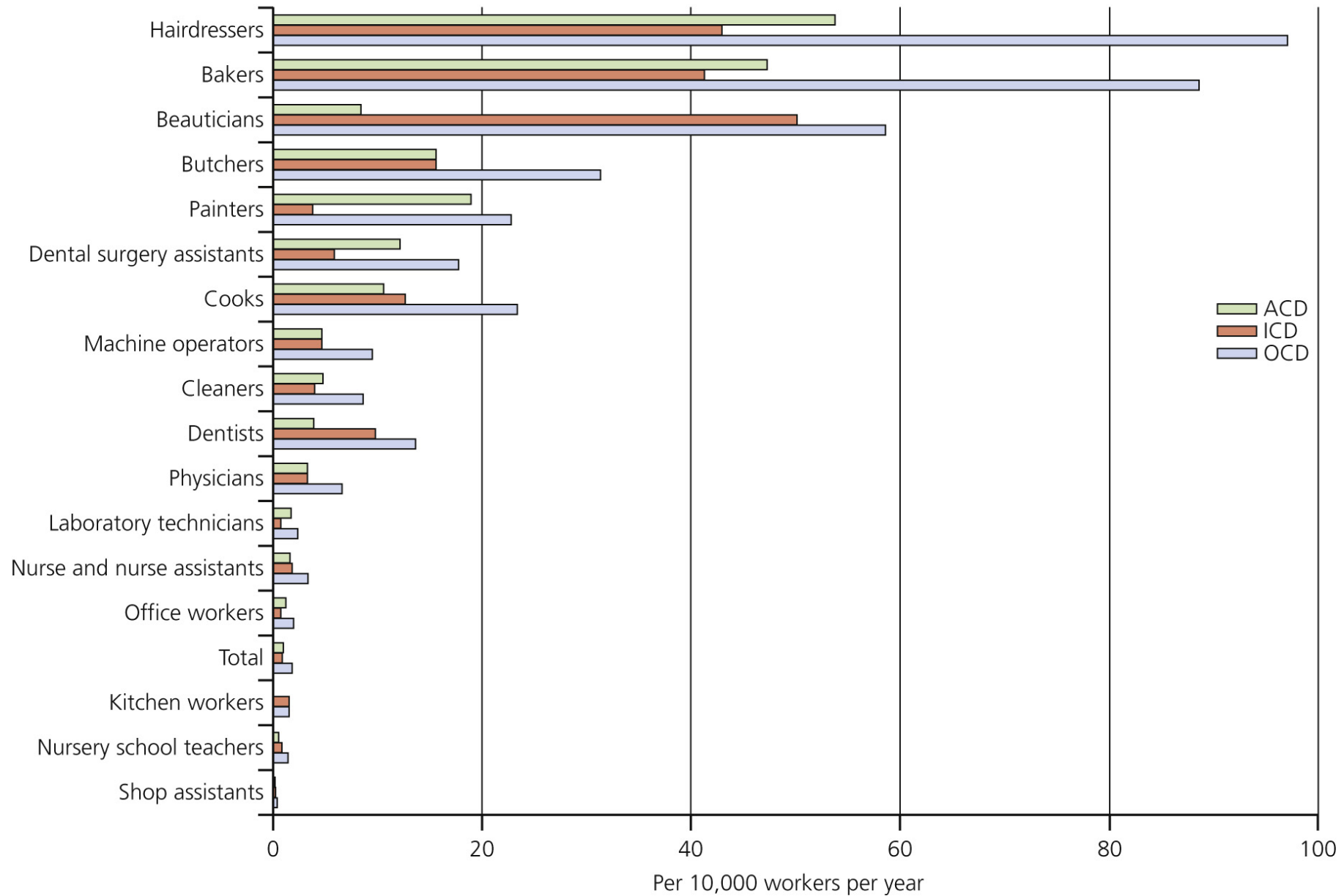
- Refractory eczematous eruptions
- New eczematous eruptions in individuals involved in high-risk occupations for contact dermatitis

- Health care workers
- Dental assistants
- Aestheticians
- Manicurist
- Hair stylist



- Worsening of a previously stable dermatitis

SEVERE OCCUPATIONAL CONTACT DERMATITIS



One thousand cases of severe occupational contact dermatitis. Contact Dermatitis 2013;68(5):259-68

Additional Indications for Patch Testing

- Refractory Stasis dermatitis
- New-onset eczema variants
 - Nummular eczema
 - Dyshidrosis
- Unusual configurations or locations
 - Linear or geometrical patterns
 - Periumbilical
 - Eyelid dermatitis



Increased Susceptibility to Contact Dermatitis in Atopics

- Atopic dermatitis patients have barrier dysfunction: Is ACD more common?
 - 2014 study in Denmark **similar overall frequency** of positive patch test reactions between atopics and non-atopics
 - Atopics have a **higher frequency of multiple positive patch test reactions** than non-atopics
- Atopy in pediatric patients is associated with an increased frequency of reported reactions to the following allergens
 - Cocamidopropyl betaine
 - Wool alcohol and lanolin
 - Tixocortol pivalate

Evolution of ACD: New Allergens Keep Coming!

- **Slime** caused what an “epidemic” of contact dermatitis in at the height of its popularity in 2019
 - **Isothiazolinone**
- **Miniverse™ Make it Mini Sets** manufactured by MGA Entertainment and marketed to children 8+ years
 - **Contain liquid acrylic monomer resins containing hydroxyethyl methacrylate (HEMA) and isobornyl acrylate (IBOA)**



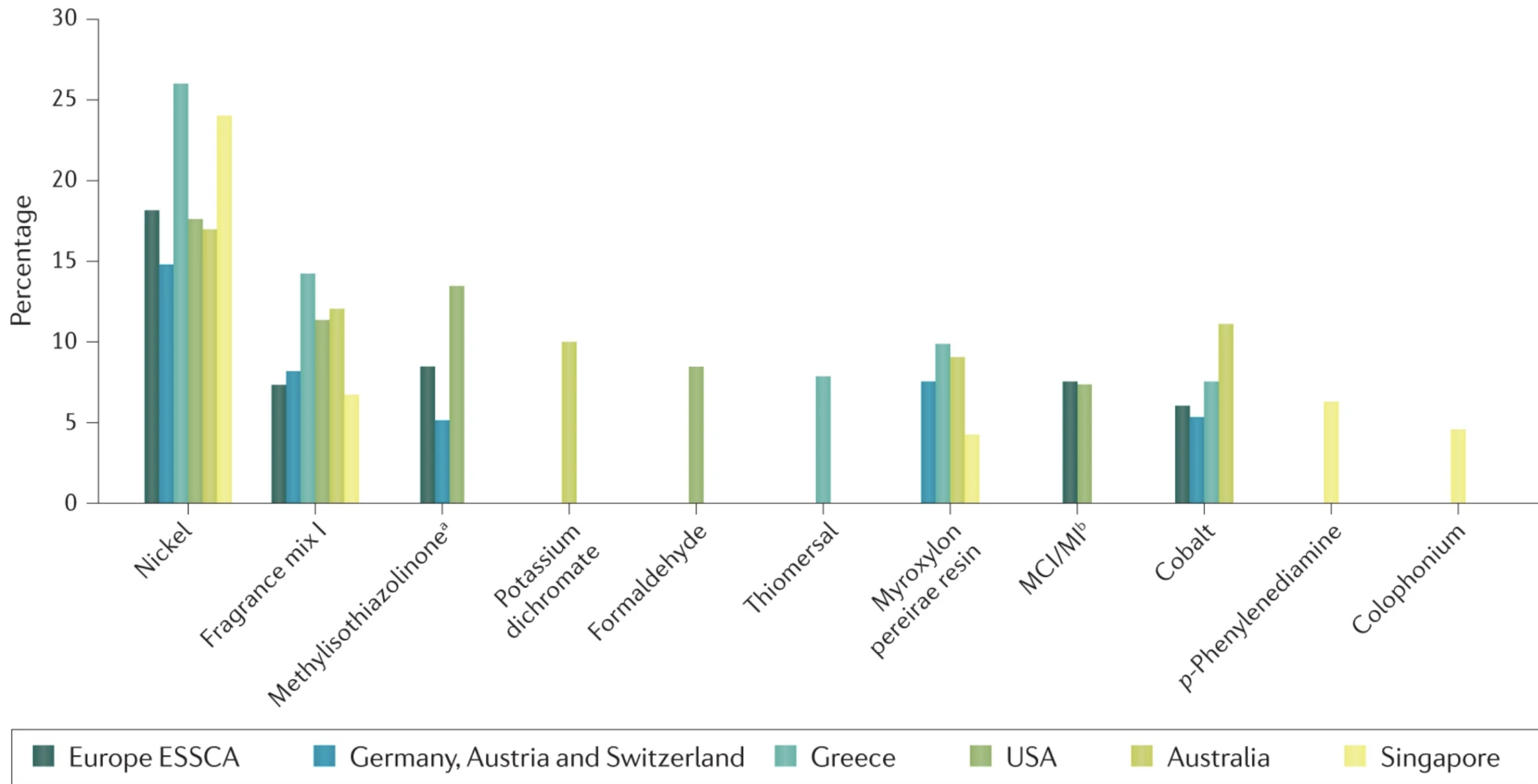
← Isothiazolinone

Acrylates →



Fig. 1: Top sensitizers in various regions worldwide.

From: [Contact dermatitis](#)



T.R.U.E. Test

(Thin Layer Rapid Use Epicutaneous Patch Test)

- TRUE TEST (TT) is the most commonly used allergen series by both allergists and dermatologists
 - Easy to use
 - Limited screening tool
 - **Distributor: SmartPractice, Phoenix, Ariz**
- Advantages
 - Ease of use with pre-made panels (no prep time)
 - 35 haptens and 1 control
 - Introduced initially in 1995 with 23 allergens
 - In 2012 updated to include 12 additional allergens
 - Only FDA approved patch testing option for age > 6 years

T.R.U.E. TEST[®]
THIN-LAYER RAPID USE
EPICUTANEOUS PATCH TEST

STANDARD DATA COLLECTION FORM

Patient's Name _____

Chart No. _____ Age _____ Sex (M/F) _____ Race _____

Physician's Name _____

Address _____ Phone _____

City _____ State _____ ZIP _____

Lot No. _____

Date Applied _____

Date
1st Reading _____

Date
2nd Reading _____

Date
3rd Reading _____

POSITIVE REACTIONS	CLINICAL RELEVANCE			
	Allergen No.	Present	Past	Unknown

PANEL 1.3	
1 = Nickel Sulfate 1st _____ 2nd _____ 3rd _____	7 = Colophony 1st _____ 2nd _____ 3rd _____
2 = Wool Alcohols 1st _____ 2nd _____ 3rd _____	8 = Paraben Mix 1st _____ 2nd _____ 3rd _____
3 = Neomycin Sulfate 1st _____ 2nd _____ 3rd _____	9 = Negative Control 1st _____ 2nd _____ 3rd _____
4 = Potassium Dichromate 1st _____ 2nd _____ 3rd _____	10 = Balsam of Peru 1st _____ 2nd _____ 3rd _____
5 = Caine Mix 1st _____ 2nd _____ 3rd _____	11 = Ethylenediamine Dihydrochloride 1st _____ 2nd _____ 3rd _____
6 = Fragrance Mix 1st _____ 2nd _____ 3rd _____	12 = Cobalt Dichloride 1st _____ 2nd _____ 3rd _____

PANEL 2.3	
13 = <i>p</i>-tert Butylphenol Formaldehyde Resin 1st _____ 2nd _____ 3rd _____	19 = Methylidibromo Glutaronitrile 1st _____ 2nd _____ 3rd _____
14 = Epoxy Resin 1st _____ 2nd _____ 3rd _____	20 = <i>p</i>-Phenylenediamine 1st _____ 2nd _____ 3rd _____
15 = Carba Mix 1st _____ 2nd _____ 3rd _____	21 = Formaldehyde 1st _____ 2nd _____ 3rd _____
16 = Black Rubber Mix 1st _____ 2nd _____ 3rd _____	22 = Mercapto Mix 1st _____ 2nd _____ 3rd _____
17 = Cl+ Me-Isothiazolinone 1st _____ 2nd _____ 3rd _____	23 = Thimerosal 1st _____ 2nd _____ 3rd _____
18 = Quaternium-15 1st _____ 2nd _____ 3rd _____	24 = Thiuram Mix 1st _____ 2nd _____ 3rd _____

PANEL 3.3	
25 = Diazolidinyl Urea 1st _____ 2nd _____ 3rd _____	31 = Hydrocortisone-17-Butyrate 1st _____ 2nd _____ 3rd _____
26 = Quinoline Mix 1st _____ 2nd _____ 3rd _____	32 = Mercaptobenzothiazole 1st _____ 2nd _____ 3rd _____
27 = Tixocortol-21-Pivalate 1st _____ 2nd _____ 3rd _____	33 = Bacitracin 1st _____ 2nd _____ 3rd _____
28 = Gold Sodium Thiosulfate 1st _____ 2nd _____ 3rd _____	34 = Parthenolide 1st _____ 2nd _____ 3rd _____
29 = Imidazolidinyl Urea 1st _____ 2nd _____ 3rd _____	35 = Disperse Blue 106 1st _____ 2nd _____ 3rd _____
30 = Budesonide 1st _____ 2nd _____ 3rd _____	36 = 2-Bromo-2-Nitropropane-1,3-diol 1st _____ 2nd _____ 3rd _____

Description Codes for Patch Test Results:
 Extreme Positive Reaction (+++): spreading, bullous, ulcerative
 Strong Positive Reaction (++) : erythema, edema, papules and vesicles
 Weak Positive Reaction (+): nonvesicular, erythema, infiltration, possibly papules

Doubtful Reaction(?): macular erythema only
 Irritant Reaction (IR)
 Negative Reaction (-)

T.R.U.E Test: Pitfalls

- Limited screen: Only identifies approximately 60% of reactions that are detected by the 80 allergen NACDG screening series
 - High false negative rate
 - More recent studies suggest higher false negative rates
- Costly



Expanded Testing: Standard Series

- American Contact Dermatitis Society (ACDS)
 - 80-core series- introduced 2013
 - updated 2017 and then 2020 to current 90 allergens
 - Offers specialty fragrance, vehicle/cosmetic, dentistry, and bakery panels
- North American Contact Dermatitis Group (NADG)
 - 80-allergen comprehensive series with additional specialty panels

- Distributors:
 - *Chemotechnique Diagnostics (Dormer Labs Inc, Toronto, Ontario, Canada)*
 - *Allergeaze (SmartPractice Canada, Calgary, Alberta, Canada)*

2020 ACDS Standard Patch Series

- First 35 allergens are based on the TT panels
- Initial core series was 80 allergens
- 9th panel added to core series to improve sensitivity of testing = 90 total allergens

American Contact Dermatitis Society (ACDS) Core Series (Updated 2020: 'The Ninth Panel')

- Lyral, Limonene, Linalool
- Pramoxine
- Shellac
- lauryl polyglucose (glucosides)
- Carmine
- disperse yellow 3
- Jasmine
- Peppermint
- Shellac
- benzyl salicylate



Improving Patch Testing Outcomes: Pearls

- Ensure proper storage and preparation of allergens
- Avoid application of patches to areas with active eczema
- Prepare site of application on patient for patch test placement
- Provide detailed patient instructions



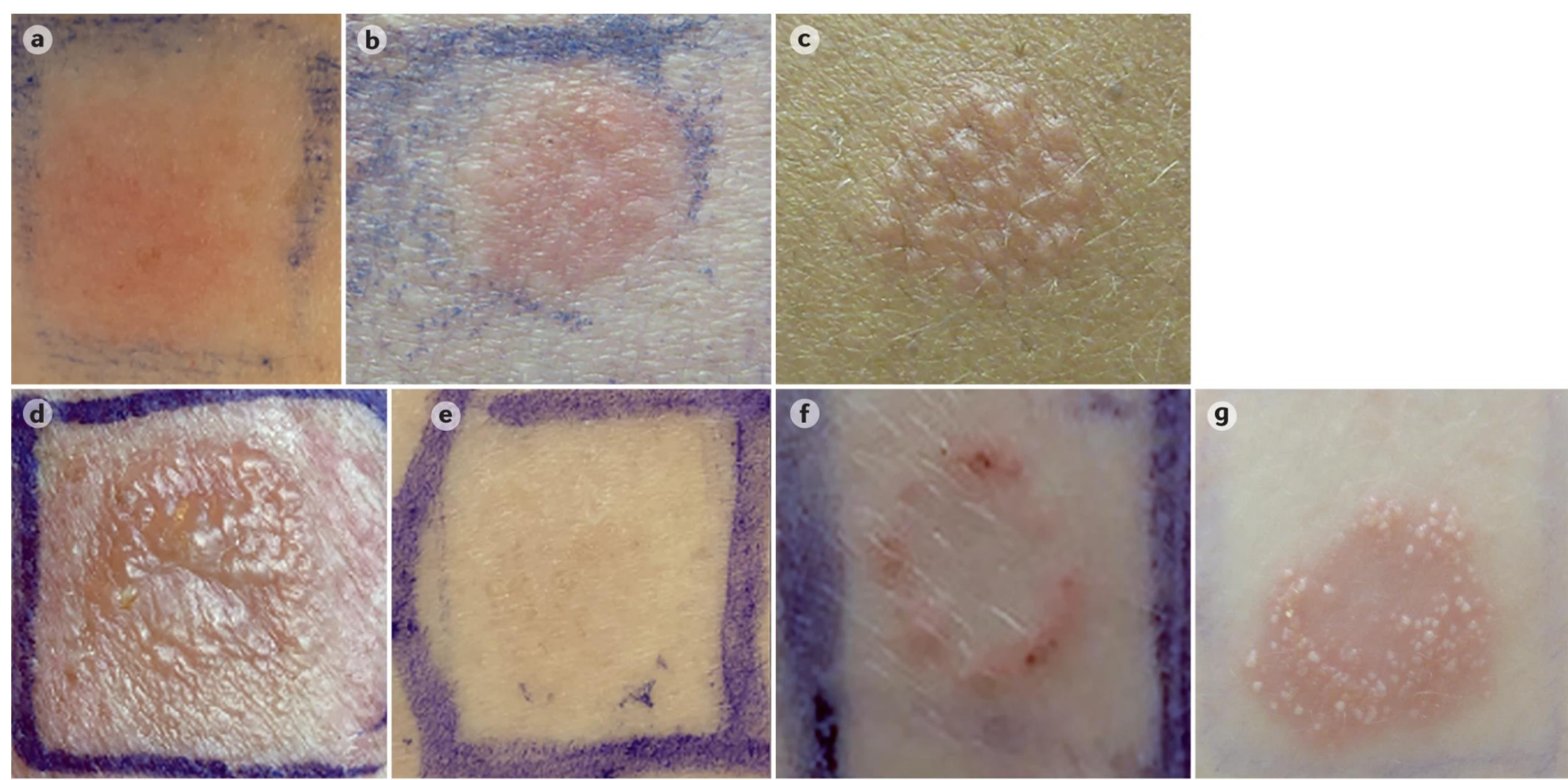




Improving Patch Testing Outcomes: Pearls

- Learn to read results accurately and consistently
 - Train staff
 - Validate interpretation by scoring separately and comparing
- In skin of color
 - Palpate and use side-lighting to improve detection of positives
 - Erythema may be less apparent

Grade	Patch Test Grading
(-)	Negative reaction
(+/-)	Doubtful reaction with faint erythema only
1+	Weak positive reaction with nonvesicular erythema, infiltration, possible papules
2+	Strong positive reaction with vesicular erythema, infiltration, and papules
3+	Extreme positive reaction with intense erythema and infiltration coalescing vesicles, bullous reaction
IR	Irritant reaction



Contact dermatitis. *Nat Rev Dis Primers* 2021. 7(38): 1-26

The most common cause of contact allergy worldwide: **Nickel**

- Nickel (Ni) has the highest incidence of patch test positivity
 - Found in Jewelry, piercings, coins, razors, curling iron, eyelash brushes, ear buds, cellphones contain Ni
- Nickel spot test to detect nickel in an item: **dimethylglyoxime nickel spot test**
 - Inexpensive, rapid, and easy-to-use
 - To test, a small amount of the chemical is rubbed on the metal item using a cotton swab
 - pink color indicates nickel release



CHEMTECHNIQUE
DIAGNOSTICS
Nemo Nickel Test
Sample - Not for sale!
Use only on treated subjects
Keep out of reach of children
Keep dry and sealed. Contains toxic
substances. Do not inhale. May irritate
eyes. Caution: Use only with
properly trained personnel.
© 2005 ChemTechnique Diagnostics, Inc.
All rights reserved. For more information,
please contact ChemTechnique, Inc.
10000 E. Colorado Street,
Denver, CO 80231. ChemTechnique.com



Pitfalls of Patch Testing

- Immunosuppressive therapies may suppress or diminish patch test responses
- Ultraviolet light in the area of patch testing suppresses reactions
- Not performing a delayed patch test reading may miss essential results
- Limited screens may not be sensitive enough to detect all relevant allergens
- Poor application site preparation, lack of patient instruction or active eczema at patch test sites may impact results

Can oral corticosteroids be given before or during patch testing?

Can oral corticosteroids be given before or during patch testing?

- The optimal duration of time to be off systemic corticosteroids before testing is uncertain
- Among the NACDG experts, the recommended avoidance time ranged from 1 to 14 days
- 1972 study suggested Prednisone 20mg QD suppressed reactions in only 6% of patients*
 - higher doses decreased or completely inhibited reactions

*Feuerman E. A study of the effect of prednisone and an antihistamine on patch test reactions. *Br J Dermatol* 1972; 86

Can oral corticosteroids be given before or during patch testing?

- Additional publications in the early 2000s suggested maintenance doses of systemic corticosteroids up to 20 mg daily could be used without significant loss of reactions
- Olupona and Scheinman reported a patient who successfully reacted to multiple allergens on prednisone 10 mg/d
- Rosmarin and colleagues also reported positive patch test results in patients on lower dose prednisone (5–10 mg/d)

Oral Corticosteroids and Patch Testing

- Overall, studies suggest that higher doses of systemic corticosteroids (≥ 20 mg prednisone equivalent/day) may significantly interfere with successful patch testing
- Positive results may still be elicited on lower doses (< 20 mg/d prednisone equivalent)
- Optimally, have the patient off all oral corticosteroid for 7-14 days before testing

Oral/injectable	Can test?		
Anti-TNF	Yes	Consider testing right before next dosage	<p>Myers W, Newman M, Katz B, Gottlieb AB. Ability to develop Rhus allergic contact dermatitis in a patient with psoriasis receiving etanercept. <i>J Am Acad Dermatol</i> 2006;55(5 suppl):S127–S128.</p> <p>Kim N, Notik S, Gottlieb AB, Scheinman PL. Patch test results in psoriasis patients on biologics. <i>Dermatitis</i> 2014;25(4):182–190.</p>
Anti-IL-17/22	Yes	Consider testing right before next dose	<p>Hamann D, Zirwas M. Successful patch testing of a patient receiving anti-interleukin-17 therapy with secukinumab: <i>Contact Dermatitis</i> 2017;76(6):378–379.</p> <p>Nosbaum A, Rozieres A, Balme B, et al. Blocking T helper 1/T helper 17 pathways has no effect on patch testing. <i>Contact Dermatitis</i> 2013;68(1):58–59.</p> <p>Kim N, Notik S, Gottlieb AB, et al. Patch test results in psoriasis patients on biologics. <i>Dermatitis</i> 2014;25(4):182–190.</p>
Azathioprine	Caution	Lowest dose possible	<p>Wee JS, White JM, McFadden JP, et al. Patch testing in patients treated with systemic immunosuppression and cytokine inhibitors. <i>Contact Dermatitis</i> 2010;62(3):165–169.</p> <p>Pigatto PD, Cesarani A, Barozzi S, et al. Positive response to nickel and azathioprine treatment. <i>J</i></p>

Corticosteroids	Caution	Avoid if possible, may test on low dose (<20 mg/d) but weak responses may be blunted.	Rietschel RFJ. Fisher's Contact Dermatitis. 6th ed. Hamilton: BC Decker Inc; 2008:268–269. Fonacier L, Noor I. Contact dermatitis and patch testing for the allergist. <i>Ann Allergy Asthma Immunol</i> 2008;120(6):592–598. Feurman E, Levy A. A study of the effect of prednisone and an antihistamine on patch test reactions. <i>Br J Dermatol.</i> 1972;86:68–71.
Cyclosporine	Caution	Lowest dose possible	Lori L, Perotti R, Mazzatenta C, Andreassi L. Cyclosporin A in the treatment of severe allergic contact dermatitis. <i>J Eur Acad Dermatol Venereol</i> 1993;2:200–206. Higgins EM, McLelland J, Friedmann PS, et al. Oral cyclosporin inhibits the expression of contact hypersensitivity in man. <i>J Dermatol Sci</i> 1991;2:79–83.
Dupilumab	Caution	Consider testing right before next dose	Stout M, Silverberg JI. Variable impact of dupilumab on patch testing results and allergic contact dermatitis in adults with atopic dermatitis. <i>J Am Acad Dermatol</i> 2019;81(1)157–162.
Methotrexate	Yes	Consider holding weekly dose	Yfanti I, Nosbaum A, Berard F, et al. Methotrexate does not impede the development of contact allergy. <i>Contact Dermatitis</i> 2018;78(3):223–224.
Mycophenolate mofetil	Caution	Lowest dose possible	Rosmarin D, Gottlieb AB, Asarch A, Gottlieb AB, Asarch A, et al. Patch-testing while on systemic immunosuppressants. <i>Dermatitis</i> 2009;20:265–270.

Phototherapy or Natural Sun Exposure and Patch Testing

- Ultraviolet light suppresses results and should be avoided for >14 days
- Phototherapy optimally is discontinued 2-4 weeks prior to patch testing

Delayed Readings: The Third Visit

- Most relevant positive reactions will be evident by day 2
- Single day 2 reading missed up to 34% of positive reactions
- Additional day 7 reading may pick up significant reactions (metals, corticosteroids, and topical antibiotics)

The case for patch test readings beyond day 2. Notes from the lost and found department. J Am Acad Dermatol 1988

Which patch testing allergens may be *false negatives* without a delayed reading?

- Metals (Nickel)
- Topical antibiotics (Bacitracin, Neomycin)
- Topical corticosteroids (Tixocortal pivate)

Pitfall: The Angry Back Syndrome



DermNetNZ.org

Case:

- A hockey player presents in 2016 with worsening diffuse eczema
- Improvement during the off-season but rapid recurrence during training camp and in-season
- Comprehensive 160 allergen patch testing was negative for contact dermatitis in 2017
- Patient declined Cyclosporine and Dupilumab and eventually retired due to his severe eczema

Blackhawks winger Marian Hossa, 38, will not play in the 2017-18 season because of a "progressive skin disorder" and the "severe side effects" of the medication used to treat it. If Hossa has played his last game, he will finish with Hall of Fame credentials. (Chicago Tribune, 2017)

Former Red Wings goalie Gilles Gilbert described a debilitating skin condition that eventually drove him to retirement as something he "wouldn't wish on my worst enemy. Maybe broken legs, but not the rash. You need boxing gloves when you go to sleep. It's worse than a sunburn. It really, really itches. It drives you crazy. " (New York Times, 1982)

This allergen is present in foam sporting equipment such as soccer shin guards and was the 2021 Contact Allergen of the Year:

- A. Thiuram
- B. Carba mix
- C. Mercaptobenzothiazole
- D. Acetophenone Azine
- E. Isobornyl acrylate

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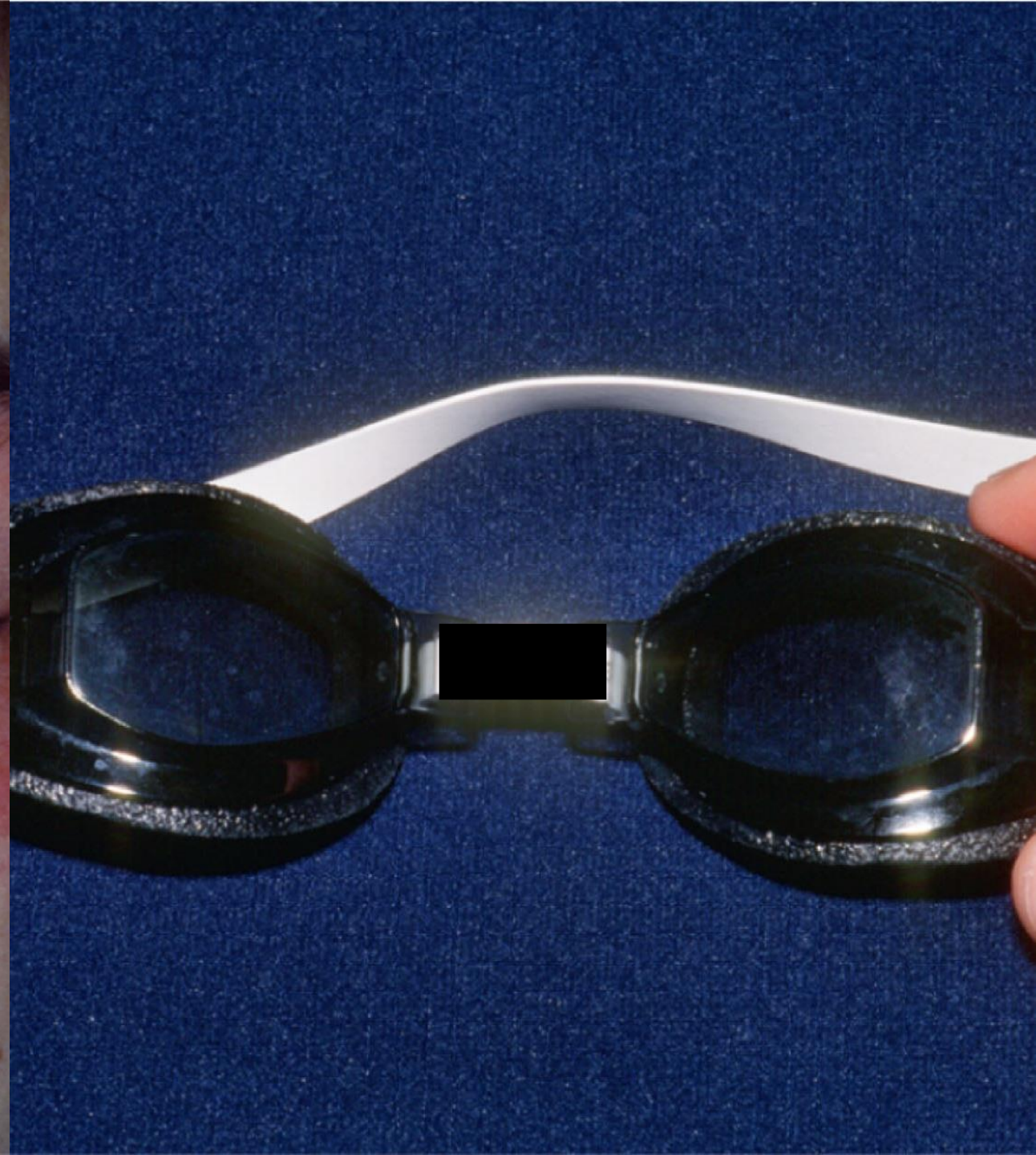
- A. Thiuram
- B. Carba mix
- C. Mercaptobenzothiazole
- D. Acetophenone Azine
- E. Isobornyl acrylate

Acetophenone Azine : 2021 Allergen of the Year

- Acetophenone azine (AZE) is a recently discovered potent allergen in shin pads and footwear containing the foam elastomer ethyl vinyl acetate
- Likely the result of reactions between additives that take place during the manufacturing process
 - foam elastomer ethyl vinyl acetate does not contain AZE
- ***Acetophenone azine*** may soon be part of patch testing for specialized shoe, plastics and glues series
 - AZE is not readily available from patch testing materials suppliers
 - A patch testing concentration of 0.1% in acetone or petrolatum is recommended







CASE

- A 29 year old woman presents for evaluation of a new facial eruption of several weeks duration
 - It is pruritic and scaling with intermittent eyelid edema
 - Improves slightly with Desonide 0.05% cream BID x 7 days prescribed by her Internist
 - She reports no change to her daily skin care regimen
 - She presents for guidance on etiology and treatment



In addition to fragrance allergen, which of the following is one of the most common sources of eyelid dermatitis in women?

- A. Neomycin
- B. Cocamide
- C. Paraphenylenediamine
- D. Paraben
- E. Propylene glycol

In addition to fragrance allergen, which of the following is one of the most common sources of eyelid dermatitis in women?

A. Neomycin

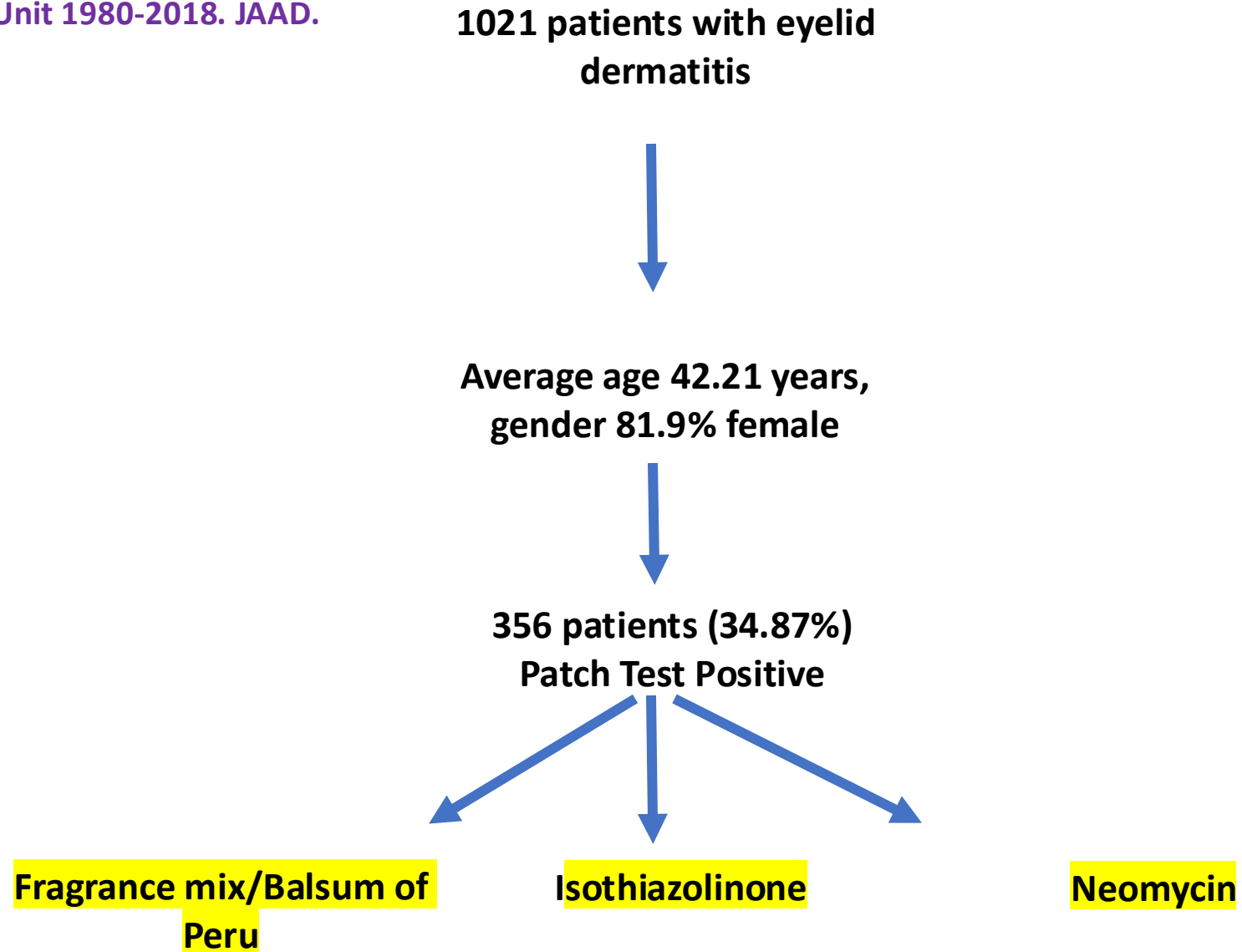
B. Cocamide

C. Paraphenylenediamine

D. Paraben

E. Propylene glycol

Eyelid Dermatitis: Experience in our
Cutaneous Allergy Unit 1980-2018. JAAD.
Oct. 2019











Acylates: New Sources and New Allergens. Clin Experimental Derm, Volume: 45, Issue 3. September 2019

Fonacier L et al. Allergy Asthma Immunol. 2022 Jun;128(6)

	Dermatitis Distribution	Likely Products
	Upper Eyelid alone	May be Irritant
	Eyelid plus the face	Facial cleansers
	Eyelid plus scalp or forehead	Hair products such as dyes, bleaching agents, setting lotions, sprays, gels, and mousses
	Some combination of eyelids, face and neck	Ectopic dermatitis from nail polish and acrylic nail dermatitis



Contact Dermatitis and Nail Care

- Acrylic Nails
 - Acrylic nails consist of a liquid methacrylate monomer drawn through a powder methacrylate polymer, which is then sculpted onto the nail plate
 - Allergy is caused primarily by acrylic monomers **Methyl methacrylates (MMA)**
 - In 1974, the US Food and Drug Administration **banned** the use of 100% MMA in cosmetic products due to the high frequency of sensitization
 - MMA is still widely available online so may need to ask patients if they are using self-applied acrylic polish

Contact Dermatitis and Nail Care

- Gel Nails
 - More popular in recent years
 - Application process entails using a primer coat and two to three coats of gel nail polish plus top coat, all cured under UV light
 - Last approximately 2 weeks, and removal involves soaking the fingertips in acetone for 20 min (ICD)
 - Home gel kits with UV source widely available
 - Primary allergens in gel nails
 - 2-HEMA
 - 2-hydroxypropyl methacrylate (2-HPMA)
 - thylene glycol dimethacrylate (EGDMA)



All-In-One Gel Nail Kit

This portable nail lamp can dry the gel quickly, you can DIY your nails in a mere 3 minutes.

Contact Dermatitis and Nail Care

- Nail Wraps and Press on Nails
 - Nail wraps are decorative sheets of silk, linen, or fiberglass
 - Applied using an adhesive typically composed of **cyanoacrylates**
 - As cyanoacrylates do not typically cross-react with acrylates or methacrylates, these products may represent a **safer substitute for those with acrylate allergy**
- Powder or dipped nails
 - Contain cyanoacrylates so also may be a safer alternative

Which of the following is responsible for the significant increase in acrylate allergy seen in recent years?

- A. Bone cement
- B. Dental procedures
- C. Long-lasting nail products
- D. Contact lenses
- E. Moisturizing creams

Which of the following is the primary source responsible for the significant increase in acrylate allergy seen in recent years?

- A. Bone cement
- B. Dental procedures
- C. Long-lasting nail products
- D. Contact lenses
- E. Moisturizing creams







Dimethyl Fumarate

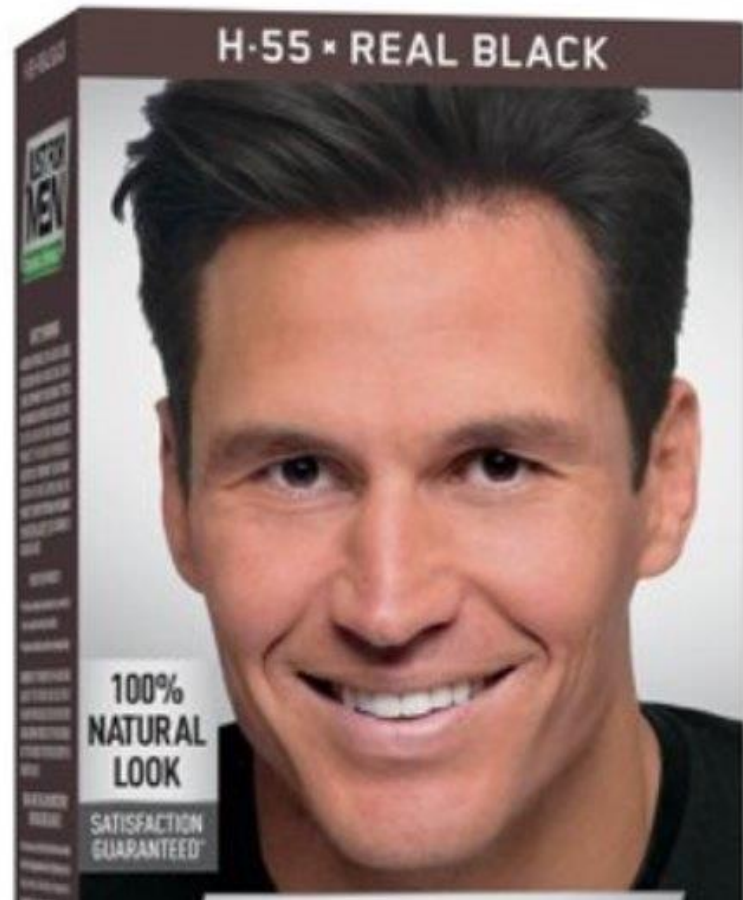


Dimethyl Fumarate

- Suspicion, collaboration and science solve a mystery
- 2007 series of eczematous eruptions on torso and legs swept Europe
- Recent furniture purchase a common variable
 - Led to suspicion that furniture manufactured in China was causative
 - 100 cases of dermatitis related to reclining chairs manufactured in China were reported in Finland
 - Additional cases in UK
- Traditional textile sensitizer did not explain all cases

Dimethyl Fumarate (DMF)

- Chinese manufacturer (Linkwise Furniture Company Ltd, Guangdong, China) denied using chemicals, fungicides, or other substances on the materials of the furniture
- Collaborating Finnish, British, and Swedish journalists, Dermatologists, Allergists and chemists proved DMF to be the responsible sensitizer
 - Sachets of DMF were used as biocide to prevent mold formation with shipping
- DMF named contact Allergen of the Year 2011



Paraphenyldiamine (PPD)

- In a review of 4087 patch tests, 4.06% of positive reactions were to PPD
- Most cases were either occupational or from home cosmetic products
- One third of PPD allergic patients were atopic
- The most common areas of dermatitis were hands or face
 - Facial dermatitis was most prevalent in women

Arch Med Sci. 2021; 17(3)



Arch Med Sci. 2021; 17(3)



Eyelid plus the face

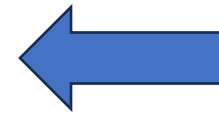
Facial cleansers



Eyelid plus scalp or forehead

**Hair products such as dyes,
bleaching agents, setting
lotions, sprays, gels, and
mousses**

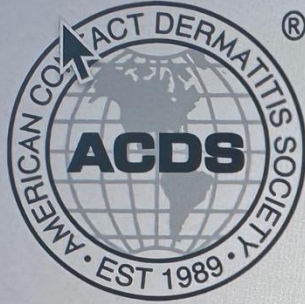




Paraphenyldiamine

If a patient is PPD allergic, is there a safe coloring agent to use as an alternative? **Yes**

- Methoxymethyl (ME)-PPD: ME side chain may allow safer coloring
 - WELLA KOLESTON PERFECT with ME+
- Check the ACDS CAMP list for a complete list of alternative options (327!)



To view your list, go to www.acdscamp.org

Allergen Search Code: eD4kM

Allergen Search Code: s9P2k



Scan inside CAMP app

Contact Allergen Management Program (CAMP®)

Presented by: The American Contact Dermatitis Society (ACDS)

The American Contact Dermatitis Society is committed to advancing the care and understanding of dermatitis and allergy. As part of this commitment, ACDS created the Contact Allergy Management Program (CAMP), a web-based resource designed to help patients manage allergic contact dermatitis and find personal care products that are safe for them to use.

Allergic Contact Dermatitis

You have been diagnosed with allergic contact dermatitis. This means that you are allergic to even extremely small amounts of certain substances.

- *Paraphenylenediamine (PPD)*

If your skin comes in contact with any of these substances, you may develop a rash. Itching, redness, small bumps or blisters may appear, usually 1 to 5 days, after exposure to the substance.

The skin reaction lasts from 2 to 8 weeks, even if you do not come into contact with the substance again.

Continuous Glucose Monitoring Devices

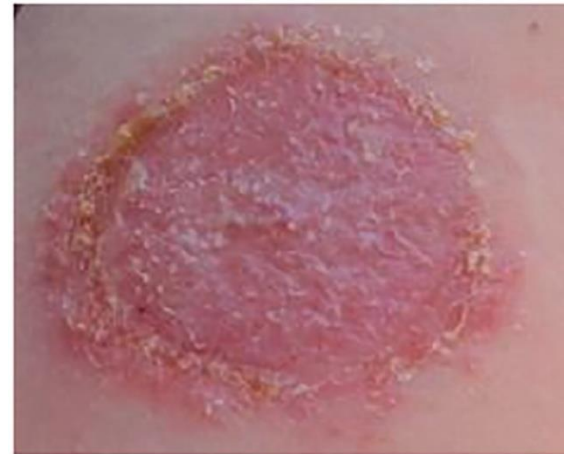


Dexcom 6®



Freestyle Libre®

What allergen in the adhesive can cause contact dermatitis to continuous glucose monitoring devices?



What allergen in adhesive can cause contact dermatitis to continuous glucose monitoring devices?

- Isobornyl acrylate
- 2020 Contact Allergen of the Year



Isobornyl Acrylate (IBOA)

- 2017 Belgian-Swedish work group identified IBOA as the main allergen in Freestyle Libre[®]
- IBOA has now been eliminated from newer models such as Freestyle Libre[®] 2

Summary

- Patch testing is the gold standard for diagnosing contact dermatitis
- A high index of suspicion and access to proper testing improves patient outcomes
 - Avoid pitfalls to maximize results
- New allergens are constantly emerging so remaining up to date with trends in contact dermatitis is important
 - Consider joining the American Contact Dermatitis Society (ACDS)

