HALYARD

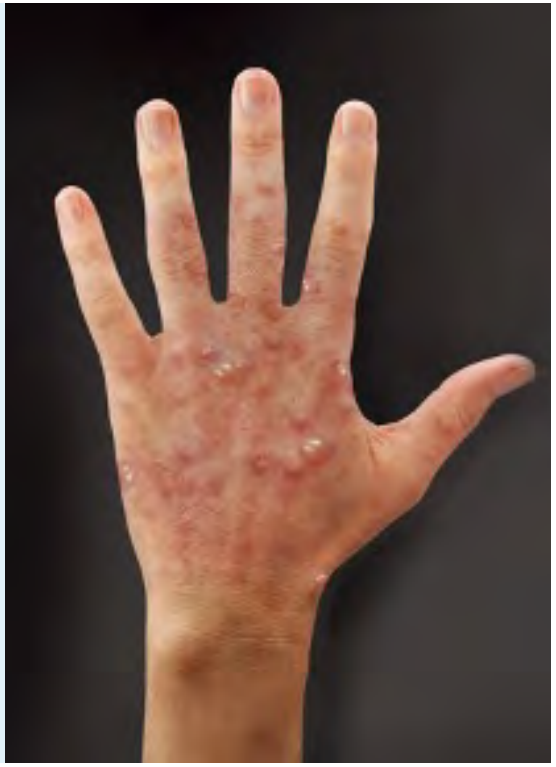
# UNCOVERING THE MYSTERY OF TYPE I ALLERGIES

## GLOVE-RELATED DISORDERS

1. **IRRITANT CONTACT DERMATITIS (ICD) –**
   **Skin Irritation, Non-Allergic Response**

2. **TYPE IV CHEMICAL ALLERGY –**
   **Cell-Mediated Delayed Allergic Contact Dermatitis (ACD)**

3. **TYPE I LATEX ALLERGY –**
   **IgE-Mediated Immediate Allergic Reaction**



# OCCUPATIONAL CONTACT DERMATITIS (ICD AND TYPE IV CHEMICAL ALLERGY)

## MOST COMMON FORM OF OCCUPATIONAL SKIN DISEASE (OSD)

**U.S. Bureau of Labor Statistics – Affects Over 13 Million Workers** [1]

Contact dermatitis accounts for

**90-95%**

of all cases of OSD[2]

Total U.S. economic cost of OCD is over

**$1 BILLION ANNUALLY**[1]

Average lost workdays

**24**[3]

Average cost per claim

**$3,552**[3]

- Second largest occupational disability reported to OSHA (7-11% of working population)[4]
- OCD is a preventable disease if the proper work health and safety systems are in place

There may be a need to pre-screen surgical patients for latex allergies prior to surgery, as these reactions can be very dangerous and costly—and latex can be found in many OR products besides gloves.

# IDENTIFYING LATEX ALLERGY – **TYPE I**

**TYPE I Reaction Immunoglobulin E (IgE) antibody mediated reactions**[5]

## IMMEDIATE

**Reaction occurs minutes after exposure**[5]

## LATE-PHASE

**Reactions may re-occur 2-4 hours after initial exposure**[5]

**FOR PATIENTS AND STAFF** — Latex allergy is an allergy to products made from natural rubber latex.

People most at risk of having or developing a latex allergy are those who have other allergies.[6]

### DO YOU SUFFER FROM:

- Eczema
- Asthma
- Hayfever (Rhinitis)
- Dermatitis
- Tingling, swelling, wheezing, or rashes associated with latex products

Certain people are at greater risk of developing a latex allergy.[7]

### ARE YOU A:

- Healthcare worker
- Person with congenital urinary tract abnormalities
- Spina bifida sufferer
- Person who has undergone multiple surgeries or procedures

Latex and some foods contain similar short sequences of amino acids and are recognized by antibodies and thus may react the same way.[7]

### ARE YOU ALLERGIC TO:

- Avocado*
- Kiwi*
- Papaya
- Melons
- Banana*
- Apple
- Potato
- Celery
- Chestnut*
- Tomato
- Grape

** Higher probability*

Latex allergy often begins with a rash on the hands when using natural rubber latex gloves; symptoms can occur immediately on contact.[7]

### ARE YOU EXPOSED TO:

- rubber / latex gloves
- elastic bands
- hot water bottles
- condoms

# IDENTIFYING CHEMICAL ALLERGY – **TYPE IV**

**TYPE IV Reaction Allergic Contact Dermatitis (ACD) Non IgE – T cell media**[8]

## FOR PATIENTS AND STAFF

Chemical allergies may be the result of chemical residue inside gloves.[9] The reaction is **not immediately evident**. This is referred to as, "delayed type hypersensitivity." Be aware that with Type IV Allergies:

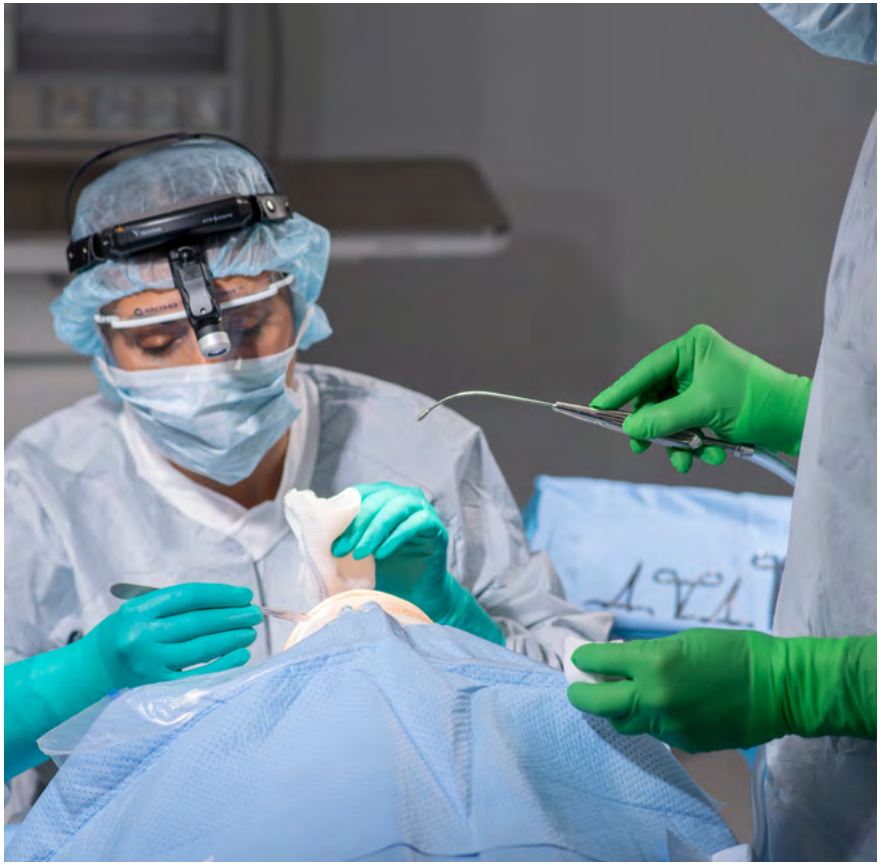
- Latex Protein Allergy may develop (Type IV is a risk factor)
- Symptoms occur 6-48 hours after initial contact[10]
- Symptoms can last for up to 4 days

**DO YOU SUFFER FROM:**

- Blisters
- Erythema
- Swelling
- Cracking
- Itching
- Weeping
- Dryness of the skin at the site

**ARE YOU USING PRODUCTS THAT CONTAIN:**

- Polyoxypropyleneglycol
- Thiurams
- Carbamates
- Lanolin
- Mercaptobenzothiazole (MBT)
- Diphenylguanidine (DPG)
- Coloring pigmentation, preservatives



In the day-to-day stress of the O.R., surgical teams may not immediately recognize the long-term reactions caused by some surgical gloves as a TYPE IV chemical allergy.[10]

# IDENTIFYING IRRITANT CONTACT DERMATITIS

**Irritant Contact Dermatitis (ICD) Non-immune response**[11]

## FOR STAFF

Irritant Contact Dermatitis (ICD) is a condition affecting the skin, and is **not** an actual allergy. In fact, ICD is more frequently encountered than allergic contact dermatitis.[10] Be aware that with ICD:

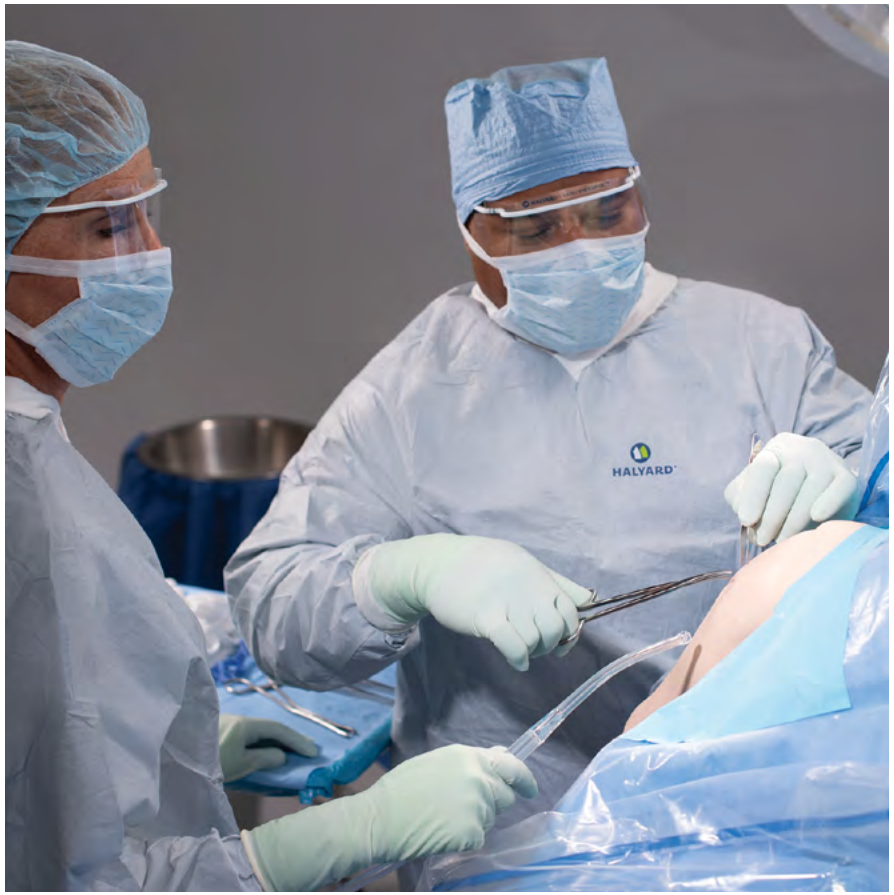
- Latex Protein Allergy may develop (ICD is a risk factor)
- Symptoms occur within minutes to hours after initial contact
- Symptoms are limited to site of exposure

### DO YOU SUFFER FROM:

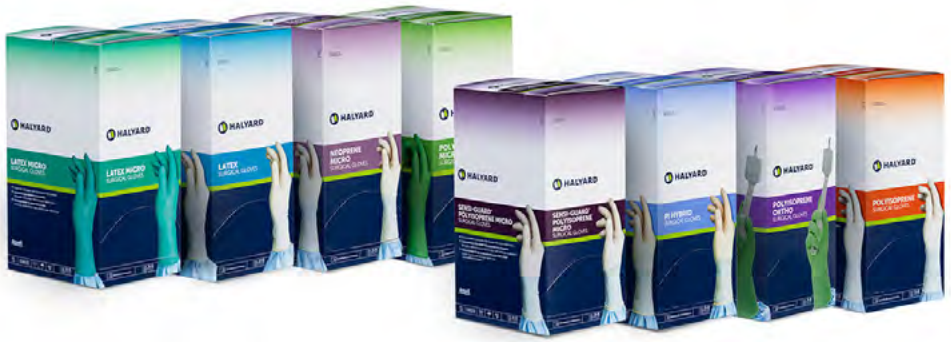
- Redness
- Chapping
- Chafing
- Dryness
- Scaling
- Cracking

### ARE YOU EXPOSED TO:

- Detergents
- Frequently washing hands
- Climate extremes
- Inadequately dried hands
- Pre-existing dermatitis
- Glove powder
- Aggressive scrubbing techniques




The risk of Irritant Contact Dermatitis can be reduced among surgical teams who use gloves manufactured without glove powder or other irritants.



## A GLOVE FOR YOU

Our streamlined surgical glove portfolio is designed to meet your surgical team needs. You'll get reliable supply, consistent fit, comfort, and protection in every glove designed for a full spectrum of procedures — from delicate neurosurgery to rugged orthopedics — from one source. Gloves are available in different materials and ranges of thickness across the eight glove styles, available in sizes 5½ to 9 to ensure the best fit for each wearer's needs.

### Our broad selection includes:

- Combinations for double-gloving in both synthetic and latex formulations
- Skin-friendly options made without natural-rubber latex or without added chemical accelerators[11]
- Several styles tested for use with chemotherapy drugs[12]
- Silky-smooth gloves with micro-textured finishes, for secure instrument handling and grip.

**HYDRASOFT™** Moisturizing Technology is an odorless, water-based coating applied on the inside of the glove that helps retain moisture and rehydrate dry skin to improve the wears' skin condition.

**DERMASHIELD™** Donning Aid Technology is our proprietary inner coating for fast and easy damp or dry hand donning whether it is the first don or during intraoperative changes.

**SENSOPRENE™** Technology: For thinner, stronger Neoprene gloves.

**SUREFIT™** Technology to minimize cuff roll-down.

**PI-KARE™** Technology: Enables the elimination of standard chemical accelerators known to cause chemical Type IV allergies.[11]


1 CDC. NIOSH. Effects of skin contact with chemicals. Guidance for occupational health professionals and employers. http://www.cdc.gov/niosh/docs/2011-200/pdfs/2011-200.pdf. Accessed December 10, 2013.
2 CDC. NIOSH. Skin Exposures and Effects. www.cdc.gov/niosh/topics/skin/default.html. Accessed 16 March 2023.
3 McCall BP, Horwitz IB, Feldman SR, Balkrishnan R. Incidence rates, costs, severity, and work-related factors of occupational dermatitis: a workers' compensation analysis of Oregon, 1990-1997. Arch Dermatol. 2005; 141(6):713-718.
4 CDC NIOSH. National Occupational Research Agenda, Disease & Injury. https://www.cdc.gov/niosh/docs/96-115/diseas. html. Allergic and Irritant Dermatitis. Accessed 16 March 2023.
5 Robbins SL, Cotran RS, Kumar V (eds). Robbins basic pathology. 7th ed. Philadelphia: WB Saunders, 2003
6 Cleveland Clinic "Latex Allergy: What It Is, Symptoms, Prevention," https://my.clevelandclinic.org/health/diseases/8623-latex-allergy?view=print. Accessed 27 April 2023.
7 Australasian Society of Clinical Immunology and Allergy (ASCIA), "Latex Allergy" p2, https://www.allergy.org.au/patients/other-allergy/latex-allergy, Accessed 27 April 2023
8 Ouellet L, Richardson L, Taylor P, Werner P. Chemical Allergy Masquerade. Accredited Continuing Education by Ansell Health-care Products LLC, 2017, p5.
9 Ouellet L, Richardson L, Taylor P, Werner P, Understanding Latex Allergy in the Healthcare Setting. Accredited Continuing Education by Ansell Healthcare Products LLC, 2017, p7-8.
10 Ibid., p8-12.
11 Chemical accelerators can act as contact sensitizers, leading to type IV allergic reactions and allergic contact dermatitis after repeated exposure; See further: Ouellet et al, Chemical Allergy Masquerade, p8.
12 Tested to resist permeation by chemotherapy drugs in accordance with ASTM D6978.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