Workshop: Hands-On Patch Testing

Luz S. Fonacier, MD FACAAI, FAAAAI
President ACAAI
Section Head of Allergy and Allergy & Immunology Training Program Director
NYU Langone Health-Long Island
Professor of Medicine, NYU Long Island School of Medicine

Sharon E. Jacob, MD
Professor, Dermatology
Loma Linda University

ACAAI 2021

Interpretation of the Patch Test

- **Irritant Reaction**
  - Weak positive allergic reaction; erythema, infiltration and possibly papules

- **1+ Reaction**
  - Strong positive allergic reaction; erythema, infiltration, papules and vesicles

- **2+ Reaction**
  - Extreme positive allergic reaction; bullous reaction

- **3+ Reaction**
  - Doubtful reaction; erythema only

- **+/- Reaction**
  - Doubtful reaction; erythema only
- **Methylisothiazolinone (MI)**
  - **96 hours**
  - Negative TRUE Test

- **Nickel**
  - **72 hours**
  - **7 days**

A. Irritant Reaction/other
B. +/- Reaction: Doubtful, erythema only
C. 1+ Reaction: Weak positive allergic reaction; erythema, infiltration & possibly papules
D. 2+ Reaction: Strong positive allergic reaction; erythema, infiltration, papules & vesicles
E. 3+ Reaction: Extreme positive allergic reaction; bullous reaction

francescobrunodermatologo.it
A. Irritant Reaction
B. +/- Reaction: Doubtful, erythema only
C. 1+ Reaction: Weak positive allergic reaction; erythema, infiltration & possibly papules
D. 2+ Reaction: Strong positive allergic reaction; erythema, infiltration, papules & vesicles
E. 3+ Reaction: Extreme positive allergic reaction; bullous reaction
A. Irritant Reaction/other
B. +/- Reaction: Doubtful, erythema only
C. 1+ Reaction: Weak positive allergic reaction; erythema, infiltration & possibly papules
D. 2+ Reaction: Strong positive allergic reaction; erythema, infiltration, papules & vesicles
E. 3+ Reaction: Extreme positive allergic reaction; bullous reaction

PPD
96 hours

A. Irritant Reaction
B. +/- Reaction: Doubtful, erythema only
C. 1+ Reaction: Weak positive allergic reaction; erythema, infiltration & possibly papules
D. 2+ Reaction: Strong positive allergic reaction; erythema, infiltration, papules & vesicles
E. 3+ Reaction: Extreme positive allergic reaction; bullous reaction

100% kerosene
24h

Courtesy of Curt Hamman
**Hand soap 48 hour**

A. Irritant Reaction/other
B. +/- Reaction: Doubtful, erythema only
C. 1+ Reaction: Weak positive allergic reaction; erythema, infiltration & possibly papules
D. 2+ Reaction: Strong positive allergic reaction; erythema, infiltration, papules & vesicles
E. 3+ Reaction: Extreme positive allergic reaction; bullous reaction

---

**CAUSES OF FALSE POSITIVE REACTIONS**

**Use of irritant substances**
- Sharply demarcated
- Confined to disc area
- Shiny, often w/ blister
- Burning or painful

**Pressure reaction**

**Edge effect**

**• Angry Back Syndrome**
marked 2+ to 3+ surrounded by (+/-) or (+) responses to contiguous site

**• Excited Skin Syndrome**
A. Irritant Reaction  
B. +/- Reaction: Doubtful, erythema only  
C. 1+ Reaction: Weak positive allergic reaction; erythema, infiltration & possibly papules  
D. 2+ Reaction: Strong positive allergic reaction; erythema, infiltration, papules & vesicles  
E. 3+ Reaction: Extreme positive allergic reaction; bullous reaction

False positive reactions to metals

Pustular patch reaction
- Common in atopics  
- Nickel, copper, arsenic & mercuric chloride  
- Minimal pruritus

Cobalt
- False (+) cobalt “poral” reaction  
- Punctate erythema, almost petechial  
- Probably toxic effect of cobalt on acrosyringium (superficial portion of the sweat duct)
Budesonide 0.1% in Petrolatum 72 hours

A. Irritant Reaction
B. +/- Reaction: Doubtful, erythema only
C. 1+ Reaction: Weak positive allergic reaction; erythema, infiltration & possibly papules
D. 2+ Reaction: Strong positive allergic reaction; erythema, infiltration, papules & vesicles
E. 3+ Reaction: Extreme positive allergic reaction; bullous reaction

A. Definite: (+) “use test” with suspected item or (+) PT with the object or product
B. Probable: Suspected allergen is verified in known skin contactants with consistent clinical presentation
C. Possible: Skin is in contact with materials likely containing the suspected allergen
D. Past: Patient no longer has exposure to the (+) allergen

Relevance

Current Relevance

**Definite:** (+) “use test” with suspected item or (+) PT with the object or product

**Probable:** Suspected allergen is verified in known skin contactants with consistent clinical presentation

**Possible:** Skin is in contact with materials likely containing the suspected allergen

**Past:** Patient no longer has exposure to the (+) allergen

---

A. Definite: (+) “use test” with suspected item or (+) PT with the object or product

B. Probable: Suspected allergen is verified in known skin contactants with consistent clinical presentation

C. Possible: Skin is in contact with materials likely containing the suspected allergen

D. Past: Patient no longer has exposure to the (+) allergen

Thimerosal

96 hours
2+ to Cocoamidopropyl betaine

A. Definite: (+) "use test" with suspected item or (+) PT with the object or product
B. Probable: Suspected allergen is verified in known skin contactants with consistent clinical presentation
C. Possible: Skin is in contact with materials likely containing the suspected allergen
D. Past: Patient no longer has exposure to the (+) allergen

Thank you