

## PHYSICIAN'S ALERT:

### Occupational Contact Dermatitis among Construction Workers

This Alert was developed to help ensure that all construction workers at risk of developing occupational contact dermatitis are properly diagnosed and treated. ***Please read and print this Alert and give it to your doctor to include in your medical records.***

**To My Doctor:** I am a construction worker who has frequent occupational contact with caustics, acids, and sensitizers. Please keep this information for reference and to aid in evaluation of possible skin conditions.

**This document should be filed in the medical records of (patient's full name):** \_\_\_\_\_

**Date of Birth (M/D/Y):** \_\_\_\_\_

**Patient's Occupation & Trade:** \_\_\_\_\_

#### **Your patient is a construction worker with exposure to wet cement and epoxy.**

Construction workers are exposed to a number of chemicals known to cause irritant and allergic dermatitis. Portland cement, found in plaster and in concrete mixes, is extremely alkaline. Wet plaster also contains slaked lime or calcium hydroxide, which is even more caustic than portland cement.

Further, portland cement contains trace amounts of hexavalent chromium. Hexavalent chromium is a strong sensitizing agent responsible for allergic dermatitis in cement workers around the world.

Other sensitizing agents include various epoxy adhesives and sealants in addition to various chemicals present in the admixtures used with cement and plaster.

Finally, construction workers may use products such as lanolin creams or lotions to soften their skin. Lanolin is a sensitizing agent. Some industrial hand cleaners contain limonene, also a sensitizing agent. The rubber in rubber gloves also may cause allergic dermatitis.

This Alert contains a partial listing of skin disorders, potential etiologic agents and possible medical surveillance.  
*See page 2 for additional information about occupational dermatitis.*

#### **Best Practices**

The following are selected best practices for preventing occupational contact dermatitis:

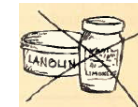
- ✓ Wash hands before putting on gloves.



- ✓ Use a pH neutral soap or cleanser.



- ✓ Try to avoid products with sensitizers, like lanolin or limonene.



- ✓ Don't wear jewelry at work.



- ✓ If they can't be left at the job, take work clothes home in a separate container. Launder separately.



- ✓ See a physician for a persistent skin problem, even a minor one.



**Please reinforce these behaviors with your patient.**

Skin Disorders	Etiologic Agents	Findings/Surveillance	Intervention/Treatment
<b>Xerosis (dry skin)</b>	Alkalies; abrasive cleaners; solvents; soaps; water; sun; heat; cold; low humidity.	Dry skin; scaling; itchiness; burning; redness.	Skin exam and specific treatment; skin lubrication; change work practices; protective clothing/equipment; gloves; mild soaps; temperature/humidity control.
<b>Irritant Contact Dermatitis (ICD) Acute, subacute and chronic</b>	Portland cement, plaster; lime; epoxies; solvents; other workplace products; abrasive cleaners; alkaline soaps; hand/barrier creams; other personal care products.	Skin exam; stinging; burning; pain; itching; blisters; dead skin; scabs; scaling; fissures; redness; swelling; bumps, dry or with watery discharge; usually concentrated where exposure occurs.	Skin exam; skin lubrication; antibiotics for infections; Aveeno baths; topical or systemic corticosteroids; antihistamines; wash hands at least before eating and leaving work for the day with pH neutral cleaners; prevent exposure; proper gloves; long sleeves over gloves; remove work clothes if soaked with wet plaster or epoxy.
<b>Allergic Contact Dermatitis (ACD) Acute, subacute and chronic</b>	Portland cement; hexavalent chromium; other trace metals found in cement or concrete; plaster; lime; epoxy resins; hardeners; reactive diluents; some admixtures; lanolin; rubber; perfumes.	Skin exam; stinging; burning; pain; itching; blisters; dead skin; scabs; scaling; fissures; redness; swelling; bumps, dry or with watery discharge; usually concentrated where exposure occurs, but also occurs on other body parts; onset 2 to 7 days or more after exposure. <b>Diagnostic aids:</b> open application tests; commercially available skin patch tests (e.g., to some rubber, epoxy, and cement compounds); do not patch test to unknown irritants, do not patch test to unknown chemicals.	Skin exam; skin lubrication; antibiotics for infections; Aveeno baths; topical or systemic corticosteroids; antihistamines; UV; wash hands at least before eating or leaving work for the day with pH neutral cleaners; identify offending agent and prevent exposure; proper gloves; long sleeves over gloves; remove work clothes if soaked with wet plaster or epoxy.
<b>Cement/Caustic burns</b>	Portland cement; lime; other alkalies; epoxy components.	Blisters, dead or hardened skin, black or green skin.	Flush with copious amounts of water; buffered solution to neutralize alkalies; burn wound care; surgery; skin grafting; physical therapy. <b>Cement burns are alkali burns. They can progress and should be referred to a specialist without delay.</b>
<b>Caused by Mechanical Trauma</b>	Friction; pressure; pounding.	Redness; blisters; abrasions; thickening; discoloration; fissures; corns/callosities, hives.	Skin exam and specific treatment; change work practices: use of proper tools, protective clothing/equipment.
<b>Caused by Solar Radiation, Climate and Temperature</b>	Sun; heat; cold; sweat; low or high humidity.	Burns; dry skin; scaling; itchiness; burning; blisters; sweat pore blockage (miliaria); maceration; frostbite; immersion foot; discoloration; waxy skin; redness; swelling; tenderness; numbness; hives; gangrene.	Skin exam and specific treatment; sunscreens; change work practices: protective clothing/equipment; temperature/humidity control.
<b>Contact Urticaria (hives)</b>	Latex; rubber; epoxy resins; leather; clothing; cold; heat; sun; water.	Skin exam; hives; swelling; redness; itchiness; pain. <b>Diagnostic aids:</b> skin prick test; RAST test; patch test; Contact urticarial can progress to include symptoms of nasal congestion, asthma and rarely anaphylaxis.	Identify and avoid offending agent; skin exam and treatment; antihistamines; systemic corticosteroids.