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Weekly Safety Tip

Life Is All About Choices!®

December 5, 2016

SCI Safety Tip: Skin Exposures & Effects (Part 4)

Source: <http://www.cdc.org>

Date: July 2, 2013



Figure 1: Intercellular lipid pathway

As shown in Figure 1, the stratum corneum consists of cells known as corneocytes. The spaces between the corneocytes are filled with substances such as fats, oils, or waxes known as lipids. Some chemicals can penetrate through these lipid-filled intercellular spaces through diffusion.

Figure 2: Transcellular permeation

As shown in Figure 2, another pathway for chemicals to be absorbed into and through the skin is transcellular, or cell-to-cell, permeation whereby molecules diffuse directly through the corneocytes.

Figure 3: Through the appendages (hair follicles, glands)

As shown in Figure 3, the third pathway for diffusion of chemicals into and through the skin is skin appendages (i.e., hair follicles and glands). This pathway is usually insignificant because the surface area of the appendages is very small compared to the total skin area. However, very slowly permeating chemicals may employ this pathway during the initial stage of absorption.

Contact Dermatitis

Contact dermatitis, also called eczema, is defined as an inflammation of the skin resulting from exposure to a hazardous agent. It is the most common form of reported OSD, and represents an overwhelming burden for workers in developed nations. Epidemiological data indicate that contact dermatitis constitutes approximately 90-95% of all cases of OSD in the United States.

SCI Safety Slogan

FRIENDS
DON'T LET
FRIENDS
FORGET
SAFETY



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Common symptoms of dermatitis include:

- Itching
- Pain
- Redness
- Swelling
- The formation of small blisters or wheals (itchy, red circles with a white centre) on the skin
- Dry, flaking, scaly skin that may develop cracks

Occupational contact dermatitis is frequently divided into two categories:

- 1 **Irritant contact dermatitis (ICD)** is a non-immunologic reaction that manifests as an inflammation of the skin caused by direct damage to the skin following exposure to a hazardous agent. The reaction is typically localized to the site of contact. Available data indicates that ICD represents approximately 80% of all cases of occupational contact dermatitis. ICD may be caused by phototoxic responses (e.g., tar), acute exposures to highly irritating substances (e.g., acids, bases, oxidizing/reducing agents), or chronic cumulative exposures to mild irritants (e.g., water, detergents, weak cleaning agents).
- 2 **Allergic contact dermatitis (ACD)** is an inflammation of the skin caused by an immunologic reaction triggered by dermal contact to a skin allergen. For ACD to occur, a worker must be first sensitized to the allergen. Subsequent exposures of the skin to the allergenic agent may elicit an immunologic reaction resulting in inflammation of the skin. The reaction is not confined to the site of contact and may result in systemic responses. ACD may be caused by industrial compounds (i.e. metals, epoxy and acrylic resins, rubber additives, chemical intermediates), agrochemicals (i.e. pesticides and fertilizers), and commercial chemicals.

Because the symptoms and presentation of ICD and ACD are so similar, it is extremely difficult to distinguish between the two forms of contact dermatitis without clinical testing (e.g. patch testing). The severity of contact dermatitis is highly variable and depends on many factors including:

- Characteristics of the hazardous agent (irritant and/or allergen)
- Concentration of the hazardous agent (irritant and/or allergen)
- Duration and frequency of exposure to the hazardous agent (irritant and/or allergen)
- Environmental factors (e.g., temperature, humidity)
- Condition of the skin (e.g., healthy vs. damaged skin, dry vs. wet)

SCI OSHA Compliance: OSHA publishes final walking/working surfaces rule (Part 2)

Source: www.blr.com

Date: November 17, 2016

Other highlights of the rule include:

- The rule requires employers to protect workers from fall hazards along unprotected sides or edges that are at least 4 feet above a lower level. It also sets requirements for fall protection in specific situations, such as hoist areas, runways, areas above dangerous equipment, wall openings, repair pits, stairways, scaffolds, and slaughtering platforms. And it establishes requirements for the performance, inspection, use, and maintenance of personal fall protection systems.



Quick Tips for Healthy Living

MyPlate Holiday Makeover

The USDA uses MyPlate to remind us to find a healthy eating style and build it throughout our lifetime. Everything you eat and drink matters. The right mix can help you be healthier now and in the future.

- Focus on variety, amount, and nutrition.
- Choose foods and beverages with less saturated fat, sodium, and added sugars.
- Start with small changes to build healthier eating styles.
- Support healthy eating for everyone.

Eat slowly, put your fork down between bites, and taste each mouthful! These are some of the easiest tips you can use to enjoy your meal and feel satisfied with one plate of food. Choose whole grains, fruits, vegetables, broth-based soups, salads, and other foods with lots of water and fiber to help make your holiday a healthy one.

Consider the options below and visit choosemyplate.gov for more healthy tips!

- Tweak the sweets: Fruits make delicious desserts!
- Bake healthier: Use recipes with pureed fruits instead of butter or oil.
- Brighten your meal: Fill half your plate with fruits and vegetables.
- Swap the grains: Choose whole wheat flour instead of white flour.
- Cheers to good health: Drink water to manage calories.
- Spice it up: Use spices and herbs instead of sugar and salt.
- Skim the fat: Try skim evaporated milk instead of heavy cream.
- Go easy on the gravy: A little bit of gravy goes a long way.

- The rule codifies a 1991 OSHA memorandum that permits employers to use Rope Descent Systems (RDS), which consist of a roof anchorage, support rope, descent device, carabiners or shackles, and a chair or seatboard. These systems are widely used throughout the country to perform elevated work, such as window washing.
- The new rule includes requirements to protect workers from falling off fixed and portable ladders, as well as mobile ladder stands and platforms.

The rule adds a requirement that employers ensure workers who use personal fall protection and work in other specified high-hazard situations are trained, and retrained as necessary, about fall and equipment hazards, including fall protection system

The final rule will be published in the *Federal Register* on November 18. On January 17, 2017 (60 days after its publication date), all provisions will take effect, with the following exceptions:

- Ensuring exposed workers are trained on fall hazards (6 months);
- Ensuring workers who use equipment covered by the final rule are trained (6 months);
- Inspecting and certifying permanent anchorages for rope descent systems (1 year);
- Installing personal fall arrest or ladder safety systems on new fixed ladders over 24 feet and on replacement ladders/ladder sections, including fixed ladders on outdoor advertising structures (2 years);
- Ensuring existing fixed ladders over 24 feet, including those on outdoor advertising structures, are equipped with a cage, well, personal fall arrest system, or ladder safety system (2 years); *and*
- Replacing cages and wells (used as fall protection) with ladder safety or personal fall arrest systems on all fixed ladders over 24 feet (20 years).

*What do you think?
Send us an email at:
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See our bold new look
In Loving Memory
of Jessica Lehrke*

In Loving Memory...
Jessica, Kristin and ❤️

