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Preventing Occupational Skin Diseases

- By [Robert Kravitz](#)
- Apr 01, 2009

Many people consider common skin rashes to be no more than an inconvenience. But to a staggering number of professionals in a variety of fields, they are a major concern that can result in loss of work, costly medical expenses, and decreased quality of life. In fact, according to the October 2006 Bureau of Labor Statistics Survey of Occupational Injuries and Illness, skin diseases continue to be the most widespread occupational illness. In 2006, skin diseases accounted for 16.5 percent of all reported private industry occupational injuries and illnesses (up from 15.6 percent in 2005).¹

Occupational skin diseases strike workers in a multitude of settings and cost employers billions of dollars every year. Contact dermatitis, the most common occupational skin disease, has been blamed for an astounding \$1.4 billion in direct medical expenses, with another estimated \$500 million in productivity losses.² Occupational skin diseases also pose a serious threat to public health. In the face of such consequences, it is important to understand what occupational skin diseases are and how they can be avoided.

Understanding Occupational Skin Diseases

Contact dermatitis usually appears as a rash located at the point of exposure. Acute dermatitis may have a weepy, swollen, or blistered appearance, while skin suffering from chronic dermatitis may become dry, cracked, and scaly. More severe skin irritation may cause red blisters or burns, while skin changes similar to those caused by eczema can appear over time due to exposure to weak irritants. Treatments for occupational skin disorders vary according to the disease.

Occupational skin diseases include:

- **Irritant contact dermatitis.** It develops slowly as a result of prolonged exposure to weak irritants such as water, solvents, or soaps. Exposure to more severe skin irritants is rare, but the reactions it causes are more serious. Heavy metals can cause an immediate and painful reaction, triggering lesions when they come in contact with the skin.
- **Allergic contact dermatitis.** It develops in response to even minimal exposure to antigenic substances (substances that evoke an immune response). This includes plants that are members of the Rhus genus (e.g., poison oak and poison ivy), epoxy resins, nickel, chromates, and acrylics. A rash, which usually appears at the point of contact, is likely to be characterized by redness, blistering, and severe swelling.
- **Oil acne and folliculitis.** This condition develops due to regular exposure to solvents and lubricants. Lesions often appear in areas that have been exposed to oil-soaked clothing. Occupational acne may also appear on the face or neck and can aggravate existing acne.
- **Occupational skin neoplasm (skin cancer).** It develops as a result of exposure to substances such as polycyclic hydrocarbons, inorganic metals, and arsenicals. The skin tumors and lesions common to this illness can also be caused by trauma, burns, or exposure to ultraviolet light or ionizing radiation. Symptoms often don't emerge until two or three decades after exposure.

Who Is at Risk?

According to *American Family Physician* (2002), workers spanning an array of industries are at risk of contracting skin diseases:³

Exposure or Causal Agent, with Examples of Workers at Risk

- **Sunlight** Outdoor workers, including postal workers, landscapers, and construction workers
- **Heat** Foundry and outdoor workers
- **Cold** Sailors, anglers, and other outdoor workers
- **Moisture** Food handlers, dishwashers, and hairdressers
- **Plants belonging to the Rhus genus (poison ivy, poison oak, etc.)** Outdoor workers, including firefighters, park and highway maintenance workers, and farmers
- **Ionizing radiation** Medical personnel, welders, and workers in the nuclear energy industry
- **Severe irritants (strong acids and alkalis, heavy metals, etc.)** Factory and semiconductor

workers

- **Weak irritants (soaps, detergents, solvents, synthetic oils, heat, sunlight, etc.)** Physicians, nurses, waiters, dishwashers, and food handlers

Why Do Occupational Skin Problems Exist?

As the previous chart indicates, people in many different occupations are exposed to causal agents that can trigger various skin diseases. And for many individuals who experience continuous exposure to those elements, occupational skin disease may very well be inevitable.

For instance, hairdressers and health care professionals, who must expose their hands to hot water many times throughout the day, almost always find themselves faced with dry, cracked skin. Once the skin is damaged, it loses the oils and moisture that help it to maintain its natural barrier function.⁴ Cracks in the skin present an ideal breeding environment for potentially harmful germs and bacteria, which can then be transferred to other people, as well as high-touch surfaces (such as door handles, light switches, railings, ledges, and countertops).

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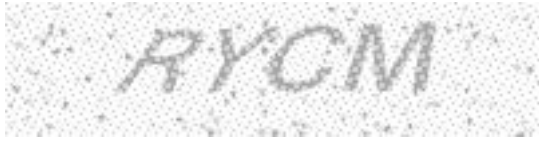
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