

New Brunswick workers are at risk of developing dermatitis due to chemical and biological agents in the workplace. This brochure outlines causes and preventive measures that workplaces can use to minimize the risk of this disease.

Dermatitis is inflammation of the skin not caused by

infection. The affected area becomes red, swollen and itchy.

The skin may thicken and become rough as the dermatitis

factors. External factors are collectively called "contact

Eczema is an older term for itchy red rashes that initially

weep but over time become crusted, thicken and scaly.

may develop in areas of acute contact dermatitis

Phototoxic and photoallergic dermatitis

Types of occupational dermatitis

with occupational exposures are:

Irritant contact dermatitis,

Allergic contact dermatitis and

The damage skin is less able to protect against the entry of

chemicals and infectious organisms into the body. Infection

The most common types of contact dermatitis associated

persists. Causes of dermatitis include internal and external

What is dermatitis?

dermatitis".



https://dermnetnz.org/topics/hand-dermatitis/

Irritant contact dermatitis usually occurs within a few hours of contact and peaks within 24 hours.

Irritant contact dermatitis occurs most often on hands, fingers, wrist and forearm

Common irritants include:

- Cleaning agents, such as detergents
- Particulates, such as fiberglass
- Food products, such as shellfish and nuts
- Metal, such as nickel and chrome
- Solvents such as xylene, toluene and prolonged water contact
- Resins, including epoxies
- Lubricants, such as machine oils and coolants acids and alkalis
- Any damage such as cuts and scrapes, friction from handling tools or excessive sun exposures will make the skin more susceptible to the erects of irritants Other factors that will aggravate the effects of

irritants include:

- Poor personal hygiene or even excessive washing
- Fair or oily skin types
- Other skin diseases

The severity of irritant contact dermatitis is also affected by the amount and concentration of the irritant as well as duration and frequently of exposure.

Examples of industries where workers are at risk for irritant contact dermatitis include:

Industry	Exposures
Agriculture	Synthetic fe gasoline, di grains and
Healthcare	Latex, prole water, clear agents
Construction	Cement and
Electroplating	Acids and a
Fishing	Fin fish and
Food Preparation	Fish and an fruits, vege
Forestry	Certain nat such as birc
Woodworking	Imported sp as teak and

Allergic contact dermatitis

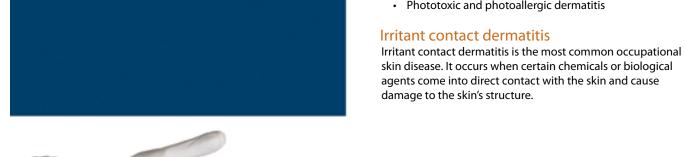
Allergic contact dermatitis results from a delayed allergic reaction. This disease develops in stages. Initially, there is a time when the individual is in contact with the allergen but does not show any symptoms. This period may last from days to years.

Sensitization occurs when the allergen penetrates the outer layer of the skin (even though the skin may not be damaged) and combines with certain cell proteins to form an "antigen". Overtime, the body's immune system reacts to the presence of this allergen-protein complex.

After initial sensitization, there tends to be a delayed reaction of several hours or days from contact with chemicals such as nickel, certain fragrances and hair dyes.



OCCUPATIONAL DERMATITIS



ertilizers, pesticides, iesel fuel, disinfectants, certain other plants.

onged exposure to ning and disinfecting

nd wood preservatives

alkalis

nd shellfish proteins

nimal proteins: certain etables and grains

tive species of wood, ch and poplar

species of wood such ebony

With continued exposure, this reaction may occur very quickly. Some people have this reaction when they put on latex gloves.

Allergic contact dermatitis usually continues, often becoming more intense, for about a week after it first appears. It gradually subsides if there is no further exposure. Continued exposure can lead to chronic allergic contact dermatitis that does not settle for months or years following removal from exposure.

A person with pre-existing allergies may be more severely affected from workplace exposures to substances that cause allergic contact dermatitis. Contact allergens are found in a wide variety of industries. A few examples are shown below.

Industry	Exposures
Agriculture	Certain animal feeds and pesticides,rubber products and allergenic plants
Auto repair	Chrome, chromates, nickel and resins
Baking and	
Candy making	Flavours, spices and citrus oils
Carpentry	Stains, glues and various woods
Electrician	Flexes, resins and rubber products
Embalming	Formaldehyde
Food preparations	Certain herbs, grains, nuts, seafood, eggs, fungal enzymes and certain spices
Health care	Latex
Metal working	Nickel, chromates and cutting oil
Forestry	Certain native species of wood, such as birch and poplar

Both irritant and allergic dermatitis

Some products may be associated with both irritant contact dermatitis and allergic contact dermatitis, the two major kinds of occupational dermatitis; rubber for example. Powders inside some gloves may dry the skin and cause irritation. Chemicals added to either natural (latex) or synthetic rubber or latex rubber itself, may cause allergic reactions.

Phototoxic and photoallergic dermatitis

Some agents cause dermatitis only when they contact the skin in the presence of Ultraviolet light. Creosote and asphalt are two examples of prototoxins. Examples of photoallergic materials include certain perfumes and specific topical medications.

Prevention of dermatitis

Under the Occupational Health & Safety Act employers are responsible to determine the risk of occupational dermatitis to employees. The first step in determining the risk is to identify chemical and biological substance that cause dermatitis in your workplace. Where a protein is identified the employer is obligated to take measures to minimize the risk.

Additional Preventive measures include:

- Substitution of less hazardous substances whenever possible
- Engineering controls
- Good housekeeping
- Immediate removal of clothing and equipment soiled with irritant or allergen
- Personal protection to avoid contact with allergens
- Good personal hygiene

Treatment

If workers suspect that they are suffering from occupational dermatitis they should report it immediately to their employer and seek medical attention.

For more information, please contact:

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worksafenb.ca

