Dermatitis Meeting Kit

Dermatitis is an inflammation of the skin from exposure to an irritant. The degree of inflammation is affected by the type of skin (pigmentation, dryness, hairiness), age, sex, season of the year, history of previous skin disease or allergies, and personal hygiene.

CAUSES OF DERMATITIS ARE CHEMICAL, MECHANICAL, PHYSICAL, OR BIOLOGICAL.

- Chemicals can produce reactions ranging from chemical burns to mild skin irritation.
- Mechanical causes of dermatitis include friction, pressure, and trauma resulting in abrasions, wounds, bruises, or foreign bodies (like glass fiber) getting into the skin.
- Physical agents that lead to dermatitis are excessive heat, cold, sunlight, ultraviolet light, X-rays, or other ionizing radiation.
- Biological agents such as bacteria, viruses, fungi, poisonous plants, and insects can cause or complicate dermatitis.

TYPES OF DERMATITIS – TWO TYPES

CONTACT IRRITANT DERMATITIS: In contact irritant dermatitis the chemical product that damages the skin is known as the irritant. A highly irritant substance is known as a corrosive. Irritant dermatitis makes up about 80% of contact dermatitis. The other 20% is allergic.

There are several ways that skin damage can be caused.

- Detergents, soaps such as in repeated hand washing or the use of solvents can remove the protective oily layer and so leave the skin exposed to damage.
- Physical damage such as friction, minor cuts for example from fibre glass and grazes can breakdown the protective layer and allow substances access.
- Chemical such as acids or alkalis can burn the layer.

Common irritants are wet work, cutting oils, solvents and degreasing agents which remove the skins outer oily barrier layer and allow easy penetration of hazardous substances, alkalis and acids. Wet cement coming into contact with exposed feet and hands is a particular example of a skin irritant.

ALLERGIC CONTACT DERMATITIS: The chemical product causes the worker to become sensitised or to develop an allergic reaction some time after initial contact. The type of allergic mechanism is known as Type IV or delayed hypersensitivity. People do not become allergic to a chemical product immediately at first contact. The

sensitisation period (the time between contact and the development of an allergy) can vary from a number of days to months or even years. The risk of becoming allergic depends on several factors:

- The nature of the chemical product. A chemical product with a higher likelihood to cause allergy is known as a skin sensitizer.
- The nature of contact. The higher or more repeated the exposure the more likely it is for the individual to develop sensitisation.
- The vulnerability of the host. Typically, people with other allergies are NOT particularly more vulnerable to developing contact allergic dermatitis. Individuals with a previous history of non allergic dermatitis ARE more vulnerable. This may be because the sensitizer may more easily enter the bloodstream in those individuals.

WHAT EMPLOYEES NEED TO KNOW

- Chemical products which are known to cause dermatitis in the workplace.
- Risk assessment.
- Proper use of control measures.
- Risks to health.
- Symptoms of sensitisation.
- Importance of reporting symptoms at an early stage.
- Role of health surveillance.
- Self examining and reporting.

BEST SAFETY MEASURES TO PREVENT AND CONTROL DERMATITIS

- **Removal of the chemical product.**

- **Substitution** with a less hazardous chemical product.
- **Closed systems of work** which minimise worker contact with the chemical product.
- **Removal of excess material** using drainage, vacuuming or local exhaust ventilation.
- **Washing, drying and applying hand creams.** The most effective way of reducing dermatitis is to reduce skin contact with the hazardous chemical product and the easiest way to do this is to wash it off. Good welfare facilities are required including a sufficient number of wash hand basins with hot and cold running water or a mixture of both, hand cleaners, drying facilities and hand creams. They should not contain harsh abrasives or organic solvents. Clean dry towels or disposable paper towels or hot air dryers may be used.
- **Barrier creams.** Barrier creams must be used with caution. Very often they are not effective barriers. In general, they are not a substitute for appropriately chosen gloves. Unlike when gloves fail, the user will not usually be aware of decreasing protection.
- **Use of personal protective equipment.** The objective of personal protective equipment, in this case gloves and clothing is to prevent direct skin contact with the hazardous chemical product. No glove provides protection from all chemicals and care must be taken that an appropriate glove is chosen. If possible latex gloves should be avoided because of the risk of latex allergy but there are occasions when they are still the best option. Apart from gloves and protective overalls, aprons and face masks may be required.

FINAL WORD

Because dermatitis is normally evident first to the individual, self-examination and reporting of problems is hugely important. This can only be successful if individuals know what to look out for, what to report and to whom.