



GUIDANCE NOTES ON PREVENTION OF

# DERMATITIS

Published by Health and Safety Authority, Davitt House, Mespil Road, Dublin 4.

May 1990.

PLEASE RETURN TO  
LIBRARY AND INFORMATION UNIT  
DEPARTMENT OF HEALTH

This book is due for return on or before the last date shown below

Don Gresswell Ltd., London, N.21 Cat No. 1208

# Foreword

000766

The Safety, Health and Welfare at Work Act (1989) requires employers to take a preventive approach to protecting workers health and safety.

It further requires (Section 12) a Safety Statement to be drawn up which

- Identifies hazards
- Assesses the risks
- Puts into place the necessary control measures.

The Act also requires the workers to be informed about and be consulted on safety and health matters.

The Health and Safety Authority have produced this guidance note to assist management and workers in their task of preventing dermatitis at work.



The Health and Safety Authority would like to thank Mr. F. Powell Consultant Dermatologist, Mater Hospital for reviewing the draft document.

## What is Dermatitis?

It is an irritation or inflammation of the skin. The skin becomes itchy, red and blistered. After continual episodes the skin becomes hard, thickened and cracked. It is not infectious.

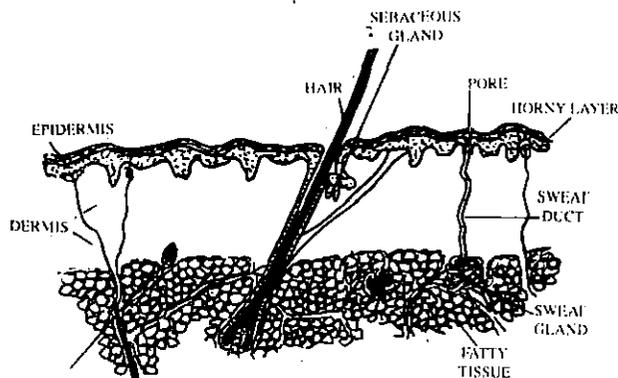
It accounts for more than 50% of all the work related diseases in Ireland. In addition many cases are not recognised or reported.

Research has shown that 10 years after the disease first occurred about 50% of the affected workers will still have some skin problems.

## Occupational Dermatitis

1. is the most common work related disease
2. has long-term consequences for the workers health – and their ability to continue with the job.
3. has financial implications in terms of ongoing medical treatment, social welfare compensation and civil law claims. It may be totally preventable by very simple, cheap measures

## Normal Skin



The skin is basically a protective layer for the body. It is an elastic envelope which secretes a slightly oily substance to cover the surface and provide an additional barrier layer. Repeated handwashing (or using solvents) will remove this protective oily layer and so leave the skin unprotected against further damage.

In some parts of the body the skin is thinner and hence these areas are more vulnerable to problems e.g. eyelids, scrotum, arm-pits. Minor cuts and grazes destroy the continuity of the skin and allow substances easier access.

The aim of a skin care programme is to keep the skin in a normal healthy state.

Cuts and grazes should be covered and hand creams used to replace the naturally occurring oils if frequent handwashing or solvents have removed them.

## Contact Dermatitis

The commonest type of skin problem is dermatitis caused by chemicals or other substances coming into contact with the skin.

## Types of Dermatitis

There are 2 forms of dermatitis, they look exactly the same but they have significant differences.

### (a) Irritant Dermatitis

In this case the substance in contact with the skin acts by irritating the skin. The major cause of this irritation is the dose or concentration of the substance on the skin, and frequently by altering the dose (dose is concentration x time) by dilution or reducing the time of skin exposure, the irritation can be prevented.

It usually occurs on the parts of the body in contact with the substance – hands, face, at cuffs of overalls, thighs where oily overalls chafe.

#### Common irritants are

Wet work accompanied by minor skin cuts and grazes.

Some cutting oils.

Solvents and de-greasing agents – remove the skins fatty barrier layer and allow for easy penetration of hazardous substances.

Alkalis/acids.

### (b) Allergic or Sensitivity Dermatitis

In this situation the substance causes the exposed worker to become sensitised or develop an allergy. After this initial period when sensitisation occurs, which can be from days to years, each time the worker comes into contact with the substance, even in very small amounts, dermatitis will develop. The long-term health consequences and ability to remain at work are quite significant.

#### Common Sensitisers are:

Chromate (Cement)	Colophony
Epoxy resins	Ethylene diamine
Formaldehyde	Coolant fluids – additives
Saw-dust	Dyes
Cobalt	Flour – benzoyl peroxide
Printing plate chemicals	Paints
Adhesives	Turpentine

# A Workplace Programme to Prevent Occupational Dermatitis

## Management

### (1) Identify chemicals

All chemicals supplied should come with a hazard data sheet. There is a section on this product information which is required to list the health hazards and also control measures required.

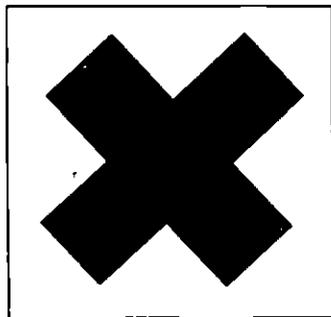
The packaging of chemicals which have been classified as skin irritants or sensitizers must have the symbol shown below and also appropriate risk and safety phrases.

*Safety phrases include:*

Avoid contact with skin

Wear suitable gloves

xi



Irritant

*Risk phrases:*

Irritant to skin

May cause skin sensitization by skin contact.

### (2) Risk Assessment

It is a wise precaution to assume there is a risk unless all exposure is minimised and controlled.

### (3) Control Procedures

#### ● Removal

If the substance is highly irritant or a sensitizer, is it essential to use it?

#### ● Substitution

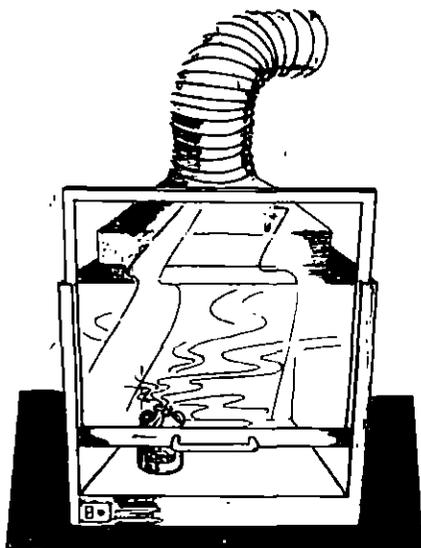
If it has to be used could it be substituted by something less hazardous. (Notice should also be taken of any other hazardous properties of the substitute e.g. explosivity or flammability).

#### ● Closed Systems of Work

For highly irritant substances or sensitizers closed working systems which minimise or reduce worker exposure are necessary.

- **Ventilation, and Extraction**

The level of exposure to solvents, fibre glass, epoxy-resin and similar can be reduced by effective extraction systems. When the humidity falls below 35% skin problems are more likely.



- **Health Monitoring**

- (a) Pre-placement

The person undertaking this monitoring will need to be fully familiar with the workplace including:

- (i) Materials used, works processes and working practices
- (ii) Housekeeping standards of the enterprise
- (iii) Washing facilities – location and numbers
  - hand washing materials and drying facilities
- (iv) Protective clothing used including
  - permeability of glove materials
  - adequate arrangements for
    - (a) fit
    - (b) replacement
    - (c) training in use.

The only specific health check is

- (a) for previous known sensitivity to a substance used at the enterprise
- (b) people with atopic eczema i.e. pre-existing dermatitis are about ten times more likely to develop an irritant dermatitis. Any specific queries can be addressed to the Occupational Medical Services of the Health and Safety Authority.

- **Reporting of Dermatitis**

Any skin irritation must be reported immediately to the responsible person (either the Supervisor, the health and safety person or whoever is the responsible person named on the Safety Statement). Minor cuts and grazes, should also be treated promptly as these reduce the intactness of the skin and increase the risk of substances penetrating the skin.

- **Washing Facilities**

The most effective way of reducing dermatitis is to reduce skin contact with the dangerous substances. The easiest way to do this is to wash off the substance. The longer the substance is in contact with the skin the greater the risk of dermatitis.

Health and safety requires clean, warm accessible washrooms: running warm water, soap or hand cleansers, drying facilities and hand creams. Supervision and encouragement may be required, as "human nature" tends to take short cuts.

- (i) **Site**

They should be sited convenient for the hazardous job.

- (ii) **Washing Time**

Time is required

- (a) at the beginning of work

- (b) tea/lunch/home breaks

- (c) depending on job.

- (iii) **Number of washstands**

- For high risk areas 1 for 5 workers is adequate. For low risk areas 1 for 10 workers is adequate.

- (iv) **Skin Cleansers**

- There are many varieties:-

- (a) Soaps – fatty soaps may irritate. Perfumes, lanolin and antiseptics may be sensitisers

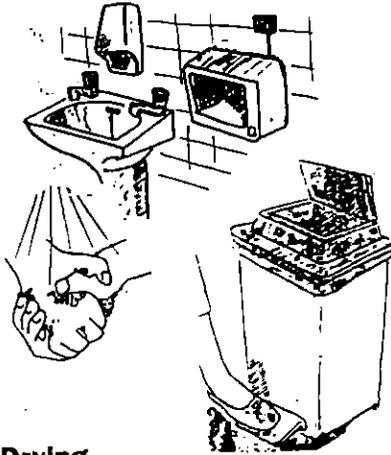
- (b) Detergents – if not used at correct dilution, will damage the skin

- (c) Waterless cleansers – avoid those which contain organic solvents which will de-grease the skin.

- avoid harsh abrasives like sand and pumice, use vegetable based ones.

Frequently the task requires the use of industrial hand cleansers to remove heavy oils or contamination.

If these are necessary, they must always be washed off with soap and water, the hands dried and a hand cream used to return the skin to its healthy state.



**(v) Drying**

Clean, dry towels are preferable. Disposable paper towels should be soft, hot air dryers not too "fierce"

**(vi) Emollient cream** – Use after every wash to replace the skins natural oily layer

● **Protective Clothing**

The object of protective clothing is to avoid skin contact with any hazardous substance.

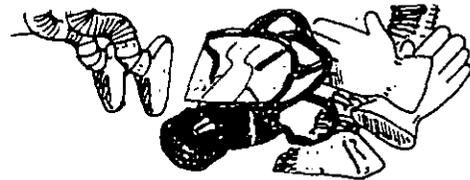
- (a) Gloves – permeability. Depending on the type of "rubber" gloves, different chemicals will penetrate them.
- Sweating under gloves can damage the skin so a good lining or a cotton insert is preferable
  - there needs to be adequate fit at the cuff. There should

be no gap between overall and glove.

- replace torn gloves immediately. If chemicals get into the glove, the occlusion enhances the chance of dermatitis.
- train wearers how to remove gloves to minimise skin contamination

(b) sleeves, aprons, face masks may be necessary depending on the process.

(c) dirty, damp overalls can chafe and irritate and cause dermatitis.



● **Barrier Creams**

Facilitate cleansing at the end of the day. They provide an extra layer for the skin. Some may be irritants.

**Employee**

Ensure that all the necessary information is available and understood. Good skin condition should be maintained by adopting a regime of washing, drying and applying emollient creams. It is also a good idea to keep the general work area clean and so avoid chance contamination.

Huc 24

## *In Summary*

Good Skin Care

- 1. Keep skin clean**
- 2. Dry properly**
- 3. Replace skins natural oil with a good hand cream**

## *Prevent Dermatitis*

- 1. Identify dangerous substances**
- 2. Avoid skin contact**

# Health and Safety Offices

Headquarters  
Davitt House  
Mespil Road,  
Dublin 4.  
Tel. (01) 765861  
Fax (01) 681435  
Telex 93435

Athlone Regional Office  
Government Buildings  
Pearse Street  
Athlone  
Co. Westmeath.  
Tel. (0902) 92608  
Fax (0902) 92914

Cork Regional Office  
Government Buildings  
4th Floor  
Sullivans Quay  
Cork  
Tel. (021) 964900  
Fax (021) 961663

Drogheda Regional Office  
Abbey Centre  
West Street  
Drogheda  
Co. Louth  
Tel. (041) 38536

Galway Regional Office  
Newtownsmythe  
Galway  
Tel. (091) 63985  
Fax (091) 64091

Limerick Regional Office  
11-16 O'Connell Street  
Limerick  
Tel. (061) 49900  
Fax (061) 49559

Sligo Regional Office  
Government Offices  
Cranmore Road  
Sligo  
Tel. (071) 43942  
Fax (071) 44078

Waterford Regional Office  
Government Buildings  
The Glen  
Waterford  
Tel. (051) 75892

This publication may be freely reproduced, except for advertising, endorsement or sale purposes. The information it contains is current at 5/90. Please acknowledge the source as HSA. Published by the Health and Safety Authority.

Designed and Printed by

*Ranelagh*

P·R·I·N·T B·U·R·E·A·U