Occupational Skin Disease

An Expert Guide

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- The human skin
- Occupational dermatitis
- At risk workers
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- Implementing procedures
- Occupational skin care
- Education and auditing
A guide to preventing Occupational Skin Disease

Occupational skin disease is a serious health issue that often goes unreported in the workplace as it’s importance is not widely recognised, yet in many cases could be prevented with simple skin care regimes. As part of our commitment to keep people safe in the workplace we have created this Expert Guide to provide guidance on minimising occupational skin disease. It highlights the risks it brings to a business and its employees, the legal requirements and describes the steps to implement a tailored skin care management system, necessary to deliver best practice.

A universal problem

The range of risks managed by a Health and Safety Manager varies from workplace to workplace, but the threat of employees contracting a form of occupational skin disease on their premises is universal. Common workplace materials such as grease, oil, solvent, detergent, soapy water, dust, paper and cardboard, can all be damaging to employees’ skin if the issue is disregarded.

Whilst costly for an organisation economically, for the employee, the consequences of contracting occupational skin disease can be life changing.

Legal responsibilities

The Health and Safety at Work Act, 1974, includes legal obligations associated with skin safety, these include COSHH (Control of Hazardous Substances to Health) and Workplace Health, Safety & Welfare regulations, which are detailed in this guide.

Overall skin management in the workplace integrates a broad risk assessment-based health and safety approach to protect workers and minimise exposure to hazardous conditions and contaminants. Skin care addresses skin health when Safe Working Practices (SWP) and Personal Protective Equipment (PPE) are not appropriate or possible.

Effective occupational skin care

Addressing and reducing occupational skin disease requires an integrated approach to protect, cleanse and restore the skin. Arco offers a comprehensive range of occupational skin care products suited to all working environments and addressing the requirements and preferences of end users.

Manufactured to international standards of quality and supported with safety test data, you can be confident that products are effective and safe for the user. A variety of dispensing solutions ensure that the products can be located where they are needed to encourage compliance with the best practice standard for skin care.

This Expert Skin Care Guide has been produced in partnership with Deb Ltd. Deb’s aim is to set higher standards in leading the fight against occupational skin disorders and the spread of infections; they are committed to working with organisations, to enable the implementation of skin care and hand hygiene best practice, to Make Hands Matter in the Workplace. Serving all types of workplace and public environments, spanning industrial, commercial, automotive, healthcare and food sectors for over 80 years, Deb operates in 18 countries where their products are used over 150 million times every day.

Arco is the UK’s leading supplier of personal protective equipment, workwear and workplace safety products offering a world-class range of over 170,000 products.

As Experts in Safety we are widely recognised as a provider of specialist advice through our sales office network and this is further supported by our training and consultancy division. We reach our customers through an extensive product catalogue, interactive website, local sales offices and a network of over 49 stores. We pride ourselves on providing customers with great availability, performance and price.

Founded in 1884 Arco has a heritage spanning four generations. With traditional family values at the heart of the business we pride ourselves on our core values: respect, hard work, enterprise and excellence in reputation.

As we are members of the BSIF Registered Safety Suppliers Scheme you can be confident that we will supply safety equipment which is genuine and compliant with the relevant standards and regulations. The BSIF monitor and regulate members of the scheme by conducting regular standards audits.

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1. Be aware of the threat

Occupational skin disease is a skin problem acquired in the workplace. This work-related health problem is more serious than is commonly recognised, and largely goes unreported. It constitutes an invisible threat that affects both an organisation’s efficiency, and the health and well-being of its employees.

To prevent occupational dermatitis, it is important to be aware of the threat, correctly assess the risks and implement the right procedures to protect workers. The great majority of cases of occupational dermatitis are preventable – if a few effective and often simple steps are taken towards this aim. This guide will explain these steps, guiding managers to keep the skin of their employees healthy.

Occupational skin disease is one of the most common health issues, costing the European Union an estimated €600m every year. But it remains under-reported: it is widely accepted that existing statistics merely represent the “tip of the iceberg”.

This guide aims to help managers and those responsible for health and safety in the workplace to keep the skin of employees healthy and undamaged by the workplace environment. It will focus on minimising the risk of occupational dermatitis – the most prevalent type of occupational skin disease reported in the workplace. Occupational dermatitis can seriously affect the well-being, quality of life, and performance of your employees. Absence from work, reduced pay, lower morale and self-esteem and even an unintended change in career can be the result.

Employers, meanwhile, run the risk of bad publicity, reduced productivity, rising costs due to sickness days, increased costs for training and recruitment and, in a worst case scenario, potential compensation claims. Any business can be affected.

www.arco.co.uk/skincare

2. The human skin

To understand occupational skin disease, it is important to understand how the human skin is constructed and how it functions. The skin regulates the body’s temperature. It senses heat, cold, and vibrations. It wards off infections and retains body fluids. One of its crucial functions is to prevent substances and microbes reaching our internal organs: the skin acts as a vital barrier.

The skin performs this job perfectly – as long as the surface is unbroken by cuts, abrasions or disease, and its natural secretions are not removed or contaminated.

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Skin diseases are the second most common work-related health problem in Europe.

European Agency for Safety and Health at Work

www.arco.co.uk/skincare

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3. The most common occupational skin disease is occupational dermatitis

Occupational dermatitis is an inflammation of the skin that is caused by external agents in the working environment. The most likely cause is exposure to chemicals and hazardous substances, biological agents, sensitisers or allergens which change the natural balance of the skin, or damage its structure. Physical vibration, mechanical abrasion (for instance sand and masonry) or extensive wet working can also increase the likelihood of contracting the disease. Other contributing factors include UV radiation and exposure to environmental conditions such as high or low temperatures and humidity.

The symptoms of dermatitis vary widely, depending on the type and the length of exposure to an irritant, as well as the susceptibility of the person affected. They include redness or swelling of the hands or fingers; cracked skin; blisters; flaking or scaling of the skin; and itchy hands. It is also possible for wart-like growths to develop from small patches of thickened skin; these can become cancerous.

At any one time up to 10-15% of workers suffer from dermatitis. Luckhaupt et al – American Journal of Industrial Medicine 56:623-634 (2013)

Examples of Skin Disease

Psoriasis   Toxic Skin Damage   Irritant Dermatitis   Melanoma

Skin Cancer   Blistened Hand   Irritant Dermatitis   Allergic Dermatitis

Hands and arms are the most frequently affected, but if the dust or fumes of an irritant substance touches the skin then any part of the body can be affected. If they penetrate the skin, many external agents can also cause harm and diseases elsewhere in the body.

If dermatitis is untreated, it can spread to other parts of the body. This is why early treatment is essential: anyone who suspects falling victim to occupational dermatitis should seek medical advice as soon as possible. Dermatitis however cannot pass from person to person, it is not contagious.

Irritant contact dermatitis is caused by substances such as solvents, oils and detergents, environmental conditions, abrasion or wet working. A full recovery can be made from this form of dermatitis if treated correctly.

Allergic contact dermatitis can occur when the sufferer develops an allergy to a substance the skin comes into repeated contact with. In this form of dermatitis, after initial contact with the allergen the body may become sensitised to it, but doesn’t react. It’s only after future exposures to the substance that the immune system reacts, causing the skin to become red and itchy.

Irritant and allergic contact dermatitis make up the majority of cases of occupational skin disease, accounting for 95% of all cases.2

Healthy skin, with a strong skin barrier prevents penetration of allergens.

The risk of occupational dermatitis can be minimised if two things work in unison: the implementation of the right procedures to minimise or eliminate contact (see section 8) and the introduction of an effective three step occupational skin care management system (see section 9).

"Regional Atlas of Contact Dermatitis" by Monica Huynh, BA, Michael F. Sheehan, MD, Michael Chung, BS, Matthew Zirwas, MD, and Steven R. Feldman, MD, PhD, 2012
4. Who is at risk?

Every day, the skin of workers is potentially exposed to contaminants and conditions that can be harmful and contribute to causing occupational dermatitis.

Irritants can affect any skin, whether healthy or already damaged. They can damage the structure of the skin, block pores or remove natural oils from the skin. Examples of the most risky and hazardous substances which can cause contact dermatitis are chemicals such as acids, oxidising or reducing agents, detergents and water-based substances; solvents; and mineral oil-based substances, such as lubricants, machine oils, and greases.

Irritants and sensitisers can come into direct contact with the skin through touching or inadvertently through splashes, but contact can also occur by touching contaminated surfaces such as worktops, tools, clothing, clothes and gloves. Airborne substances can also deposit on the skin.

But while external agents and regular “wet work” (prolonged or repeated contact of hands with water) are the major causes for occupational dermatitis, it is important to keep in mind that work in uncomfortably hot or cold, or excessively dry conditions can also cause occupational dermatitis. Temperature, humidity and wind can all affect the skin’s ability to protect itself.

Are you at risk?
The following checklist should help you to assess your situation. If you answer ‘Yes’ to any of these questions, you may have a higher risk of incidence of occupational skin disease.

- Are there chemicals in your workplace that carry warning signs (irritant, toxic, corrosive, or harmful) and/or risk and safety phrases?
- Are the hands of employees exposed to hazardous substances such as paints or inks, adhesives, solvents or greases?
- Do hands come into contact with mineral oil-based substances? These could be lubricants or machine oils, cutting fluids, or greases.
- Is there “wet working” (prolonged or repeated contact of hands with water) for more than 2 hours per day or more than 20 times per day?
- Do employee hands come into frequent contact with flowers, plants, or animal products?
- Is there contact with natural substances, such as wood dust or latex?
- Do employee hands come into contact with food?
- Is there a risk of skin abrasion?
- During their working days, are employees exposed to the sun?
- Are there pre-existing skin conditions, such as allergies, to be taken into account?
- Do employees work in cold conditions?

5. Legal responsibilities

Employers have a Duty of Care to provide a safe working environment for their employees. The key law relating to skin safety is the Health and Safety at Work Act, 1974, which includes regulations for employers to:

- Conduct risk assessments and introduce appropriate procedures to remove or minimise identified risks (Management of Health and Safety at Work Regulations).
- Enforce the control of exposure to hazardous materials, including those which could lead to skin problems (Control of Substances Hazardous to Health (COSHH) Regulations).
- Provide suitable washing facilities (Workplace Health, Safety & Welfare Regulations).
- Report all diagnosed cases of work-related diseases and health issues to the Health and Safety Executive (Reporting of Injuries, Diseases & Dangerous Occurrences Regulations).

Other relevant regulations are Chemical Hazard Information and Packaging (CHIP); Classification, Labelling and Packaging (CLP) and Restriction, Evaluation, Authorisation of Chemicals (REACH).

CHIP, CLP and REACH are designed to identify the hazards associated with chemicals, ensure that users are provided with accurate information (including health and safety data sheets) and enforce safe packaging. Employers need to take note of these warning symbols and risk and safety phrases when assessing substances which may represent a danger to the skin.

It is an employer’s duty to assess the risks which could cause dermatitis – and to take the necessary steps to prevent them. Where it is not possible to prevent exposure, everything possible should be done to minimise it.

As part of this effort, employers should provide protective clothing wherever necessary, and ensure the right washing facilities are available. A Health and Safety manager, or another responsible person, should be appointed to make sure that health and safety measures are being adhered to at all times.

Employees need to be made aware of the possible dangers of occupational dermatitis. To assure this, employers should provide thorough training and an ongoing programme of staff education.

Where required, periodic medical inspections should be carried out. This is a legal requirement in certain industries (covered by COSHH Regulations).

The failure to provide a safe working environment can have serious consequences – from poor staff morale to bad publicity, from lost productivity (due to staff absence) to financial penalties. In severe cases, imprisonment could be the result.

The scope and depth of the legislation relating to skin safety clearly indicates that employers need to take the issue seriously. Further information is available from the Health & Safety Executive website: www.hse.gov.uk.
6. Employees need to play their part too

Employees who work in environments that carry the risk of occupational dermatitis have a duty too. They should:
- Comply with all preventative measures in place.
- Wear appropriate clothing.
- Use the washing facilities provided.

If there is an injury (however minor), first aid treatment should be sought straight away.

Employees should report any signs of skin issues to a supervisor, a health and safety representative or a workplace doctor or nurse. These individuals should investigate the case and take appropriate action. Employees with concerns about their skin should also discuss these with their GP.

Early treatment of occupational dermatitis is crucial: this not only lessens the likelihood of a case becoming serious; it also reduces the chance of the disease reoccurring.

7. Risk assessments are critical

Occupational skin diseases are estimated to cost the EU €600m each year, resulting in around 3 million lost working days... and forces many workers to change jobs.

— European Agency for Safety and Health at Work, Fact Sheet No. 40

To take a proactive approach to prevent occupational dermatitis, employers should conduct a thorough initial risk assessment to:
- Identify hazards.
- Establish the risks each hazard poses to the skin.
- Assess the potential impact on employees.

When it comes to identifying the external agents that might pose a hazard, it is important to keep in mind that they are not always the ones that come to mind first. “Branded” chemical products can often be seen as harmless when, actually, they could be hazardous and compromise skin safety.

Even skin care products can carry risks, if they are not used in the correct way, which is one more reason staff training and education is crucial.

Because some employees are more susceptible to occupational dermatitis than others, it is important to conduct a risk assessment on an individual basis – taking into account the skin condition of the employee and any pre-existing skin health issues.

— Centers for Disease Control and Prevention
Experts in Safety

8. Implementing the right procedures

Following the initial risk assessment, the appropriate procedures should be put in place. As much as possible, this should be a cooperation between the employer and employees.

Any substance that has been identified as a risk should either be eliminated or replaced by a safer alternative. If this is not possible, a Safe Working Distance (SWD) approach can control and therefore reduce exposure, for example by using screens and splash guards when dealing with liquids and using mechanical aids such as tongs and long-handled tools.

If exposure cannot be adequately controlled by elimination, substitution, or SWD, Personal Protective Equipment (PPE) then skin care practices should be a priority: where necessary, suitable protective gloves should be worn, workers’ hands should be washed regularly and suitable protective and restorative creams should be applied to keep the skin in a healthy condition.

Before choosing gloves or other protective wear, advice should be sought. Wearing gloves that are poor quality or not appropriate for a particular working environment can sometimes do more damage than wearing no gloves at all. It is also important to keep in mind that certain glove coatings lack ventilation and can cause irritation.

Contact us if you require support regarding protective wear on your site. This may be validation of the current gloves in use, recommendations for new processes, specific information or technical advice or just help with cost down initiatives. We have a Technical Specialist for gloves available to assist you. They can assess your site specific needs and recommend the most suitable hand protection. To arrange an appointment please call your regional Arco sales office.

9. How to implement an effective three-step occupational skin care management system

Cleaning and taking care of hands is an important part of an integrated, pro-active approach to preventing occupational skin disease. Arco recommends implementing a three-step programme utilising the Deb Stoko range of skin care and hand hygiene products.

- **Protect creams** for application to clean hands prior to working or after washing hands.
- **Appropriate hand cleansers** to be used as soon as possible after hands become contaminated and/or immediately before/after visiting the toilet.
- **Restore creams** for application to clean hands at the end of the day/shift or prior to prolonged breaks.

An effective three-step approach to skin care identifies three crucial moments for care: applying protective cream before work; using appropriate hand cleansers after potential contamination; and applying restorative cream at the end of the day.

Advice and guidance are important to ensure the right cleansers and creams are chosen for the specific working environment. To help aid the selection of the right product for the right application, Arco has a dedicated Technical Skincare Specialist who can provide a unique bespoke on-site service to customers. Our Technical Skincare Specialist offers comprehensive advice on actual and potential skin problems, training on the correct use of skincare products and product trials together with a number of communication tools to support ongoing education and awareness.

It is strongly recommended that skin care products are provided in specially designed, sealed cartridge dispensers, which are widely seen as the most hygienic option. These reduce the risk of cross-infection which can occur if a number of people extract a product from a communal or bulk container. Dispensers with BioCote technology, such as those in the Deb range, employ an antimicrobial technology that is proven to achieve up to a 99.99% reduction in bacteria, mould and fungi on the equipment’s surface over a 24-hour period.

Modern dispensers also make sure the correct amount of product is provided every time, through measured shot sizes – making them the most cost-effective solution. Placed in strategic, accessible locations, they can also increase compliance, which is crucial to prevent occupational dermatitis.

Regular site audits are vital to make sure a skin care management system continues to be effective. Refer to section 11 for further information. Skin care compliance can be further encouraged if products are not just effective and scientifically proven, but pleasant to use.

The incidence of occupational skin disease in Europe may be underestimated by 10 to 50 times.

European Dermatology Forum White Book – Skin Diseases in Europe
9.1. Step one: protect

Protective pre-work creams can help when contact with potentially hazardous substances cannot be avoided. Specially formulated to leave a protective layer on the surface of the skin, protective creams can reduce direct contact with specific types of physical contaminants, help retain natural lipids and moisture in the skin, improve comfort and skin strength when wearing gloves, and make the skin quicker and easier to clean.

According to HSE COSHH guidelines, protective creams should be provided to employees who might come into contact with potentially hazardous substances.

Expert advice is crucial to choose the right creams: they need to be of a type that works in a specific working environment, and it’s important to keep in mind that with some substances, creams have been known to promote absorption, instead of hindering it.

9.2. Step two: cleanse

To minimise the risk of occupational dermatitis, proper cleaning of hands is crucial. Using the appropriate cleansers – and the right technique – will help with removing dirt and irritants.

Hand washing should occur at regular intervals during the working day, such as at the end of each work period, before and after breaks, and before and after visiting the toilet. Hands should always be thoroughly rinsed and properly dried.

Employers need to ensure that suitable facilities for the proper cleaning of hands are accessible to all employees.

If the right pre-work creams are used (see section 9.1), it might be possible to use milder hand cleansers, making sure frequent hand washing doesn’t have a negative impact on the skin.

Training and education are important to make sure employees are aware how to apply pre-work creams correctly. One shot of the Protect cream should be applied from the dispenser, onto the back of the hand, or a 5p sized shot if using a tube. The cream should then be rubbed all over the hands for 20 – 30 seconds as depicted below.
9.3. Step three: restore

The regular use of after-work, restorative creams can help maintain the skin in a healthy condition. These creams help replenish lost natural oils, keeping the skin soft and supple, and avoiding dryness. They should be applied at lunch breaks and at the end of each working day.

According to HSE COSHH guidelines, restorative creams should be provided to employees who might come into contact with potentially hazardous substances.

People whose skin is more prone to being sore, chapped or dry, might need to use creams that have special hydrating features, particularly if they are working in environments which might increase the risk of these conditions.

It is recommended that products which can provide supplementary test data and verify claims of a conditioning effect are chosen. Any cream should be dermatologically tested to assure it is compatible with the skin.

Like for Protect creams, one shot of Restore cream should be applied from the dispenser onto the back of the hand, or a 5p sized shot if using a tube. The cream should then be rubbed all over the hands for 20 – 30 seconds as depicted on page 12.

Arco supply a number of internationally established product brands. Visit www.arco.co.uk/skincare to find out more.

10. Special requirements for mobile and outdoor workers

Outdoor workers should receive special attention. Work in adverse weather conditions – cold, heat, wet – can place a particular burden on the skin, making it more vulnerable to becoming sore or chapped.

Where possible, contact with dirty, contaminated water should be avoided by implementing and adhering to appropriate procedures and wearing protective clothing. Refer back to section 8 for further information. Where contact cannot be avoided, the right kind of pre-work creams should be applied.

Outdoor workers should also be protected from the risks posed by the sun. Prolonged unprotected exposure to the sun does not only cause skin damage; ultimately, we know it can increase the risk of skin cancer. If UV protection is integrated into staff education on skin care – ideally combined with sun cream that is widely available to workers – employers can take a huge step towards protecting their employees from this threat.

For workplaces where water supply is an issue, special cleansers are available for use without water. Hands should then be cleaned at the next opportunity. Hand sanitisers – which kill germs and bacteria, rather than physically remove them – are another option where access to soap and water is inconvenient. Mobile Skin Care Systems which conveniently fit inside vehicles and cabins and do not require access to water, are available through Arco.
11. Education and auditing are a vital part of any skin care programme

For a Skin Care Management System to be effective, real engagement from the entire workforce is crucial. Employees need to understand the need for the implementation of such a system, and the role they play in making it work.

To achieve compliance, employers need to do much more than put the right products in the right places: training and education should be an ongoing conversation. Training sessions, videos, safety signs, personal issue cards and posters can all help to keep skin safety on everyone’s mind.

Skin care systems that feature colour coding for each step can help employees to use the right product at the right point in time.

Meanwhile, regular audits are important to monitor and review the effectiveness of a Skin Care Management System. Our skin care experts can help provide annual audit services – assuring that dispensers work effectively and that the correct products are being used. Audits are also the perfect moment to identify opportunities for the further improvements in compliance.

One-to-one interviews with staff can help to evaluate compliance, assess employee skin conditions and collect feedback from staff on what works and what doesn’t. Audits should take into account any changes in the working environment in addition to changes in individual circumstances.

12. Occupational Skin Care Checklist

The following checklist will help you to make sure you have taken all the necessary steps to minimise the risk of occupational dermatitis affecting your organisation.

- Have we conducted a thorough initial assessment and identified risks to the skin?
- Have we substituted or eliminated products labelled as irritant, corrosive, harmful, toxic or very toxic where possible?
- Has a Safe Working Distance (SWD) been implemented wherever substitution or elimination are impossible?
- Have we introduced the appropriate procedures to minimise the risks?
- Are we making sure that hands, clothing and equipment are washed or cleaned frequently and is free from holes and other defects?
- Are we advising on the proper use of gloves?
- Do we ensure the right skin care products are being used at the right moments throughout the working day?
- Are our skin care products provided in hygienic dispenser systems?
- Are we providing our skin care products in pleasant and easy to use?
- Do we provide employees with appropriate pre-work protective creams (indoors/outdoors)?
- Are appropriate, effective cleansers available in our workplace?
- Do we provide employees with post-work creams to keep their skin healthy?
- Are employees aware that they should report any signs of a skin issue to a workplace or family doctor straight away?
- Is a training and education programme in place to assure real engagement from the workforce and assure compliance?
- Do we monitor and review the effectiveness of our Skin Care Management System regularly?
Contact Us

Call your regional sales office

- Aberdeen: 01224 249 494
- Scotland & Northern Ireland: 01506 841 510
- North England: 0191 499 1555
- North West England: 0161 869 5807
- Yorkshire & Humber: 01482 611 611
- East Midlands: 0115 938 0456
- West Midlands: 0121 500 6060
- Wales & South West: 0117 982 3751
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