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Occupational Contact

Dermatitis and Urticaria

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**A Guide for General Practitioners
and Practice Nurses**

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British Occupational Health Research Foundation

This leaflet summarises the key evidence based advice for policy and practice on the risk management of occupational contact dermatitis and urticaria.

The full guidelines, report, and analysis of relevant research is available from the British Occupational Health Research Foundation. It can also be accessed on the BOHRF website at www.bohrf.org.uk.

BOHRF is an award-winning, innovative niche charity specialising in the provision of evidence based solutions to practical questions asked by employers and their advisers in both private and public sectors.

Our mission is:

'Bringing employers and researchers together to produce research that will contribute to good employee health and performance at work'.

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OCCUPATIONAL CONTACT DERMATITIS AND URTICARIA

A Guide for General Practitioners and Practice Nurses

British Occupational Health Research Foundation

This guide helps you to:

- Summarize the key recommendations of the systematic evidence review of the prevention, identification and management of occupational contact dermatitis and urticaria. *The full guidelines are available from the British Occupational Health Research Foundation (BOHRF).*
- Increase understanding of occupational contact dermatitis and urticaria and their significance, in addition to the management of these conditions in a primary setting.
- Understand the importance of early referral as this affords patients the best chance of improvement

About this guide

This guide was created through funding by the **British Occupational Health Research Foundation (BOHRF)** which is a non-profit, grant awarding charity established in 1991 to contribute to the best possible physical and mental well-being of workers.

Epidemiology of occupational dermatitis and urticaria

Skin disease is the second commonest occupational health problem in the European Union after musculoskeletal disorders. Contact dermatitis accounts for 70-90% of all occupational skin disease, while contact urticaria accounts for less than 10%. Up to half of workers with occupational contact dermatitis experience adverse effects on quality of life, daily function and relationships at home. It is because occupational skin disease is so common and the impact is so severe that this evidence review was undertaken.

This guide will assist you in your clinical practice to manage these conditions. It provides a brief summary of the 2010 occupational contact dermatitis and urticaria evidence based guidelines.

What are occupational contact dermatitis and urticaria?

This guide is focused on the following three skin conditions caused by exposure to substances in the course of work:

1. **Occupational irritant occupational contact dermatitis**

This is the commonest type of occupational contact dermatitis where agents have a direct toxic effect on the skin e.g. wet work, detergents, alkalis, solvents, friction

2. **Occupational allergic occupational contact dermatitis**

which involves a delayed or type IV hypersensitivity T cell mediated immune reaction to skin sensitizers such as epoxy resins, preservatives, etc. Allergic contact dermatitis often carries a worse prognosis than irritant contact dermatitis.

3. **Occupational contact urticaria**

which can be divided into 2 broad categories: non-immunologic contact urticaria and immunologic contact urticaria that involves an immediate or type I hypersensitivity reaction, associated with the presence of specific immunoglobulin E. Contact urticaria is associated with proteins in food and latex gloves, especially in health care workers and with some low molecular weight agents.

The outlook for these conditions may be improved in individual cases by earlier identification and improved case management.

Who is at risk?

Different jobs carry different levels of risk for occupational contact dermatitis. Those at the highest risk include hairdressers, health care workers, cleaners, construction workers, cooks and caterers, mechanics, metalworkers and vehicle assemblers, chemical/petroleum plant operatives and agricultural workers. Those at greatest risk of developing occupational contact urticaria include bakers, farmers, health care workers and those in food preparation occupations.

Practice Point: If a patient asks advice about the risk of dermatitis in association with a proposed job, be aware of the jobs at increased risk, especially if that patient has previously experienced dermatitis.

Practice Point: Take a full occupational history whenever someone of working age presents with a skin rash, asking them about their job, the materials with which they work, the location of the rash and any temporal relationship with work

Practice Point: Occupational contact urticaria is more likely in someone with a history of atopy.

What can health professionals do?

Occupational contact dermatitis and urticaria can be prevented in the workplace by applying the normal hierarchy of controls as required under the Control of Substances Hazardous to Health, namely:

- hazard elimination
- hazard substitution
- engineering controls such as ventilation
- safe work practices with appropriate training, and, where this is not possible,
- personal protective equipment.

Gloves have only been shown to help reduce the incidence of irritant occupational contact dermatitis when coupled with other preventive measures. They must be selected according to their chemical and physical resistance properties and their general suitability for the job tasks. The employer is responsible for arranging the choice of glove following an adequate risk assessment.

Wet work is a significant risk factor for irritant contact dermatitis and occurs when the hands are in contact with water (including water-diluted detergents) or where the prolonged wearing of gloves causes the hands to become moist from perspiration. Thin cotton gloves that absorb sweat may be worn inside occlusive gloves and this may be beneficial for this condition.

Pre-work creams are of questionable value. They are often referred to as barrier creams, but this term gives rise to a false perception that they form a physical barrier to protect the skin. Pre-work creams are not generally effective as a preventative measure. Their use should not be overly promoted as this may confer on workers a false sense of security and encourage them to be complacent in implementing more appropriate preventative measures. After-work or conditioning creams help to prevent the development of occupational irritant contact dermatitis. They should be encouraged and made readily available in the workplace.

Medical management of occupational contact dermatitis and urticaria

Care must be taken to distinguish between occupational and non-occupational disease and between irritant and allergic occupational contact dermatitis, since the occupational management of the individual patient will differ. The diagnosis of occupational contact dermatitis and urticaria is an iterative process that involves fastidious history taking, clinical examination, patch testing and prick testing. A temporal relationship with work (for example improvements noted at weekend or on holiday) and/or the presence of a rash on the hands only raises suspicion of an occupational cause, and does not confirm occupational causation. The identification of any offending allergen by patch or prick tests is a major objective, since exclusion of an offending allergen from the environment can contribute to clinical recovery in the individual worker and avoidance of new cases of disease.

Practice Point: If an occupational cause for contact dermatitis is suspected, a referral for patch testing (or prick testing in the case of urticaria) should be made. This is extremely important as accurate diagnosis is paramount especially if it influences advice regarding implications for future employment,

Practice Point: It will be helpful in the referral to list the possible agents to which the patient is exposed.

The pharmacological treatments for dermatitis and urticaria do not differ irrespective of whether the cause is occupational or non-occupational. This review therefore only addresses the occupational management of affected individuals.

Occupational management of occupational contact dermatitis and urticaria

Redeployment to a low exposure area or the introduction of exposure controls may lead to improvement or resolution of occupational contact dermatitis and urticaria in some workers (especially if the problem is picked up early and adequately reviewed while working in the new area), but is not always effective. Likewise, the enhanced use of gloves or protective clothing may improve or prevent symptoms in some but not all workers who continue to be exposed to the causative agent. Difficulties in managing occupational contact dermatitis, once caused, emphasise further the importance of prevention. Improvements are more likely to be seen when the problem is non-immune i.e. irritant contact dermatitis.

The prognosis of occupational contact dermatitis varies widely and, in some occupational settings, reasonable control of symptoms and job retention is possible. Similar proportions of patients report either improvement or ongoing symptoms. As many as about one in ten patients continue to have persistent or post-occupational contact dermatitis in the very long term, even after exposure to the original offending agent has ceased.

Loss of job or complete change of employment is common among workers with occupational contact dermatitis; however, most manage to continue working in some capacity. There is little if any evidence related to the prognosis of occupational contact urticaria.

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British Occupational Health Research Foundation
6 St Andrews Place
Regent's Park
London NW1 4LB

020 7034 3420

www.bohrf.org.uk

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