

Occupational health: The priorities



The big picture

Every year, in all industries, 1.5 million workers suffer from ill health caused or made worse by work. In the food and drink industries, an estimated 29 000 workers (4.8% of the workforce) suffered from ill health caused or made worse by work during 2001/02, according to the Self-reported Work-related Illness (SWI) Survey for those years. This compares with 2.2% of workers receiving an injury reported to HSE under RIDDOR during the same year.

From this data, the risk of a worker suffering occupational ill health at work in the food and drink industries is more than twice that of sustaining an injury. This is reflected in civil claims; more claims now result from occupational ill-health issues than from safety issues - reversing the trend in earlier years.

Occupational health is generally more difficult to manage than safety. The causes and consequences of poor safety at work are immediate and often relatively easy to deal with. Work-related causes of ill health can be more difficult to spot. It can often take some time for symptoms to develop so the connection between cause and effect is less obvious, but once the problems have been recognised and acknowledged, solutions are now well documented.

For the most common occupational health problems, such as back injuries, there may be other causes that have nothing to do with work. Workers may be unwilling to admit themselves that they have work-related health problems because of fears about their job or the stigma attached to certain types of illness. For these reasons it is doubly important to identify and reduce aggravating factors arising from work.

Despite the availability of information on solutions to work-related health problems, local knowledge about the most effective solutions can be limited. Some of the larger businesses in the industry employ specialist occupational health staff, usually with a medical background. However, for most businesses, especially small businesses, access to reliable medical advice on occupational health is very limited. When most people have a health problem they visit their GP, but most GPs are not well-qualified to deal with occupational health issues.

Most businesses do not need to set up specialist departments or pay for medical advisors to control occupational health on a day-to-day basis. The vast majority of occupational ill health results from a small

number of basic causes, all of which can be controlled by management and workers working together to identify practical control measures that are suitable for their workplace. However, use of occupational physicians and other experts can be cost effective in appropriate circumstances.

This section explains the common causes of occupational ill health in the food and drink industries and gives advice on how to manage them.

Main causes

The main causes of occupational ill health in the food and drink industries are, in order:

- **musculoskeletal disorders (MSDs):** mainly comprising work-related upper limb disorders (WRULDs) and back injuries;
- **work-related stress:** which can be caused by poor work organisation;
- **occupational asthma:** caused by inhalation of bakery and grain dusts;
- **occupational dermatitis:** from handwashing, contact with foodstuffs etc;
- **rhinitis:** caused by irritant dusts such as bakery and grain dusts, spices and seasonings;
- **noise-induced hearing loss:** where noise levels exceed 85 dB(A).

Of the above risks, MSDs (both WRULDs and back injuries) are by far the most common. However other risks are significant and apply where conditions permit. See Figure 4.

Extent of the problem

There is no single source of reliable data on the extent of occupational ill health. HSE has carried out an analysis of four national data sources that give some information on risks in food and drink manufacture. Each data source has its own shortcomings - eg the list of reportable diseases under RIDDOR is very restricted and under-reporting is much worse for diseases than for injuries. However, when taken together, a consistent picture emerges.

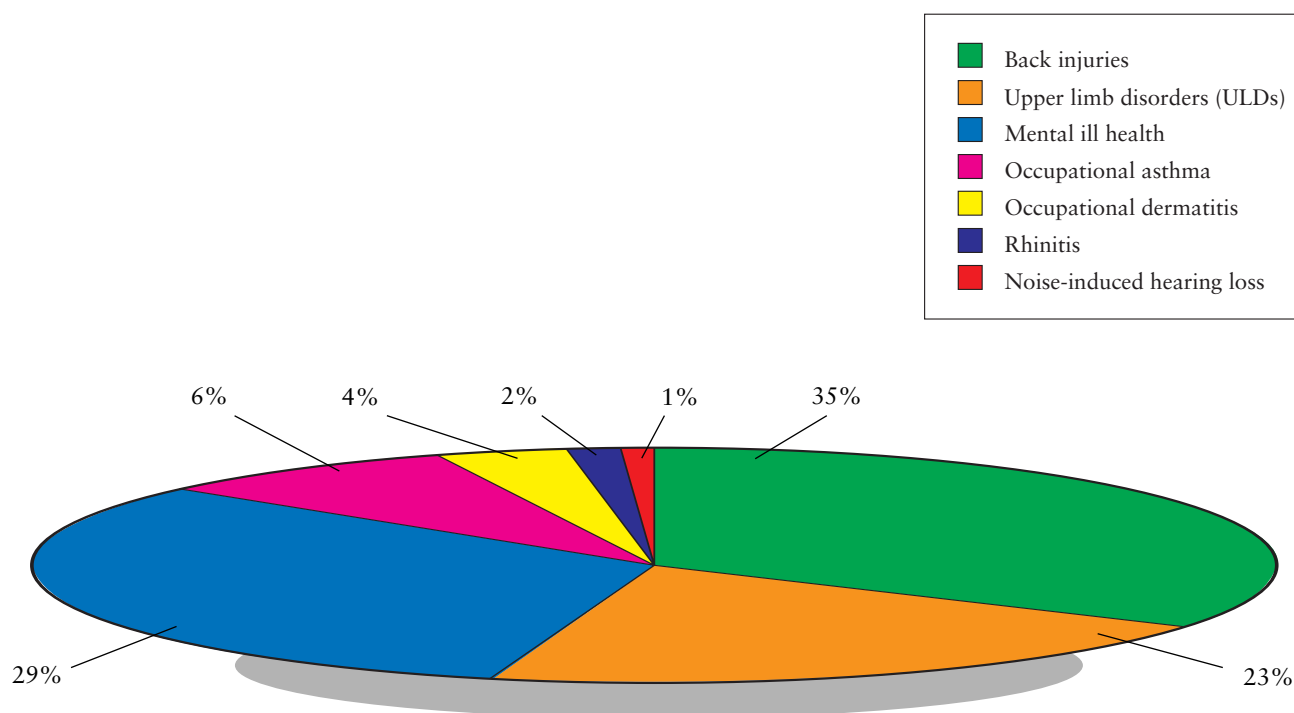


Figure 4 Main causes of occupational ill health derived from FIMA and THOR (asthma) data

Musculoskeletal disorders (MSDs)

All the data sources confirm that MSDs are the most significant occupational health risk, resulting in:

- 74% of cases of ill health reported to HSE under RIDDOR between 2000-02;
- 55% of disorders reported by specialist doctors between 2001-03 under The Health Occupation Reporting Network (THOR);
- 38% of compensation cases under the Department for Work and Pensions (DWP) occupational health Industrial Injuries Scheme (IIS) between 2000-02;
- some of the highest incidence rates reported by occupational physicians in the Food Industry Medical Association (FIMA) between 1997-2001;
- of these MSDs, the vast majority are WRULDs and spine/back disorders, recorded as 63% and 33% respectively under THOR.

*Benchmark: * FIMA reports 647 injuries per 100 000 workers for back pain and 415 injuries per 100 000 workers for WRULDs.*

* FIMA data comes from occupational health physicians working with large employers. To compare your own company's rates against these benchmarks, multiply the number of cases of back pain (or WRULDs as appropriate) on your site by 100 000 and divide this by the number of employees.

The causes of MSDs

- MSDs (mainly upper-limb disorders and back problems) affected two-thirds of food and drink workers interviewed as part of a survey of over 1500 people from all industries who suffered from an

illness caused or made worse by their work. Two-thirds of those food and drink workers with a musculoskeletal complaint suffered from a condition that affected their back.

- MSDs include a variety of strain, sprain and overuse problems affecting the body's muscles and joints.
- These problems include everything from backache and slipped discs to WRULDs, which include disorders such as tenosynovitis and other conditions causing pain, numbness, swelling and tingling in the arms, hands and wrists.
- MSDs can be caused, for example, by lifting heavy or awkward loads resulting in chronic back pain or by repeated awkward movements, eg on packing lines, poultry lines.
- About half the food factories in an HSE survey (which covered most industry sectors) were found to have employees suffering from WRULD.
- Particular industry priorities are: stacking, cutting, wrapping, packing and drinks delivery.

Work-related stress and mental ill health

No data is available for the prevalence of work-related stress in the food and drink manufacturing industries. However work-related stress is often cited as a cause of mental ill health. Medically-diagnosed mental ill health (eg depression) accounted for:

- 18% of disorders reported by specialist doctors under THOR;
- the third highest incidence rate (out of seven categories) reported in some large food companies by FIMA.

Benchmark: FIMA reports 534 cases per 100 000 workers for mental ill health.

The causes of work-related stress

- Stress is a significant occupational health risk. There is a clear link between poor work organisation and subsequent ill health.
- Pressure in itself is not necessarily bad and many people thrive on it. It is when pressure experienced by an individual exceeds their ability to cope with it that ill-health problems can result.
- Work-related stress caused by excessive work demands, lack of control over work etc is often cited as a cause of mental ill health.

Further guidance:

HSE's Management Standards for work-related stress provide a means of measuring organisational performance in tackling stress and provide a description of good management practice across six broad areas of work design - demands, control, support, relationships, role and change. The Standards can be found at: www.hse.gov.uk/stress/standards.

Real solutions real people: A managers' guide to tackling work-related stress (resource pack)
HSE Books 2003 ISBN 0 7176 2767 5

Work-related stress: A short guide Leaflet INDG281(rev1) HSE Books 2001 (single copy free or priced packs of 10 ISBN 0 7176 2112 X)

Tackling work-related stress: A guide for employees Leaflet INDG341 HSE Books 2001 (single copy free or priced packs of 20 ISBN 0 7176 2065 4)

Also at: www.hse.gov.uk/stress

Occupational asthma

All data sources record a significant level of asthma in food and drink manufacturing:

- 9% of cases of ill health reported under RIDDOR;
- 14% of disorders reported by specialist doctors under THOR;
- 33% of compensation cases under the DWP IIS.

The main causes of asthma are inhalation of dust from grain and flour, with bakers having the second highest incidence rate of all occupations in any industry.

Benchmark: THOR reports 105 cases per 100 000 workers (FIMA, which covers only larger companies, reports 31 cases per 100 000 workers).

The causes of occupational asthma

- Work-related asthma affects workers inhaling dusts which are respiratory sensitisers - such as dust from

grain, flour, enzyme additives, egg protein, fish protein, spices and wood - so workers involved in milling, malting, baking, fish processing and coopering etc, are at particular risk.

- Asthma is an extremely distressing and potentially a life-threatening disease.
- Chest consultants reporting to the THOR scheme estimated that, over all industries, bakers are the occupational group which is the second most likely to suffer occupationally-induced asthma, at a rate about 40 times the 'all occupations' average.

Occupational dermatitis

All data sources record a significant level of dermatitis:

- 13% of cases of ill health reported under RIDDOR;
- 10% of disorders reported by specialist doctors under THOR;
- 10% of compensation cases under the DWP IIS;
- the fifth highest incidence rate (out of seven categories) reported by FIMA.

The main causes of dermatitis are contact with soaps/cleaners, flour and other foods and wet work.

Benchmark: FIMA reports 69 cases per 100 000 workers.

The causes of occupational dermatitis

- Occupational dermatitis affects workers handling meat, fish, poultry, fruit and vegetables, as well as bakers, confectioners, cooks, cleaners and many other workers.
- In food preparation, it usually affects the hands and forearms.
- It results in redness, scaling and blistering of the skin often sufficiently badly to keep people off work and serious enough to force them to change jobs.
- Occupational dermatitis is caused by contact with water, soaps and detergents (55% of cases) and contact with a wide variety of food such as sugar, flour/dough, citrus fruits, vegetables, spices and herbs, fish and seafoods, meat and poultry (40% of cases).
- It affects an estimated 8500 people in the food and catering industries each year - about 10% of the total in all industries.

Rhinitis

Under the DWP IIS, 15% of compensation cases were for rhinitis, which also had the sixth highest incidence rate (out of seven categories) reported by FIMA. Rhinitis (runny or stuffy nose) results in inflammation of the nasal mucous membrane caused by irritant dusts.

Benchmark: FIMA reports 38 cases per 100 000 workers.

The causes of rhinitis

- Grain, flour, spices, seasonings and wood dust can cause rhinitis, conjunctivitis (watery or prickly eyes) and other irritant effects.

Noise-induced hearing loss

3% of compensation cases under the DWP IIS were for hearing loss, which also results in about 75% of occupational health insurance claims.

Benchmark: FIMA reports 16 cases per 100 000 workers.

The causes of noise-induced hearing loss

- Exposure to high levels of noise at work can cause irreversible hearing damage, which can be difficult to detect as the effects build up gradually over time.
- Noise levels can be high either in large areas (eg bottling halls) or locally from noisy plant and machinery (eg product impact on hoppers).
- If your site-level assessment of risks identifies noise to be a priority, this is best controlled at source.

Further guidance can be found in:

Reducing noise exposure in the food and drink industries Food Information Sheet FIS32 HSE Books 2002

Sound solutions for the food and drink industries: Reducing noise in food and drink manufacturing HSG232 HSE Books 2002 ISBN 0 7176 2548 6

Case studies

Glass jars were transported along a conveyor from the jar cleaner to the filler. The glass jars clashed together producing noise levels of 96 dB(A). An enclosure was put over the conveyor at a cost of £2000 and the conveyor speed was changed to reduce jar clashing. Noise levels reduced to 86 dB(A).

At a large bakery, a machine was used to blow debris out of bread baking tins by means of compressed air jets. Employees were exposed to noise levels of 91-92 dB(A) during this process. The company built a soundproof room around the machine, reducing noise levels to below 85 dB(A).

A soft drinks factory used a large air compressor, air from which was used to operate machines on the bottling line. The air compressor was located in the middle of the production area and produced noise levels of 94-95 dB(A). The company moved the air compressor out of the production hall into a nearby enclosed and unmanned room, eliminating the noise source.



Source: The Edrington Group

Developing an occupational health policy

There are three broad issues to consider in the development of effective occupational health management:

1 Prevention

There is a legal and moral responsibility on the employer to do whatever is reasonably practicable to prevent work-related ill health. In addition to compliance with general duties under the Health and Safety at Work etc Act and the Management of Health and Safety at Work Regulations, some more specific legal duties are relevant to the common health problems. For example, the Control of Substances Hazardous to Health Regulations (COSHH) and Approved Code of Practice deals with substances that cause asthma. COSHH is also relevant for dermatitis and the Manual Handling Operations Regulations are relevant for many MSD problems.

Identifying work-related health risks may not be straightforward, but there are a number of sources that can be used.

HSE/trade sector guidance:

HSE has now produced a lot of guidance on the main issues. Much of this is available through the HSE website (www.hse.gov.uk) and the microsite devoted to food and drink manufacture at: www.hse.gov.uk/food. These sites offer advice on MSDs, stress, asthma and all the other main issues.

The general HSE information has been supported by sector-specific guidance from trade associations and from trade unions. For example, the Health and Safety in Bakeries Liaison Committee has developed guidance on dust control in bakeries (see *Occupational asthma: Have you really implemented COSHH?* on page 27).

In order to safeguard workers' health, the cause of occupational health risks must first be known. In most cases these will be self-evident to those familiar with the contents of this publication and related guidance. Once the main risks (MSDs, dust, noise etc) are determined, action can be taken to risk assess these topics individually in the same way as safety issues. It is important to determine not only the individuals (or groups of individuals) exposed to these risks but also the degree to which they are exposed and likely consequences. This knowledge will also be useful when recruiting personnel, or during rehabilitation, to ensure the work environment does not adversely affect any pre-existing medical condition.

Monitoring sickness absence

Attendance management has become a major issue with many large employers. Information obtained from more tightly-managed attendance can be very useful in spotting

possible work-related health problems. If there are certain jobs or parts of the workplace where absence is higher, this may be an indication of a problem. High levels of back pain or WRULD symptoms may be associated with certain types of work.

Some caution needs to be exercised when analysing absence patterns. More detail may be available from medically-certificated absences (usually over seven days) than from self-certificated absence. However, Med3s (absence certificates) are mainly completed by GPs who have little experience or training in occupational health.

Some sensitivity may also be needed about personal information for individuals that is protected by data protection laws. The Information Commissioner has recently published a code of practice that gives advice on this: *Employment Practices Data Protection Code Part 4 Information about Workers Health* (www.informationcommissioner.gov.uk).

Listening to the workers

A lot of information can be gained from the workers themselves. Workers may be reluctant to admit to health problems to management if they think it might damage their job prospects or if the information is sensitive. However, there are a number of ways of gathering their experience or collecting their opinions that can protect confidentiality and ensure a more honest response.

Trade union safety representatives are often trained in the use of techniques such as body mapping, surveying with discomfort questionnaires etc - all basic techniques that help to identify which areas of the body hurt when staff are at work and why. See, for example, USDAW's report *Charting Back Pain* (www.usdaw.org.uk/resource_library/#HealthandSafety) or the ILO study of workers ('barefoot research') (www.ilo.org/public/english/protection/ses/info/publ/2barefoot.htm).

Managing the risk

As with any health and safety problem, the hierarchy of control measures in Schedule 1 of the Management of Health and Safety at Work Regulations should be followed. Where possible, removing the hazard is the best option. Reliance on individual protection through personal protective equipment (PPE) should normally be a last resort. There are many examples of successful intervention in HSE guidance.

Often the process of managing occupational health only requires good communication between managers and workers. There is usually no need to employ specialist assistance or experts; however, involvement of occupational physicians and specialists can be cost effective in appropriate circumstances. When expert advice is needed it may not be medical, eg for many MSD problems, an ergonomist might be more appropriate, or for an asthma problem an occupational hygienist.

Specialist services in this area are not well developed in this country at present. However HSE is keen to promote the development of better sources of advice. There are a small number of occupational safety and health advice services in operation:

- In Scotland, Healthy Working Lives (previously Safe and Healthy Work) has been running for a few years now. This offers a Freephone Advice Line on 0800 019 2211 and a free initial site visit from a health and safety advisor. If more specialist help is needed it can advise on where to get it. Further information is on the Healthy Working Lives website: www.hwl.org.uk.
- For England and Wales, HSE has announced a £20 million pilot for Workplace Health Direct to provide a similar national helpline, and up to six separate pilots in regions across England and Wales providing qualified health and safety advisors. Further information is on the Workplace Health Direct website: www.hse.gov.uk/workplacehealth/index.htm.

2 Rehabilitation

Even if everything possible is being done to prevent people suffering ill health from their work, there still will be occasions where someone does become ill. The initial cause of their health problem may not be work related, but the consequences still need to be managed. It is quite possible that someone might develop backache or a stress-related illness because of non-work-related factors, but if they work in a job that involves heavy lifting or that is very intensive then there is a real chance that their work could aggravate the condition and turn it into something more serious. Failure to manage an episode of ill health could result in more permanent illness and the loss of a valued employee.

Further advice on managing sickness absence:

DWP and HSE have developed some useful guidance on the management of sickness absence and the retention of staff who may have developed a health problem:

www.hse.gov.uk/sicknessabsence

Managing sickness absence and return to work: An employer's and manager's guide HSG249
HSE Books 2004 ISBN 0 7176 2882 5

Managing sickness absence and return to work in small businesses Leaflet INDG399 HSE Books 2004 (single copy free or priced packs of 20 ISBN 0 7176 2914 7)

3 Health promotion

The Department of Health has identified health in the workplace as a central part of its public health policy. It is keen to see more being done to prevent work-related ill health but also to see the workplace being used as a vehicle for promoting healthier lifestyles.

Health promotion may seem like a fad or gimmick but it can make good business sense. Examples of useful initiatives that can benefit the employer as well as the employees include:

- promoting healthy eating and offering healthy alternatives in the canteen;
- helping staff to stop smoking; and
- educating staff about drinking and drug use as part of an overall policy on drugs and alcohol.

However, health promotion is not a substitute for prevention of work-related ill health. It may be attractive to offer it as a part of the overall health policy, but the primary reason for having such a policy is to make sure that staff are not being made ill by the work that they do.



Source: Greencore Group plc

Managing the occupational health priorities

Have you assessed and met your occupational health needs?

An assessment of risk can identify the main activities and situations likely to be harmful to health so you can then decide how to meet these occupational health needs in your company. Health surveillance is particularly needed for hazards which have no occupational exposure standards for judging whether the control measures are adequate.

Examples of when health surveillance is likely to be required include where there is a risk of occupational asthma (eg exposure to sensitisers such as grain dust, flour dust, bakery dust, fish or egg protein or spices), MSDs (including WRULDs), exposure to microbiological infections (eg in slaughterhouses), risk of dermatitis and work in hot or cold environments. Remember: food materials may have a sensitising effect even at very low exposures.

A professional approach is needed to occupational health. This could usefully be linked in with food safety/hygiene needs.

Musculoskeletal disorders

Do you have a management package of measures to prevent, investigate and control musculoskeletal injuries, such as strains from frequent and heavy lifting or WRULDs from repetitive work? Preventive measures are cost effective. It is not possible to prevent all cases of MSDs, so early reporting of symptoms, proper treatment and rehabilitation are essential.

A successful approach for managing WRULDs

Automation

Introduce automation where possible. Review processes not automated and where the speed of working has been increased by upstream automation, eg take-off from conveyors.

Work design

Incorporate ergonomics into the design of tools, machines, workplaces and work methods. Pay attention to reducing vibration, the force required and to postural changes.

Duration of exposure

Look at job rotation, speed of working, breaks and provision of assistance. Take particular care when the

duration of exposure is increased during overtime or peak demand working.

Environment

Make sure it is warm and that there is adequate space, seating and daylight.

Risk assessment

In your risk assessment, identify injury-causing tasks which require one or more of the following:

- force;
- repetition;
- awkward posture.

Reduce the injury potential in tasks where possible by tackling these three causes.

Pre-employment screening

This will help ensure people are not placed in jobs that will aggravate existing or past musculoskeletal or other conditions.

Job placement

Ensure likely injury-producing tasks are not given to known sufferers and injury-aggravating tasks not given to past sufferers.

Training employees

Employees should have training and information on the nature of likely injuries and causative factors, safe lifting methods (especially posture and methods of carrying) and the need to report injuries.

Monitor employees

Check on workers in injury-producing or aggravating tasks early in a new job, eg after four weeks, to ensure no contra-indications to placement.

Occupational health provision

Several tasks are identified above, but you can also undertake rehabilitation and monitoring of sufferers.

Review sickness-absence records

Consider medical review of employees, eg after four weeks absence; also consider access to physiotherapy treatment etc as required.

Monitor the effectiveness of the strategy

To ensure the approach to managing WRULDs is effective, it should be regularly monitored.

Further information is given in:

Moving food and drink: Manual handling solutions for the food and drink industries HSG196 HSE Books 2000 ISBN 0 7176 1731 9

Injuries and ill health caused by handling in the food and drink industries Food Information Sheet FIS23 HSE Books 2000

Upper limb disorders in the workplace HSG60 (Second edition) HSE Books 2002 ISBN 0 7176 1978 8

Manual handling. Manual Handling Operations Regulations 1992 (as amended). Guidance on Regulations L23 (Third edition) HSE Books 2004 ISBN 0 7176 2823

Occupational asthma: Have you really implemented COSHH?

Complying with the Control of Substances Hazardous to Health Regulations 2002 (COSHH) provides the framework for management of hazards:

- assessing health risks;
- preventing exposure, if reasonably practicable;
- adequate control (if preventing exposure not reasonably practicable);
- monitoring, surveillance, examination of plant, training.

Specific guidance about COSHH for the food industries, on how to assess and control the hazards from food products, has been prepared jointly by HSE and trade associations.

Further information is given in a number of HSE publications including:

Guidance on dust control and health surveillance in bakeries, and *Breathe easy* (video, training package and booklet) are available from the Federation of Bakers, 6 Catherine Street, London WC2B 5JW, www.bakersfederation.org.uk.

A baker's dozen: Thirteen essentials for health and safety in bakeries HSG233 HSE Books 2003 ISBN 0 7176 2616 4

Case studies

In a single year one company recorded 875 absences per 1000 employees due to WRULDs. They managed the problem using the approach set out here. Three years later the incidence was reduced to just 85 absences per 1000 employees per year.

Baking tin lids were placed and removed from baking tins at a rate of up to 650 per hour by one or two operatives. Staff complained about the repetitiveness of the work which involved stooping, twisting and holding loads away from the body. The company automated the process at a cost of £16 000. The operators could be redeployed elsewhere, complaints ceased, noise reduced, production improved and the yearly cost saving was between £50-60 000.

A 20-year-old man was admitted to hospital from work with an acute asthmatic attack caused by flour dust inhalation. In the previous 12 months he had been absent from work for 25 days with chest symptoms. His exposure to flour dust was dramatically reduced by engineering controls and better work methods and he was able to go back to work. In the following three years he did not have any time off with chest problems.



Source: Greencore Group plc

Preventing asthma at work. How to control respiratory sensitisers L55 HSE Books 1994 ISBN 0 7176 0661 9

Respiratory sensitisers and COSHH: Breathe freely - An employers' leaflet on preventing occupational asthma Leaflet INDG95(rev2) HSE Books 1995 (single copy free or priced packs of 15 ISBN 0 7176 0914 6)

Grain dust Environmental Hygiene Guidance Note EH66 (Second edition) HSE Books 1998 ISBN 0 7176 1535 9

Grain dust in maltings (maximum exposure limits) Environmental Hygiene Guidance Note EH67 HSE Books 1993 ISBN 0 11 886357 6

Control of substances hazardous to health (Fifth edition). The Control of Substances Hazardous to Health Regulations 2002 (as amended). Approved Code of Practice and guidance L5 (Fifth edition) HSE Books 2005 ISBN 0 7176 2981 3

Controlling exposure to disinfectants used in the food and drink industries Food Information Sheet FIS29 HSE Books 2001

Dermatitis: Have you managed the risk?

Your assessment should identify tasks where workers' hands come into contact with water, soaps, detergents and foodstuffs such as those listed on page 22. Sickness absence due to skin problems should be monitored and workers' complaints investigated. If a dermatitis problem is identified, the cause should be established and, if possible, the substance removed or replaced with something safer.

If this is not possible, contact with the substance should be prevented in some other way, eg by not touching the foodstuff or by wearing gloves (but remember, some people are sensitive to rubber and latex glove materials).

The situation should be closely monitored to ensure the control measures are effective.

Further information can be found in:

Occupational dermatitis in the catering and food industries Food Information Sheet FIS17 HSE Books 1997

Preventing dermatitis at work: Advice for employers and employees Leaflet INDG233 HSE Books 1996 (single copy free or priced packs of 15 ISBN 0 7176 1246 5)

Medical aspects of occupational skin disease Medical Guidance Note MS24 (Second edition) HSE Books 1998 ISBN 0 7176 1545 6

Case studies

A number of employees in a food production area developed dermatitis. This was traced to water disinfecting tablets which were used to wash vegetables. The employer stopped those who had developed dermatitis working in this area and issued gloves to all the food handlers who were subsequently involved in this work. This satisfactorily resolved the problem.

A 40-year-old female employee wore latex gloves when handling garlic and ginger in the production of soups and sauces. The skin on her hands occasionally became cracked and bled, necessitating time off work. Investigations into the cause of her dermatitis found that it was due to the latex gloves and not the ingredients she handled. She now wears hypoallergenic non-latex gloves and continues to work in the same department.



Source: Greencore Group plc