

## **Prevention of accidents and ill-health to cleaners**

Cleaners work in all industry sectors and workplaces, from hotels to hospitals and factories to farms. They work inside and outdoors, including in public areas. Often working at night or in the early morning, sometimes alone, cleaners are found in every setting and the work they do is essential.<sup>1</sup>

Cleaners may either be employed directly, working in their employer's premises, or they may work in a location run by a third party. They may be employed by public services, private enterprises, or they may be self-employed. Cleaners may also be employed by a contractor, working at several locations over the course of a week. Contract, or industrial, cleaning is a multi-million Euro industry employing millions of workers across Europe.

Most cleaners are women and work part time. A significant proportion of workers come from ethnic minorities<sup>2</sup>. Staff turnover is generally high, caused by a high level of temporary work and short fixed-term contracts<sup>3</sup>. These demographic and employment models make it difficult to ensure the safety and health of cleaning workers.

### **About this E-Fact**

Cleaners are best defined by task rather than as a sector or group. Common tasks are surface cleaning – mopping, dusting, vacuuming, polishing floors and work surfaces – and routine housekeeping. While cleaning work can include tasks such as window and street cleaning, the focus of this E-fact is on the prevention of harm to paid workers carrying out general cleaning.

This E-Fact is intended to inform employers, supervisors, workers and their representatives, particularly those in small and medium enterprises (SMEs), about the dangers involved in cleaning and how harm to cleaners can be prevented. It should be noted that as cleaners work in all types of workplace, it is not possible for all issues to be covered. Readers should check relevant legislation in their own Member State and, if in doubt, seek further assistance from appropriate bodies.

### **Hazards and risks to cleaning workers**

The hazards and risks to which cleaning workers are exposed will vary depending on the workplace being cleaned. The type of workplace will dictate what:



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- waste materials are being cleaned; for example, wood dust from carpentry shops or blood in hospitals
- surfaces are being cleaned; for example, concrete floors in industrial premises or polished stone in office foyers
- substances are used to clean; for example, bleaches or solvents
- work equipment is used to do the cleaning.

Cleaning workers can suffer:

- slips, trips, and falls accidents, particularly when carrying out “wet work”
- musculoskeletal disorders (MSDs) through carrying out repetitive tasks or manual handling
- exposure to dangerous substances, either from the waste material being cleaned or the substance being used for cleaning
- harm through psychosocial issues such as work-related stress, bullying (mobbing) and violence
- accidents involving work equipment such as trapping fingers in machines or electric shocks
- work patterns such as working shifts or long hours.

It is the responsibility of the employer of the cleaner to identify and evaluate the potential for harm, and to identify the preventive measures required to prevent harm or, if this is not possible, to reduce the risk of harm occurring. This process is called risk assessment.

### **Risk assessment for cleaners**

The goal of the risk assessment process is to identify all risks that may harm workers and to install effective measures to protect them. To protect cleaners from accidents and ill health, the employer has to work out and adapt prevention and intervention strategies throughout the workplace.

Employers have a legal obligation to protect the health and safety of their workforce. The employer must evaluate the risks to safety and health within the workplace and then improve the standards of safety and health for all workers (and any others) who may be harmed. If employees of two employers work together, the employers must coordinate the work.

A good risk assessment should, therefore, form the basis for the selection of work equipment and cleaning detergents, personal protective measures, the training of the workforce and the organisation of the work, together with the owner or operator of the premises to be cleaned. It should cover all standard operations and it should reflect how the work is actually done under all circumstances. To ensure that every aspect of the job is considered, the workers should be involved in the risk assessment process.



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Remember:

- a hazard can be anything – work materials, equipment, work methods or practices – that has the potential to cause harm
- a risk is the chance – high or low – that somebody may be harmed by the hazard.

The guiding principles that should be considered throughout the risk assessment process can be broken down into a series of steps.

### **Step 1: identifying hazards and those at risk**

Looking for those things at work that have the potential to cause harm and identifying workers who may be exposed to the hazards. Owing to the variety of cleaning activities only key hazards can be mentioned here. However, it is essential for the risk assessment process to identify at every workplace the hazards that could be especially harmful to the workers.

Key hazards include:

- slips, trips and falls due to wet surfaces or trailing power leads
- dangerous substances: cleaning detergents but also those originating from the premises; for example, dusts
- biological hazards from infectious materials and vacuum cleaning; for example, mite allergens
- work equipment: either the equipment being cleaned or the equipment being used to clean
- MSDs from repetitive work and manual handling, aggravated by the high average age of the workforce
- wet working conditions
- working along in isolated workplaces: check for rescue issues
- psychosocial issues such as violence, sexual harassment or bullying
- work patterns: work intensification and work organisation.

Where the employer is sending its cleaners to other workplaces, there is a requirement for cooperation between the employers to ensure that all workers are protected during the cleaning activities – not only the cleaner working in another employer's workplace, but to avoid workers being harmed by the actions of the cleaners.

### **Step 2: evaluating and prioritising risks**

Estimating the existing risks – their severity or probability, for example – and prioritising them. It is essential that any work to be done to eliminate or prevent risks is prioritised.

The evaluation of risks is the next step of the process. Having carried out an assessment of risk, control measures have to be implemented according to the given hierarchy.



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### Step 3: deciding on preventive action

Identifying the appropriate measures to eliminate or control the risks. Preventive measures should be considered according the relevant legal requirements. Where possible the risk should be eliminated, for example by:

- replacing wet cleaning by dry cleaning methods to remove the risks of slips
- using battery-powered equipment to remove the risk of tripping over trailing power leads.

If this is not possible, a hazard should be substituted with something less dangerous. This can be done - for example - by:

- replacing aggressive cleaning detergents with less aggressive detergents
- replacing manual scrubbers by motor-driven scrubbers to reduce the risk of MSDs.

Collective measures should be implemented, with individual personal protection being used only as a last resort, when the risk cannot be prevented or controlled by other means.

### Step 4: taking action

Putting in place the preventive and protective measures through a prioritisation plan (most likely all problems cannot be resolved immediately) and specifying who does what and when, when a task is to be completed and the means allocated to implement the measures.

Prevention and intervention strategies should start at the company level to protect the whole workforce. Examples of intervention strategies at company level include:

- providing information and training on lifting and handling of products and equipment;
- ensuring that all substances used by cleaners are properly labelled, that cleaning staff have received training and information on the safe use of substances, and that personal protective equipment (PPE) and clothing are provided where necessary;
- obtaining all the manufacturers' safety data sheets for each product and ensuring that cleaners understand the risks and control measures for different cleaning products;
- providing regular testing and examination of electrical equipment in order to prevent electrical risks associated, for example, with electrical cord that trails across wet floors;
- informing and training cleaners about fire risks, precautions and evacuation in the event of a fire, as well as testing fire alarms when cleaners are working so that they are able to recognise the sound of



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- the alarm in an emergency; this should be done in each premises that is cleaned;
- providing non-slip shoes or recommending/encouraging a style of non-slip footwear, preferably an electrical insulator such as rubber;
  - providing written instructions on preferred and validated working practices;
  - developing maintenance procedures for cleaners' working equipment; for example, checking and maintaining trolleys and mechanical lifting equipment;
  - adopting floor-cleaning products that do not create a slip hazard during cleaning;
  - ensuring that clients provide adequate lighting and ventilation during cleaning operations when they are performed outside office hours;
  - ensuring that refuse compactors are used by trained workers only;
  - avoiding butoxyethanol-based glass cleaners, carpet spot removers and general purpose cleaners, toilet cleaners with hydrochloric or phosphoric acid, sodium hydroxide (heavy duty degreaser) and ethanolamine-compound base products such as floor finish strippers and degreasers.

Workers should be made aware of the risks and what will be done to protect them. Also, when tackling one hazard, it is important to check that no new hazards are created.

### **Step 5: monitoring and reviewing**

The assessment should be reviewed at regular intervals to ensure it remains up to date. It has to be revised whenever significant changes occur in the organisation or as a result of the findings of an accident or "near miss" investigation.

Once prevention measures are in place, they should be checked to ensure they are working properly. Supervisors are in the best place to ensure that control measures are effective on a day-to-day basis.

Some workers will be entitled to health monitoring, depending on their status, Member State or hazards to which they are exposed.

## **Legislative requirements and strategic actions**

European directives set minimum standards to protect workers. These have been transposed into the law of Member States. The most important of these is the framework directive (89/391/EEC) that sets out the risk assessment process and a hierarchy of prevention measures that employers are required to follow. Some of the most important directives are listed at the end of this document. Check with your national authorities to see what legislation is in



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place; directives set minimum standards – your Member State may have more stringent requirements.

Many standards such as ISO and CEN standards may also apply to cleaners. They give detailed technical information on the organisation of workplaces and equipment; for example, standards on vibration exposure.

### Workplace solutions

#### Daytime cleaning

Cleaning work is often part time and carried out at unsocial hours during the early morning, evening, or night, yet antisocial hours and irregular shift patterns can lead to an increased risk of harm to cleaning workers (for example, by having someone working alone at night). As has been demonstrated in some Member States, cleaning does not have to be done at unsocial hours, and where it has been implemented, daytime cleaning has been reported as beneficial not only to the cleaning workers, but also to the client enterprises through, for example, quicker responses to spillages.<sup>v</sup>

#### Innovative work

Cleaning is seen as an occupation of low standing. Many factors may contribute to this widely held perception. One of these is that the most traditional working methods and tools are often used. Improving ergonomic design tends to go hand in hand with the introduction of new, sophisticated and more systematic working methods, equipment and machines. Therefore, the work can become more attractive for more workers. Improving the image of cleaning as an occupation and job satisfaction could lead, via healthier enhanced quality work, to increased productivity.

### Information resources

A lot of useful information about cleaners, their work and health can be found on the internet. A selection is given below:

#### Online Information

- Bena, A., Mamo, A., Marinacci, C., Pasqualini, O., Tomaino, A., Costa, G., 'Infortuni ripetuti, rischio per professioni in Italia negli anni novanta' (Risk of repeated injuries by economic activity in Italy in the 1990's), *Med Lav*, 96, Suppl pp. 116-126, 2005, Italian, <http://www.dors.it/alleg/0201/09-bena.pdf>
- European Agency for Safety and Health at Work, *Accident prevention in practice* ISBN 92-95007-34-4, 2001, <http://osha.europa.eu/publications/reports/103/>



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- European Federation of Cleaning Industries, *Health & Safety in the office cleaning sector*. <http://www.feni.be/index.php?id=19&L=0>
- Gamperiene, M., Nygård, J., Sandanger, I., Wærsted, M., Bruusgaard, D., 'The impact of psychosocial and organizational working conditions on the mental health of female cleaning personnel in Norway', *J Occup Med Toxicol.*, 1(1), Nov 2006, <http://www.occup-med.com/content/1/1/24>
- GMB: Britain's General Union, *Health and Safety for cleaners: A GMB guide*. <http://www.gmb.org.uk/Templates/PublicationItems.asp?NodeID=91047>
- Health & Safety Executive, *Caring for cleaners. Guidance and case studies on how to prevent musculoskeletal disorders*, HSG234, ISBN 0-7176-2682-2 <http://www.hse.gov.uk/press/2003/e03078.htm>
- Health & Safety Executive, *Safe use of cleaning chemicals in the hospitality industry*. <http://www.hse.gov.uk/pubns/cais22.pdf>
- Hoods, V., Buckle, P., Haisman, M., *Musculoskeletal health of cleaners*, Robens Centre for Health Ergonomics, University of Surrey, 1999, [http://www.hse.gov.uk/research/crr\\_pdf/1999/CRR99215.pdf](http://www.hse.gov.uk/research/crr_pdf/1999/CRR99215.pdf)
- Huth, Elke, *Arbeitsfelder: Arbeits- und Gesundheitsschutz in der Reinigung, Reinigungs- und Hygiene – Technik, Facility Management*, <http://www.bewegungs-abc.de/haupt.htm>
- Instituto Sindical de Trabajo, Ambiente y Salud, *Fichas internacionales de datos de seguridad*. <http://www.istas.net/webistas/abreenlace.asp?idenlace=1570>
- Scherzer, T., Rugulies, R., Krause, N., 'Work-related pain and injury and barriers to workers' compensation among Las Vegas hotel room cleaners', *Am J Public Health*, 95(3), Mar 2005, pp. 483-488, <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1449206>
- Union Network International, *Health and Safety in the office cleaning sector – European manual for employees*, 2000. [http://www.union-network.org/UNISite/Sectors/Property\\_Services/Cleaning/CleaningManual.htm](http://www.union-network.org/UNISite/Sectors/Property_Services/Cleaning/CleaningManual.htm)

### Paper publications

- Flyvholm, M., Mygind, K., Sell, L., Jensen, A., Jepsen, K., 'A randomised controlled intervention study on prevention of work related skin problems among gut cleaners in swine slaughterhouses', *Occup Environ Med.*, 62(9), Sep 2005, pp. 642-649.
- Gamperiene, M., Nygård, J., Brage, S., Bjerkedal, T., Bruusgaard, D., 'Duration of employment is not a predictor of disability of cleaners: a longitudinal study', *Scand J Public Health*, 31(1), 2003, pp. 63-68.



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- Kumar, R., Chaikumarn, M., Lundberg, J., 'Participatory ergonomics and an evaluation of a low-cost improvement effect on cleaners' working posture', *Int J Occup Saf Ergon.*, 11(2), 2005, pp. 203-210.
- Laursen, B., Søgaard, K., Sjøgaard, G., 'Biomechanical model predicting electromyographic activity in three shoulder muscles from 3D kinematics and external forces during cleaning work', *Clin Biomech (Bristol, Avon)*, Volume 18, Issue 4, May 2003 May, pp. 287-295.
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- Mondelli, M., et al., 'Carpal tunnel syndrome and ulnar neuropathy at the elbow in floor cleaners', *Neurophysiol Clin.*, 36(4), Jul-Aug 2006, pp. 245-53.
- Zock, J., et al., 'Asthma risk, cleaning activities and use of specific cleaning products among Spanish indoor cleaners', *Scand J Work Environ Health.*, 27(1), Feb 2001, pp. 76-81.

### Standards

- EN 14253:2003 Mechanical vibration – measurement and calculation of occupational exposure to whole-body vibration with reference to health – practical guidance.
- ISO 2631:2001 Mechanical vibration and shock – evaluation of human exposure to whole-body vibration.
- ISO 5349:1986 Mechanical vibration – guidelines for the measurement and the assessment of human exposure to hand-transmitted vibration.
- ISO 5805:1997 Mechanical vibration and shock – human exposure – vocabulary.
- ISO 8662:1988 Hand-held portable power tools – measurement of vibrations at the handle.
- prEN ISO 20643 Hand-transmitted vibration from hand-held or hand-guided machinery – measurement of vibration at the grip surface (ISO/DIS 20643:2002).

### Relevant directives

- 2000/54/EC of 18 September 2000 Biological Agents – the aim of this directive is to establish minimum requirements to provide workers exposed to biological agents at work a better level of safety and health protection.
- 2002/44/EC of 25/06/2002 Physical Agents (Vibrations) – the exposure of workers to the risks arising from vibration.
- 89/391/EEC of 12/06/1989 Framework Directive – this general directive on the introduction of measures to encourage improvements in the safety and health of workers obliges the employer to take the



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necessary measures to ensure the safety and health of the workers in every aspect of their work.

- 89/654/EEC of 30/11/1989 Workplace Directive – concerns the minimum safety and health requirements for both workplaces in use and workplaces used for the first time. These requirements are extensively described in the annexes of the directive.
- 89/655/EEC of 30/11/1989 Work Equipment Directive – setting requirements for use for work equipment such as tools and machines,
- 89/656/EEC of 30/11/1989 PPE Directive – all personal protective equipment must take account of ergonomic requirements and the worker's state of health, and fit the wearer correctly after any necessary adjustment.
- 90/269/EEC of 29/5/1990 Manual Handling of Loads – the need for manual handling of loads should be avoided, otherwise the handling should be organised and the workers properly trained.
- 91/383/EEC of 29/07/1991 Temporary Worker – the aim is to implement supplementary provisions to ensure that temporary workers enjoy the same level of protection as other workers.
- 93/104/EC of 23/11/1993 Working Time – the aims are to adopt minimum requirements covering certain aspects of the organisation of working time connected with workers' health and safety. For the purposes of cleaning workers, they should be protected against adverse effects on their health and safety mainly caused by disruptive working patterns or working at night.
- 94/33/EC of 22/06/1994 Young workers – the directive places responsibilities on employers to ensure that the risks to young workers are minimised by making the risk assessment before they begin their work. It shall also be determined whether or not the young person is prohibited from doing certain cleaning work.
- 98/37/EC of 22/06/1998 Supply of Machinery – requirements on the supply of machinery for use at work.

## References

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<sup>1</sup> European Federation of Cleaning Industries, *The Cleaning Industry in Europe*, An EFCI Survey Edition 2006 (Data 2003) <http://www.feni.be>

<sup>2</sup> European Federation of Cleaning Industries, *The Cleaning Industry in Europe*, An EFCI Survey Edition 2006 (Data 2003) <http://www.feni.be>

<sup>3</sup> Mormont, M., *Institutional representativeness of trade unions and employers' organisations in the industrial cleaning sector*, Université Catholique de Louvain, Institut des Sciences du Travail, Project number VC/2003/0451, 146 pp. [http://www.trav.ucl.ac.be/recherche/pdf%202002/2001%2012%20LPS\\_final.pdf](http://www.trav.ucl.ac.be/recherche/pdf%202002/2001%2012%20LPS_final.pdf)

<sup>v</sup> Schlese, M., Schramm, F., *Beschäftigungsbedingungen in der Gebäudereinigung*, Berichte der Werkstatt für Organisations und Personalforschung e.V., Berlin 2004, ISSN 1615-8261.