

Occupational Health and Safety for Hotel Housekeepers:

*Towards a framework for international standards
to protect workers and advance workers' rights*

Background, Analysis and Draft Proposal
prepared for the International Union of Foodworkers (IUF)
by the Labor Law Clinic at Cornell Law School

Introduction

Employees are required to dust, vacuum, make beds, scrub bathrooms, clean mirrors, distribute amenities, take out the trash, and more.¹ These may sound like undemanding, everyday activities, but when employees must perform each of them dozens of times a day, subject to room-cleaning quotas and under various physical and psychological stressors, they can add up to a serious risk to health and safety. The result is that hotel workers in the United States alone are 40% more likely to be injured at work than are service-sector workers in general.²

One study of United States hotel workers found that employees suffer from the highest rates of injury of any occupation within the hotels studied and that injury rates varied significantly by gender and ethnicity.³ In particular, the study found that employees studied suffered the highest rate of musculoskeletal disorders among all job titles studied, and ranked first (along with cooks and kitchen workers) for the highest rates of injury due to acute trauma.⁴ Moreover, the study found that the rate of injury varied between hotel companies, which implies that the dangers faced by employees may be mitigated by an individual corporation's practices.⁵ Finally, the injury incidence among employees is possibly even higher than the numbers that have been reported, as formal reporting systems –like the OSHA 300 logs on which the study was based –are known to suffer from serious and systematic underestimation.⁶ Another study of over 900 employees pointed to a significant factor contributing to workers' experience of pain: work intensity. For instance, workers who made more than 18 beds per day reported a 44% increase in lower back pain.⁷

In addition to the occupational health and safety risks posed to hotel employees, employees have a high rate of precarious employment; employees are predominantly female,⁸ earn low wages, are frequently migrants and/or ethnic and racial minorities, and do not typically enjoy much job security due to short-term, seasonal, and otherwise part-time contracts.⁹ The precariousness of their employment increases the risks of dismissal for employees if they approach their employers with complaints, and a high turnover rate within the industry discourages many workers who might otherwise invest in improving their working conditions.

These issues are common across the industry. And yet, while hotel chains have increasingly dominated the global market, and have routinely insisted on extensive uniformity in the appearance and condition of rooms as part of their brand identity, there is little uniformity in protections for the

¹ National Institute for Occupational Safety and Health, *Safety and Health among Hotel Cleaners* (2012), <http://www.cdc.gov/niosh/docs/2012-151/pdfs/2012-151.pdf>.

² U.S. Bureau of Labor Statistics, cited in Susan Buchanan, et al., *Occupational injury disparities in the US hotel industry*, 53 AM.J. IND. MED. 116 (2010), <http://onlinelibrary.wiley.com/doi/10.1002/ajim.20724/abstract>.

³ *Id.*

⁴ *Id.*

⁵ *Id.*

⁶ “According to Laura Punnett, an occupational epidemiologist and ergonomist at the University of Massachusetts Lowell . . . ‘we know that formal reporting systems like that have serious underestimation problems.’” Unite Here!, *Creating Luxury, Enduring Pain* (2006), http://www.hotelworkersrising.org/pdf/Injury_Paper.pdf.

⁷ Niklas Krause et al., *Physical workload, work intensification and prevalence of pain in low wage workers: Results from a participatory research project with hotel room cleaners in Las Vegas*, AM.J. IND.MED. (2005).

⁸ 6 See, Thomas Baum, *International Perspectives on Women and Work in Hotels, Catering and Tourism*, ILO WORKING Paper (2013), http://www.ilo.org/wcmsp5/groups/public/---dgreports/---gender/documents/publication/wcms_209867.pdf

⁹ Yu-Chin Hsieh et al., *The World at Work: Hotel Cleaners*, 70 OCCUP.ENVIRON. MED.J. 360 (2013).

workers, across different jurisdictions. In a rapidly evolving sector, no one national jurisdiction appears to have all of the answers on hotel housekeeper health and safety. Thus, the draft standards below draw from best practices across multiple jurisdictions, identified with the help of national unions representing hotel workers. They also try to address weaknesses and gaps, similarly identified with the help of unions.

I. Purposes

- a. to secure a working environment for hotel housekeepers that is healthy and meaningful, and affords full safety from harmful physical and mental impacts.
- b. to ensure sound conditions of employment and equality of treatment at work,
- c. to facilitate adaptations of the individual employee's working situation in relation to his or her capabilities and circumstances of life,
- d. to provide a basis whereby the employer and the employees may themselves safeguard and develop their working environment in cooperation with the employers' and employees' organisations,
- e. to foster inclusive working conditions freely
- f. to prevent and correct physical, emotional and mental stresses that are commonly associate with housekeeping work.

II. Duty to cooperate

- a. Employers and employees shall work together to design, implement and follow up on provisions related to health, environment and safety.
- b. Employees shall take part in the organised safety and environmental work of the undertaking and shall actively cooperate on implementation of measures to create a satisfactory and safe working environment.
- c. Employees shall elect safety representatives who shall safeguard the interests of employees in matters relating to the working environment. The safety representative will have the power to end an imminent hazard, and to ensure that the workplace is arranged in such a manner that the safety, health and welfare of the employees.
- d. The safety representatives shall particularly ensure
 - i. that employees are not exposed to hazards from machines, technical installations, chemical substances and work processes,
 - ii. that safety devices and personal protective equipment are provided in adequate numbers and that they are readily accessible and in proper condition,
 - iii. that the employees receive necessary instruction, practice and training,
 - iv. that work is arranged in such a way that employees can perform the work in a proper manner with regard to health and safety.
- e. Employees shall:
 - i. Receive and use the prescribed protective equipment, exercise caution and otherwise contribute to prevention of accidents and injury to health
 - ii. immediately notify the employer and the safety representative and to the extent necessary other employees when employees become aware of faults or defects that may involve danger to life or health and they themselves are unable to remedy the fault or defect,

- iii. interrupt work if the employees consider that it cannot continue without involving danger to life or health of themselves or others,
- iv. ensure that the employer or the safety representative is notified as soon as employees become aware of harassment or discrimination at the workplace,
- v. notify the employer if an employee suffers injury at work or contracts diseases which the employee believes to result from the work or conditions at the working premises.

III. Acute Trauma

- a. In order to maintain safety at the workplace, the employer shall ensure:
 - i. that employees are informed of accident risks and health hazards that may be connected with the work, and that they receive the necessary training, practice and instruction,
 - ii. that employees charged with directing or supervising other employees have the necessary competence to ensure that the work is performed in a proper manner with regard to health and safety,
 - iii. Expert assistance, when this is necessary
 - iv. That the premises are adequately lit, maintained and clear of obstacles
- b. When satisfactory precautions to protect life and health cannot be achieved by other means, the employer shall ensure that satisfactory personal protective equipment is made available to the employees, that the employees are trained in the use of such equipment and that the equipment is used.
 - i. The employer should ensure that workplaces are equipped with adequate rescue and first aid equipment, as well as safety signs and equipment.
- c. If work is to be carried out that may involve particular hazards to life or health, written instructions shall be prepared prescribing how the work is to be done and what safety measures are to be implemented.

IV. Musculoskeletal Injuries

- a. The workplace shall be equipped and arranged in such a way as to avoid adverse physical strain on the employees. Necessary aids shall be made available to the employees. Arrangements shall be made for variation in the work and to avoid heavy lifting and monotonous repetitive work. When machines and other work equipment are being installed and used, care shall be taken to ensure that employees are not subjected to undesirable strain as a result of vibration, uncomfortable working positions and the like.
- b. Machines and other work equipment shall be designed and provided with safety devices so that employees are protected against injuries.
- c. Employers should establish the following procedures and policies to utilize ergonomics to minimize musculoskeletal injury and maximize efficiency (See **Appendix A** for diagrams).
 - i. Before starting work
 - 1. Ensure employees wear comfortable shoes as part of their uniform.
 - 2. Ensure employees warm up their bodies by gently bending the back and swinging the arms. This should happen on paid time.
 - ii. At any time

1. Ensure employees feel comfortable to report any unusual aches or pains in back, neck shoulders or elbows.
 2. Ensure employees feel comfortable to communicate ways to make their job easier.
- iii. Making Beds
1. Use fitted sheets instead of flat sheets because it takes less time to make beds and reduces straightening and re-tucking.
 2. Offer bed-making assistive devices to reduce the need to bend over and raise mattresses, and/or enable work in pairs.
 3. Arrange workplace so that employees have room to kneel next to bed to tuck in sheets to reduce bending and twisting.
- iv. Pushing Supply Carts
1. Employers shall provide supply carts to carry cleaning equipment.
 2. Implement an equipment maintenance program to reduce effort in moving cars.
 3. Provide carts with larger, harder wheels when necessary to reduce overall daily fatigue.
 4. Provide motorized carts when needed to reduce physical demands.
 5. Require that heaviest or most used items are place on the cart between hips and chest.
 6. Require that carts be pushed with both hands to keep the body from twisting.
 7. Require/allow trash to be emptied from carts as often as possible.
 8. Require/allow restocking of cart several times over shift to lighten cart and provide rest.
 9. Require that employees report cart problems to supervisor.
 10. Limit the amount of time that employees use a malfunctioning cart.
- v. Vacuuming
1. Provide light-weight vacuums.
 2. Provide self-propelled vacuums or those with brush-assisted movement when necessary.
 3. Provide vacuums with ergonomic handles, where less grip force is needed and allows for hand to rest.
 4. Provide upright with canister vacuums where needed.
 5. Provide backpack vacuums where needed.
 6. Require/allow vacuum bags to be regularly emptied.
 7. Ensure employees use proper carpet height settings.
 8. Train employees to line up body with path of vacuum.
 9. Train employees to alternate vacuuming between left and right hands.
- vi. Cleaning bathrooms
1. Provide cleaning brushes with long and ergonomic handles to prevent excessive bending and twisting and stress from gripping.
 2. Train and allow employees to stand inside tub to clean wall tile as long as there is no risk of slipping.

3. Encourage guests to and ensure employees keep dirty towels off floor as much as possible, to reduce bending.
 4. Require/allow employees to carry smaller sets of wet, dirty towels, even if it means factoring in time for more trips.
 5. Train employees to do work at waist level as often as possible to reduce bending.
 6. Train employees to alternate harms when cleaning surfaces.
- vii. Dusting
1. Provide microfiber products so tasks can be accomplished with less strain.
- viii. Furniture/Amenities
1. Do not furnish with oversized mirrors, porous surfaces or dark furniture.
 2. Do not arrange rooms so that they are overcrowded with furniture.
 3. Provide wall-mounted toilets, showers without tubs, wall-mounted nightstands.

V. Chemical and Biological Exposure

- a. When handling chemicals or biological substances, the working environment shall be so arranged that employees are protected against accidents, injuries to health and excessive discomfort. Chemicals and biological substances shall be manufactured, packed, used and stored in such a way that employees are not subjected to health hazards.
- b. Chemicals and biological substances that may involve health hazards shall not be used if they can be replaced by other substances or by another process that is less hazardous for the employees.
- c. The employer shall provide the necessary routines and equipment to prevent or counteract injuries to health due to chemicals or biological substances.
- d. The employer shall keep a record of hazardous chemicals and biological substances. The record shall include information on physical, chemical and hazardous properties, preventive safety measures and first-aid treatment. Containers and packaging for chemicals and biological substances shall be clearly labelled with the name and composition and a warning that is easily understandable to workers.
- e. Cleaning chemicals shall be stored in their original containers and never mixed, even if they are the same "type" of chemical.
- f. Cleaning chemicals shall be stored in well-ventilated areas away from HVAC intake vents; this helps prevent any fumes from spreading to other areas of the facility.
- g. Employers shall install safety signage in multiple languages or images that quickly convey possible dangers and precautions. If using images, ensure that employees understand what they mean.
- h. Employers shall ensure that all employees know exactly what the following "signal words" mean: "Caution": the product should be used carefully but is relatively safe; "Warning": the product is moderately toxic; "Danger": the product is highly toxic and may cause permanent damage to skin and eyes.

- i. Employers shall provide and facilitate the relevant preventative measures, related to biological agent exposure, especially personal protective equipment, outlined in **Appendix B**.
- j. Workers shall co-operate as closely as possible with their employers in the discharge by the employers of their responsibilities and comply with all procedures and practices relating to safety in the use of chemicals at work.
- k. Workers shall take all reasonable steps to eliminate or minimize risk to themselves and to others from the use of chemicals at work.
- l. Workers shall have the right to remove themselves from danger resulting from the use of chemicals when they have reasonable justification to believe there is an imminent and serious risk to their safety or health, and shall inform their supervisor immediately.
- m. Workers who remove themselves from danger in accordance with the provisions of the previous paragraph or who exercise any other rights outlined here shall be protected against undue consequences such as retaliation.
- n. Workers concerned and their representatives shall have the right to:
 - i. information on the identity of chemicals used at work, the hazardous properties of such chemicals, precautionary measures, education and training;
 - ii. the information contained in labels and markings;
 - iii. chemical safety information.

VI. Medical Examination and On-Site Health Professionals

- a. The employer must enable adequate, voluntary access to medical examinations. These may only be conducted in a routine and compulsory way:
 - i. when provided by statutes or regulations,
 - ii. in connection with posts involving particularly high risks,

VII. Working Hours/ Overtime/ Leave of Absence

- a. Working Hours
 - i. Normal working hours must not exceed nine hours per 24 hours and 40 hours per seven days.
 - ii. Normal working hours must not exceed nine hours per 24 hours and 38 hours per seven days for:
 - 1. semi-continuous shift work and comparable rota work,
 - 2. work on two shifts which are regularly carried out on weekends and public holidays and comparable rota work regularly carried out on weekends and public holidays,
 - 3. work principally performed at night.
 - iii. Normal working hours must not exceed nine hours per 24 hours and 36 hours per seven days in the case of continuous shift work and comparable rota work.
- b. Overtime
 - i. Work in excess of agreed working hours must not take place except in cases when there is an exceptional and time-limited need for it.
 - ii. If in the case of some employees the work exceeds normal working hours, the time in excess is regarded as overtime.

- iii. Before imposing work as referred to in this section, the employer shall, if possible, discuss the necessity of such work with the employees' elected representatives.
 - iv. Overtime work must not exceed ten hours per seven days, 25 hours per four consecutive weeks or 200 hours during a period of 52 weeks.
 - v. Total working hours must not exceed 13 hours per 24 hours or 48 hours per seven days. The limit of 48 hours per seven days may be calculated according to a fixed average over a period of eight weeks.
 - vi. An employee shall be entitled to exemption from performing work in excess of agreed working hours when he or she so requests for health reasons or for weighty social reasons. The employer is otherwise obliged to exempt an employee who so requests when the work can be postponed or performed by others without harm.
 - vii. For overtime work a supplement shall be paid in addition to the pay received by the employee for corresponding work during normal working hours. The overtime supplement shall be at least 40 per cent.
- c. Pace of work
 - i. When assigning room quotas, employers must take into account additional variables such as the time it takes to restock supplies, travel to a different floor, varying states of cleanliness before housekeeping, etc.
- d. Breaks
 - i. An employee shall have at least one break if the daily working hours exceed five hours and 30 minutes. The breaks shall collectively amount to at least one hour if the daily working hours total at least eight hours. When the employee is not free to leave the workplace during the break or where there is no satisfactory break room, the break shall be regarded as part of the working hours. When conditions so necessitate, the break may be postponed.
- e. Leave of Absence
 - i. Workers should be entitled to a leave of absence, without loss of seniority or other benefits, connected with a medical condition.
 - ii. Accommodations must be made for leave connected with pregnancy and childbirth.

VIII. Work Environment (noise, temperature, lighting and ventilation)

- a. Physical working environment factors such as factors relating to buildings and equipment, indoor climate, lighting, noise, radiation and the like shall be fully satisfactory with regard to the employees' health, environment, safety and welfare.

IX. Sexual Harassment

- a. Employers shall promote an equal workplace by ensuring that employees are protected from harassment related to gender, and sexual harassment in the working environment.
- b. Employers shall promote an environment wherein employees feel comfortable reporting occurrences of sexual harassment, and provide grievance machinery to do so.
- c. Employers must inform employees of the rights under the relevant statute.
- d. Employers must provide safeguards against sexual harassment, such as a zero-tolerance policy and allowing employees to work in pairs or carry a panic button.

X. Mental Stresses

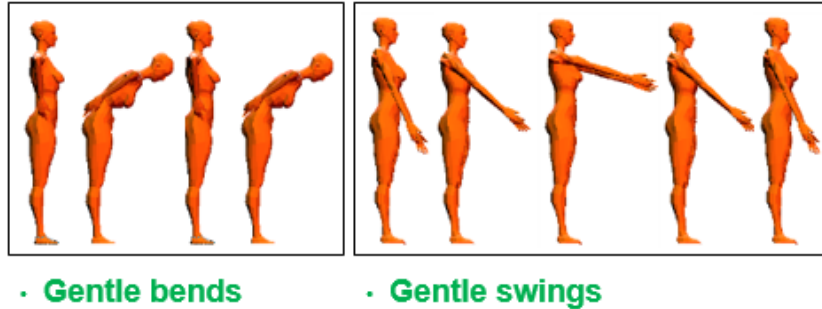
- a. The employer shall ensure that the work be arranged so as to preserve the employees' integrity and dignity.
- b. Efforts shall be made to arrange the work so as to enable contact and communication with other employees.
- c. Employees shall not be subjected to harassment or other improper conduct.
- d. Employees shall, as far as possible, be protected against violence, threats and undesirable strain as a result of contact with other persons.
- e. The Employer shall ensure that employees do not experience excessive mental stresses from monotony or isolation.
- f. The employer shall ensure that employees are not overburdened with work (e.g. excessive room-cleaning quotas).

Before Starting Work

Encourage housekeepers to wear comfortable shoes

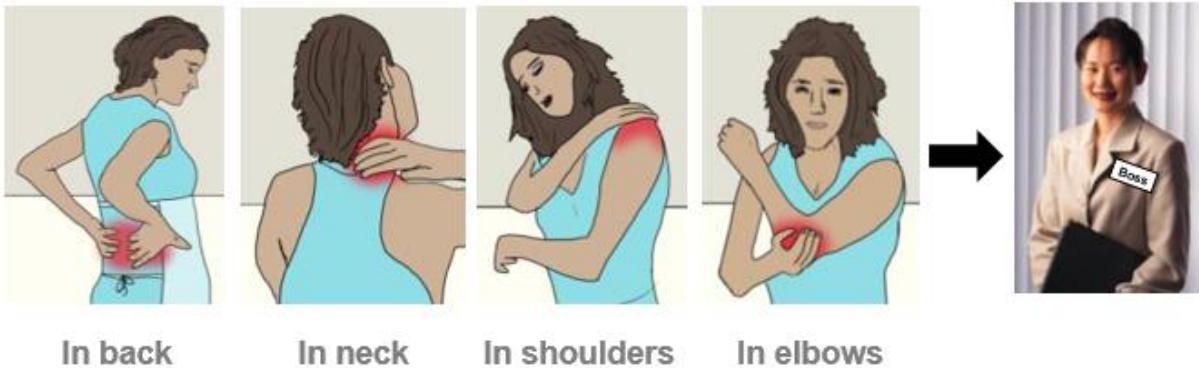


Have housekeepers warm up their bodies
Back Arms & Shoulders



At Any Time

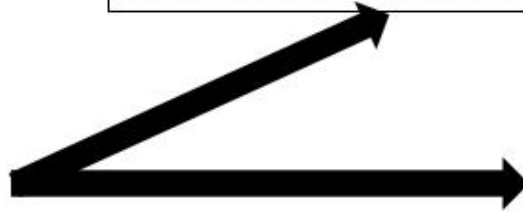
Encourage housekeepers to report any unusual aches or pains



¹⁰ Institute for Ergonomics, Ohio State University, www.ergonomics.osu.edu, accessed 3/23/2015

At Any Time

Encourage housekeepers to communicate ways they have found to make the job easier



Making Beds

Consider using fitted sheets instead of flat sheets



Have staff try using bed-making assistive devices



- Less time to make beds
- Reduces need to raise mattress
- Reduces straightening & re-tucking
- Provides another bed-making option

Making Beds (Lifting Mattress and Tucking in Sheets)



Good or Bad? Why?

Is This any Better? Why or Why Not?



- Forward bending
- Twisted back

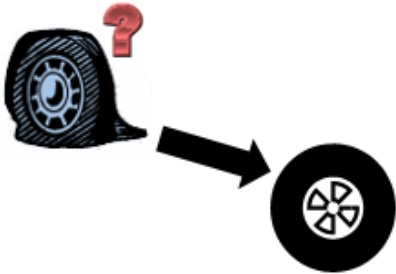
Ideas for Better Methods?



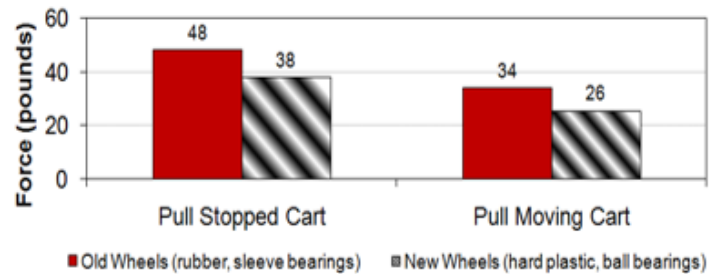
- No bending
- Closer to bed

Pushing Supply Carts and Vacuum Cleaners

Implement an equipment maintenance program



If necessary, modify carts to have larger, harder wheels



- Reduces effort to move carts
- Demonstrates care for employees
- Requires less force to push
- Can reduce overall daily fatigue

Pushing Supply Carts

Consider using motorized carts



- Reduces physical demands
- Can increase productivity

Moving Supply Carts

Store heaviest or most used items between your hips and chest



- More body strength at this part of the body



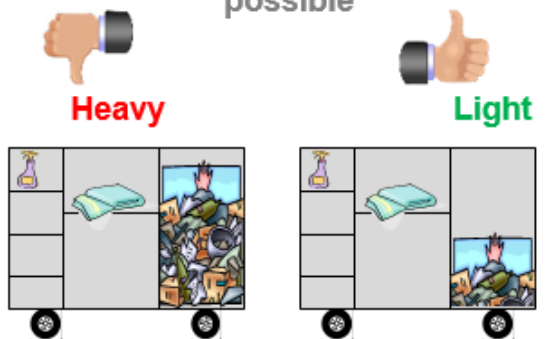
Push cart using both hands



- Keeps the body from twisting
- Distributes effort across both sides of body

Moving Supply Carts

Empty trash from cart as often as possible



- Makes cart easier to push



Replenish supply cart a few times over shift



- Less effort to push lighter cart
- A good, brief rest break

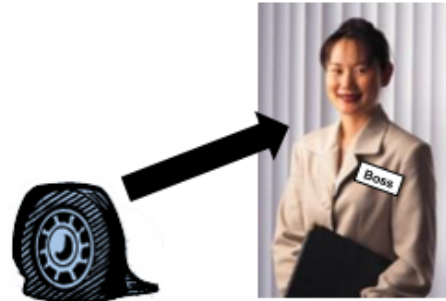
Moving Supply Carts

Align cart wheels in the direction
of movement



- Carts with aligned wheels are easier to push

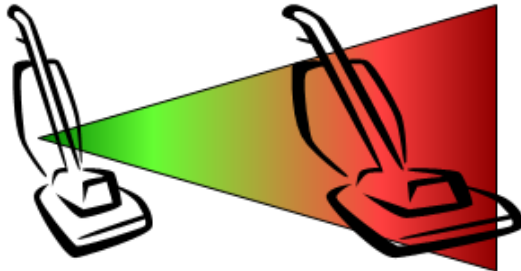
Report cart problems to
supervisor



- Repaired carts easier to use

Vacuuming – Weight

Purchase light-weight vacuums



Vacuum weight range

- Less effort to move and lift
- Reduced stress on shoulders, back

Consider self-propelled vacuums or those with brush-assisted movement



- Less force needed when vacuuming
- Reduced fatigue across shift

Vacuuming – Handle Design

Look for vacuums with “ergonomic” handles



- High grip force to prevent slipping
- Constant grip needed to vacuum



- Less grip force needed
- Design allows for hand to rest

Vacuuming –Alternative Methods

Consider replacing uprights with canister vacuums

- Easier to push/pull lightweight wand
- Flexible hose is easier to maneuver
- Retractable cord reduces cord handling



Consider replacing uprights with backpack vacuums

- Faster vacuuming time
- Only the wand and hose need to be moved
- Can easily change between forward-backward and side-to-side movements



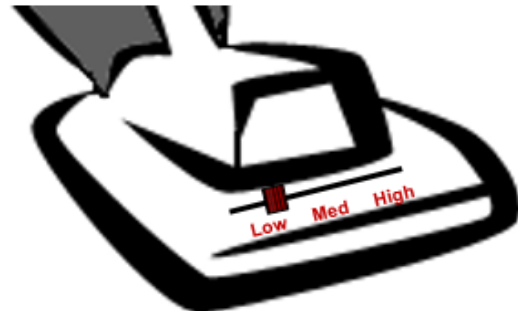
Vacuuming

Regularly empty vacuum bag



- Lower force to push vacuum
- Less fatigue

Choose proper height setting for carpet conditions



- Lower force to push vacuum
- Less fatigue

Vacuuming

Good or Bad? Why?



- Stress to shoulder



- Twisted back

Ideas for Better Methods?

Line up body with path of vacuum



- Less awkward posture of shoulder
- Back not twisted



Vacuuming

Good or Bad? Why?



- Stress to shoulder



- Twisted back

Alternate vacuuming between the right and left hands



- Chance to rest frequently used muscles and body parts



Cleaning Bathrooms – Toilets

Use toilet brushes with long handles



- Forward bending or kneeling required to clean toilet



- Toilet can be cleaned in an upright posture
- Less exposure to backsplash

Cleaning Bathrooms – Bathtubs and Showers

Use scrub brushes with long handles



- Using rags / sponges / brushes with short handles requires more reaching & bending



- Brushes with telescoping handles reduce reaching & bending; save time

Cleaning Bathrooms

Stand inside tub to clean wall tile (as long as there is no risk of slipping)



Outside of tub



- **Extended reaching**
- **Stress to shoulder**



Inside tub



- **Less reaching**
- **Less stress on shoulder**

Cleaning Bathrooms

Keep dirty towels off floor as much as possible



On floor



- **Repeated bending to pick up towels**



Above floor



- **Little or no bending to pick up towels**

Cleaning Bathrooms

Do not carry large or heavy weight; make more trips if possible



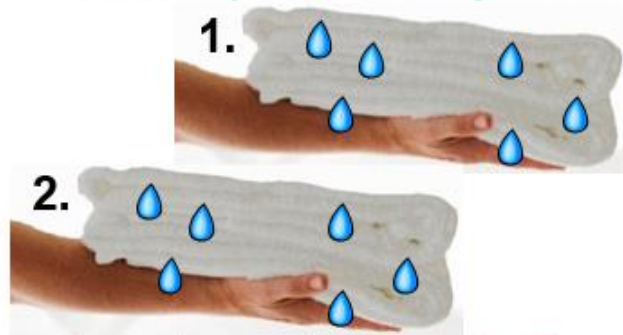
One large pile of wet, dirty towels



• **More stress on back and shoulders**



Two small piles of wet, dirty towels



• **Less stress on back and shoulders**

Cleaning Bathrooms

Do work at waist level as often as possible



On floor



• **Removing trash and replacing liners from floor**



Above floor



• **Little or no bending to remove trash**

Cleaning Bathrooms

Alternate arms when cleaning surfaces



- Demands of task spread to both shoulders
- Gives each arm/shoulder time to rest

Cleaning Bathrooms – Multiple Areas

Provide tool handles that are comfortable and improve gripping



- Smooth or small-diameter handles are hard to hold, more so with wet hands
- Larger handles fit better in the hand
- Textured surface resists slippage

Dusting

Replace mops and lambs-wool / feather dusters with microfiber products



- Picks up less dust
- Tends to push dirt around



- Removes significantly more particles
- Tasks can be done faster

Examples

Oversized mirrors  <ul style="list-style-type: none"> • Hard to reach entire surface 	Porous surfaces  <ul style="list-style-type: none"> • Pick up stains more easily 	Crowded Rooms Lots of Furniture  <ul style="list-style-type: none"> • Difficult to vacuum around 	Nightstands  <ul style="list-style-type: none"> • Difficult to make beds 	Dark furniture  <ul style="list-style-type: none"> • Shows dust more easily
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Examples – Which area would be easier to clean?

Toilet Floor-Mount Wall-Mount  	 	Shower With Tub Without Tub  	 	Under Nightstand On Floor Wall-Mount  	 
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APPENDIX B—Biological Risk Factors and Preventative Measures in Cleaning Work¹¹

Biological agent	Health outcome	Workers at risk	Preventive measure
Fungi (<i>Aspergillus fumigatus</i>)	Hypersensitivity reactions, pneumonitis with asthmatic symptoms Lung mycosis, bronchial asthma;	Medical, hospital or laboratory cleaning staff	Wearing respirators during work in a dusty area; dusting reduction; ventilation improvements,
Fungi (<i>Puccinia graminis</i>)	Bronchial asthma, Allergic nose catarrh	Agricultural, hotels or domestic, school cleaners	
Mould	Dermal allergies, asthma, Sick-Building Syndrom	All cleaning staff (particularly during emptying of dust collectors or filters)	Personal protective equipment
Pathogens from rodent droppings and various types of disease-carrying vermin	Diseases depending on the type of pathogen	All cleaning staff	Periodical pest control; personal protective equipment, in particular respiratory protection
Micro-organisms contained in human excreta, blood and body fluids	Risk of virus infection, HIV, hepatitis	Mainly possible for medical, hospital, laboratory, schools, universities, domestic cleaners and all groups of cleaning workers during cleaning of sanitary ware	Personal protective equipment; compliance with safety and hygiene instructions
Bacteria (<i>E. faecalis</i> ; <i>e.faecium</i>)	Inflammation of gallbladder, cholecystitis; cystitis	Hospital medical laboratory and others	Compliance with safety and hygiene instructions at hospitals; hand washing, disinfection, sterilization
Bacteria (<i>Escherichia coli</i>)	Enteritis; diarrh(oe)a	Hospital medical laboratory, schools, universities, domestic cleaners and others (mainly during sanitary ware cleaning)	
Dermatophagoides spp.	Bronchial asthma, allergic nose catarrh; conjunctivitis; dermatitis	Domestic, office, school or hotel cleaners	Saprophytes fighting, frequent vacuuming and ventilation
<i>Glycyphagus domesticus</i>		Domestic, hotels, office and kitchen restaurant cleaning personnel	Storing of food products in dry clean rooms with good ventilation; Efficient hygienic measures, adequate disinfection, Personal protective equipment

¹¹ The European Agency for Safety and Health at Work, *The Occupational Safety and Health of Cleaning Workers*, Luxembourg: Office for Official Publications of the European Communities, 2009.