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## 1. Introduction to Health and Safety

Health and safety guidelines are imperative in any working environment to ensure a safe atmosphere for everyone by reducing occupational injuries and illnesses, preventing loss of collections and assets, and reducing environmental impact. It is especially important in a museum, because the safety of staff, volunteers and visitors has to be considered as much as the safety of the collections. Understanding general, personal, and object health and safety will ensure the efficient running of the museum and the safe handling of objects.

## 2. General Considerations

### 2.1 Health and Safety Programs

In order to accomplish the goals of health and safety and to comply with legislation, museums establish safe working protocols and procedures. Responsibility for managing work-related risk and overseeing the implementation of health and safety procedures lies with management, although there is also an element of staff responsibility. These programs include risk assessments, inspections, accident and injury reporting and investigation, emergency planning, training and evaluation.

### 2.2 Assessment of Risk

Identification of hazards is key in being able to limit risk and ensuring a successful health and safety program. A specific job is

reviewed and classified by listing the major tasks, any injuries that may occur, risks from performing the task in relation to frequency and duration versus the severity of the injury, and finally, listing ways to reduce the risk by implementing any safety measures. The resulting risk assessment indicates the risks of work-related tasks and how to mitigate them. Employees are expected to read the assessments, understand the risks and ways of reducing them, and implement the suggested control measures while performing the task. Sample risk assessment forms can be found at [www.hse.gov.uk](http://www.hse.gov.uk).

All new employees and volunteers should receive a health and safety induction to be made aware of procedures and the emergency contingency plan.

# Disaster



## 2.3 Emergency Planning

One large part of health and safety is effective emergency planning (also known as disaster prevention planning / management, contingency planning, and business continuity planning / management). Emergencies covered within this category include fire, flood, natural disaster, power failure, chemical spill, toxic gas leak, medical emergency, etc. The emergency contingency plan may include the following:

- Threat risk assessment
- Training
- Evacuation of personnel and visitors
- Emergency contact list
- Security
- Action plans for specific emergencies including role allocations
- Salvage of collections, records and valuable equipment
- Communications and documentation
- Recovery

## 3. Personal Health and Safety

### 3.1 Working with Objects

#### *i. Risks*

Hazards relating to specific objects may include previous conservation/restoration treatments, which may include chemicals that are now known to be harmful, such as arsenic and mercury. Some natural history objects were treated in the past with toxic substances to deter pest species, such as herbarium, taxidermy and entomology collections. More often than not such previous treatments were not recorded and for many collections it is unknown whether they were treated. Unless testing was undertaken to demonstrate unequivocally that no risk exists the precautionary principle applies, and any such collections should be regarded as potentially hazardous. Any handling, display or conservation work should be undertaken under advice from a conservator.

#### *ii. Handling*

Collections are handled for a variety of reasons, including relocation between galleries or between the collection store and gallery, receipt or dispatch of objects, special events, such as exhibition, conservation, or photography, or to create new forms of access. Moving objects without assessing and reducing risk can result in serious injury to the handler as well as the object. Ensure safe handling by risk assessing the task, the load, the environment, and the individual's capacity for handling the task.

After assessment, it is important to reduce the risk. This may include improving the layout and making the movement safer, for example opening doors, using elevators instead of stairs, ensuring clear walkways, splitting up the load into smaller more manageable sections, testing the weight of the object before lifting, using a trolley for larger objects etc.

### 3.1 Personal Protective Equipment

Staff and volunteers should be protected from hazards with appropriate clothing and personal protective equipment. All working within the museum should have the following to protect themselves from harm:

- Shirts and jumpers with close fitting sleeves
- Trousers
- Supportive, non-slip shoes
- Long hair tied back or secured out of one's eyes
- Apron/lab coat when dealing with chemicals, and cleaning supplies to protect skin and clothing from harm
- Nitrile gloves when using cleaning supplies or handling chemicals
- Face mask if harmful dust or fumes are present (depending on risk assessment, FFP1 to FFP3 or respirator)
- Safety glasses for eye protection
- Hearing protection if using noisy equipment

In addition, instructions given in manuals, protocols and procedures must be understood prior to using any equipment.

### 3.2 Housekeeping

Good housekeeping is imperative for the safety of staff, volunteers, visitors, and collections. Working spaces must be kept clean and tidy, and free of food and drink. It is important to keep walkways clear of tripping hazards. Doors, cabinets and drawers must be kept closed when not in use, chairs are pushed in, and all working surfaces are cleaned on a regular basis. Specimens and objects should be kept in stores, galleries or, if undergoing conservation work, a laboratory, but not in offices or corridors.

## Proper Lifting Technique



**3.3 ii. The correct way to lift boxes: keep back straight, bend the knees, hold opposite corners of the box, and lift with your legs.**

## 4. Object Safety

### 4.1 Risk

Risks to objects in the museum environment include contact shock (suddenly hitting the floor or another object), vibration from handling, changes in environment, insufficient protection, lack of security, and lack of care (cf. CCI 2015).

### 4.2 Storage and Display Environments

In order to ensure that collections survive for future generations, understanding the specific requirements for their storage and display is imperative. Things to consider are temperature, relative humidity, pollution, light, pests, and physical damage. For best storage and display environments for specific collections, please refer to the other leaflets in this current series.

### 4.3 Handling Regulations

The best way to ensure that an object does not become subject to physical damage from mishandling is to handle objects as little as possible. Other ways to reduce risk include organising object stores well, ensuring proper labelling for both boxes and shelving, preventing visitors and untrained personnel from touching objects unless the objects are identified as suitable for handling, and ensuring that security is adequate for objects on display.

If the object is to be moved it is important to think carefully beforehand about how and where the object is to be moved to ensure the minimum amount of obstacles as possible. Also, double check yourself for jewellery, pens in pockets, badges, etc. which might damage objects while you handle them. Always support the object as much as possible, never picking it up at weak points such as areas of previous treatments, rims, handles, arms, legs, heads, etc. Two hands are necessary to support both the bottom and the main body of the object; this means that you will need at least one additional person to open doors if carrying an object, although if an object has to be transported the use of a trolley is advisable. Retain natural orientation, and never carry more than one object at a time. If necessary get help if the object is too unwieldy for one person. Also, gloves should always be worn when handling objects.

## 5. Additional Information

This information sheet was compiled by [Cardiff University Conservation](#) students as part of the Federation of Museums and Art Galleries in Wales project 'Linking Natural Science Collections in Wales', funded by [Esmée Fairbairn Collections Fund](#) and supported by the [Welsh Government's Museums Libraries Archives Division](#) and [Amgueddfa Cymru – National Museum Wales](#). You can find information about the project on the website of the [Federation of Museums and Art Galleries in Wales](#).

This leaflet provides a brief introduction to the subject. If you require detailed advice on the care of museum collections please consult your regional conservator or the Institute of Conservation's [Conservation Register](#).

## 6. References, Publication, Resources

AIC. *Personal Protective Equipment (PPE)*. 2014. [http://www.conservation-wiki.com/wiki/Personal\\_Protective\\_Equipment\\_\(PPE\)](http://www.conservation-wiki.com/wiki/Personal_Protective_Equipment_(PPE))

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*Health and Safety Executive*. <http://www.hse.gov.uk/index.htm>

*Health and Safety Laboratory*. <http://www.hsl.gov.uk/internal/licensing-information.aspx>

*Institution of Occupational Safety and Health*. 2014. <http://www.iosh.co.uk/>

*Health and Safety Executive*: [www.hse.gov.uk](http://www.hse.gov.uk)

*Radiation Protection advisors*: [www.hse.gov.uk/radiation/rpnews/rpa.htm](http://www.hse.gov.uk/radiation/rpnews/rpa.htm)

*Asbestos Advice*: [www.hse.gov.uk/asbestos/faq.htm](http://www.hse.gov.uk/asbestos/faq.htm)

*Earth Lab Database(NHM)*:

<http://www.nhm.ac.uk/nature-on-line/earth/rock-minerals/earthlab/>

*Mineral Database*: <http://www.museum-wales.ac.uk/mineralogy/database/>