

## GUIDANCE NOTES

### Exposure to Hazardous Substances

#### IMPORTANT NOTICE

1. The information contained in this document is a reminder of the guidelines for those working with hazardous substances. Before conducting any research involving hazardous substances, investigators are required to undertake relevant training and consult experts in the field. Further information and advice should be sought from the University's Health, Safety and Environment Section.
2. The focus of these guidance notes is the protection of participants who may be exposed to harmful/hazardous substances. However, investigators and other University staff must also receive adequate protection from exposure to hazardous substances during research projects. Investigators must liaise with the Health and Safety Office to ensure appropriate action is taken.

Ultimately, it is the responsibility of investigators to ensure that participant exposure to hazardous substances is in accordance with relevant legislation. The following guidelines are intended to highlight specific areas on which the University has identified best practice for investigators intending to expose participants to ionising radiation or harmful substances during the course of a research project.

Compliance with this guidance should help to:

- ensure the safety of participants who are exposed to hazardous substances.
- protect investigators and enable them to meet their legal and ethical requirements.
- provide reassurance that the University encourages staff to observe best practice and that research is designed to ensure the safety of participants involved

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### 1. Health, Safety and Environmental Section

Investigators are expected to **seek advice** from the Health, Safety and Environmental Section when designing research projects which involve exposing either participants or researchers to hazardous substances.

All members of staff intending to work with hazardous substances should ensure that they familiarise themselves with the COSHH and Risk Assessment [guidance](#).

Written instructions to students must draw specific attention to the risks of using hazardous substances in their practical work.

The remainder of this document relates specifically to the action that researchers should undertake to ensure the safety of participants who may be exposed to hazardous substances during a research project. All

researchers conducting research which involves hazardous substances should familiarise themselves with COSHH regulations and guidelines. The Health and Safety Executive is also a useful source of information.

## 2. What Are Hazardous Substances?

Hazardous substances cover a range of substances that can be used or produced e.g. adhesives, paints, cleaning agents, dusts, fumes, gases, vapours etc. Investigators should think carefully about whether or not participants will be exposed to hazardous substances, either **directly or indirectly**, as a result of participating in the research project. If unsure about the possible use or production of a substance hazardous to health contact the Health Safety & Environment Office for advice.

## 3. Risk Assessment

3.1. Investigators should assess the risks to which they may be exposing participants, either directly or indirectly. The risk assessment should first identify the hazardous substances and second, identify the risks those substances might present to participants.

3.2. Investigators should consider what **precautions** can be taken to avoid or limit participants' exposure to hazardous substances. Such precautions will range from engineering controls such as ventilation to the provision of personal protective equipment or administrative controls such as instruction and training. Relocating the research project or redesigning the research project to completely remove the risk of exposure to hazardous substances may have to be a serious consideration. The severity of action required will depend on the substances involved and the extent to which they could harm the health of participants.

3.3. Where preventing exposure to the hazardous substances is not reasonably practical or goes against the purpose of the research objectives, investigators must produce a comprehensive risk assessment and adequately control the levels to which participants (and researchers) are exposed.

The full risk assessment should be presented to the Ethics Review Sub-Committee as part of the research proposal signed by the Dean of School/Head of Department. The Ethics Review Sub-Committee retains the right to refer proposals back to the Health, Safety and Environment Section for comment.

## 4. Participants

All participants should be **fully informed** of any risks associated with exposure to hazardous substances. They should be provided with full details of the type and amount of hazardous substances to which they will be exposed, and informed of the risks created by exposure to those substances. If any protective clothing or equipment is to be used, all participants should be fully informed about how to use it. Participants should be fully supervised throughout the study and at least one member of staff, trained in first aid should be present at all times. Full consent should be obtained from all participants.

**The University advises investigators not to include pregnant women, children or elderly participants in research projects involving exposure to hazardous substances.**

## 5. Need for Health Surveillance – STAFF and Researchers

Where there is a known risk to health highlighted by the risk assessment and/or there is exposure to substances classified under Schedule 6 of the COSHH regulations and/or where there exists valid techniques for identifying early signs of disease or effect of that substance, then Health Surveillance must be performed. Further advice on your requirements can be obtained from the Occupational Health (OH) Service on 01509 222851 or email to [occupationalhealth@lboro.ac.uk](mailto:occupationalhealth@lboro.ac.uk)

The rationale for Health Surveillance also includes identifying those members of staff who:

- Do not suffer from any medical conditions that could be aggravated by exposure to the hazardous substances.
- Are not susceptible or have a sensitisation to the substances in question.
- Have not been subjected to high levels of the hazardous substance (eg chemical accident) on previous occasions.
- Are not regularly in contact with similar hazardous substances (eg work environment).

## 6. Need for Health Surveillance – Participants

The above advice would still apply to participants, except that under normal circumstances the OH service would not usually have professional responsibility for external parties. However, further consultation with OH is recommended in order to discuss specific arrangements for your participants **if** Health Surveillance requirements have been identified. A separate contract for OH services to your research project may be required for this, or you may be directed to other appropriate medical services.

## 7. Further Information

The above is not intended to be an exhaustive list of considerations in relation to the practice of exposing participants to hazardous substances during research projects. However, it is hoped that these guidelines will encourage researchers to adopt best practice and familiarise themselves with the relevant legislation and guidance. The following websites may also be of interest:

- [Health & Safety Executive](#)
  - HSE Indexes:
    - [Hazards at Work - Chemicals](#)
    - [Hazards at Work - Health and Safety Regulations](#)
    - [Hazards at Work - Risk Assessment](#)
  - [COSHH - A Brief Guide to the Regulations](#)
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