Health Surveillance Requirements for Work with Respiratory Sensitisers

Allergens produced by laboratory animals are of particular significance within the University and the health surveillance arrangements for these are described in University guidance.

Identification of respiratory sensitisers
Many different kinds of substances may be respiratory sensitisers and these are listed on the HSE website. Common examples that may be encountered in the University include antibiotics, proteolytic enzymes, flour, dust from some types of beans, some wood dusts and some components of epoxy resins. Manufactures and suppliers of chemicals and preparations that may cause respiratory sensitisation are required to label these accordingly, i.e. "May cause allergy or asthma symptoms or breathing difficulties if inhaled" and assign to it the hazard statement "H344". Supplier's safety data sheets should also be referred to.

Health effects of exposure
Respiratory sensitisers can cause permanent damage to the nose, throat and lungs. Once sensitised further exposure to the sensitiser, sometimes extremely small quantities, causes allergic symptoms. These can range in severity from a runny nose and watery eyes to asthma which on occasion can be extreme. Respiratory sensitisation can in some instances result in permanent lung damage and breathing difficulties may continue long after exposure to the sensitiser has ended.

Sensitisation is unpredictable, as only some of the individuals at risk will be affected and there may be a long latent period of months or even years before it becomes apparent that sensitisation has occurred.

Respiratory sensitisation may result from either high exposure over short periods or long term exposure to lower concentrations. Furthermore some substances need to be present at higher concentrations to cause sensitisation than others.

Assessment and control of sensitisation risk
When carrying out a COSHH assessment it should be established whether the material to be worked with is a respiratory sensitiser. If so then the potential for exposure needs to be evaluated. Activities giving rise to short term peak concentrations should receive particular attention.

If there is the potential for significant exposure to occur then, as with any substance hazardous to health, the use of the material must be justified on the grounds that it is, so far as is reasonably practicable, the least hazardous suitable material that may be used for the purpose. Where this is the case then physical and procedural controls
should be in place in order to prevent or minimise exposure so far as is reasonably practicable.

Physical and procedural controls include:

- enclosure of the material to prevent its release,
- using it in a different form, e.g. replacing a powder with granular or liquid formulation,
- containment and exhausting releases of the material, e.g. by using in a fume cupboard,
- provision and use of respiratory protective equipment,
- written methods that describe the control measures to be used.

Where there remains the potential for exposures that could cause sensitisation then those who may be affected should be referred to Occupational Health for health surveillance.

**Health surveillance**

The purpose of health surveillance is to identify:

- Whether those who may be at risk are being adversely affected at an early stage and thereby prevent any serious health effects from occurring, and
- To monitor the effectiveness of controls over working practices in preventing harmful exposures.

Regulation 11 of the Control of Substances Hazardous to Health Regulations 1994 requires that health surveillance is provided under the following circumstances:

- Exposure to a substance may be related to an identifiable health effect,
- There is reasonable likelihood that the effect may occur under the particular conditions of work, and
- There are valid techniques for detecting the indications of the effect.

Health surveillance will comprise both pre-employment screening and periodic surveillance. Occupational health are equipped to visit workplaces to carry out screening and will make arrangements to do this where the numbers or location justify this.

**Pre-activity health screening**

The purpose of pre-activity health screening is to:

- Identify those who have already developed occupational ill-health and for whom special precautions may be necessary;
- Identify people who would be more vulnerable if they developed occupational ill-health;
- Provide a baseline measurement for later periodic health surveillance;
- Raise awareness of occupational ill-health and inform individuals where confidential medical advice can be sought if symptoms develop.

This screening involves completion of a questionnaire, a lung function test (spirometry) and health education by the Occupational Health nurse. If any queries arise from the screening, the individual will be referred to the Occupational Health Physician. After the
Initial screening by the nurse and doctor as necessary, a fitness for work certificate will be sent to the person's line manager or academic supervisor. Individuals should not commence work until a certificate has been issued.

Supplementary health surveillance will be carried out at 6 weeks and 6 months (or any such interval which the Occupational Health Physician may recommend) after commencing work with respiratory sensitisers. An appointment for health surveillance at 6 weeks will be made at the initial appointment. It will be the responsibility of the individual to attend and the time for this should be allowed by both the individual and the School.

Should pre-activity screening reveal that an individual would be at a risk to their health from the proposed work, then Occupational Health will inform the relevant Head of School or Manager.

**Periodic health surveillance**
The Head of School or Department shall ensure that a register of people exposed to respiratory sensitisers is maintained and that the name of the person responsible for this is notified to Occupational Health.

Occupational Health will annually request an up to date list of people who are exposed to respiratory sensitisers from the responsible person. Individuals will be given an appointment for annual health surveillance and asked to complete a confidential health questionnaire. This will identify changes in respiratory function. The Occupational Health Nurse will review the questionnaire and enquire of chest symptoms with the employee and undertake spirometry where there is any cause for concern.

The individual will have the opportunity to discuss any changes relating to their personal exposure to respiratory sensitisers.

The responsible person will be notified by Occupational Health of those staff who have attended for annual health screening. This is to enable the maintenance of the above-mentioned register.

Any member of the University who has been subject to health surveillance for working with respiratory sensitisers and is ceasing work at the University of Nottingham must inform the responsible person prior to leaving. The responsible person will then issue a confidential health questionnaire to be returned, by the individual, to Occupational Health. (Appendix 1).

People carrying out short-term work with respiratory sensitisers (i.e. less than six weeks duration) must be advised of the risk to health from these materials. This will be done by issuing the individual with a copy of Appendix 2. The exposure time should be restricted to a minimum.

**Feedback from health surveillance**
Any information concerning the state of an individual's health resulting from screening carried out at Occupational Health is medically confidential. One of the objectives of health surveillance however is to enable the adequacy of existing controls to be evaluated. If the health surveillance programme indicates that certain categories of worker or certain areas might involve significant exposures to respiratory sensitisers, then indicative feedback will be provided to enable the control measures in place to be
re-evaluated. Confidential medical information will not be included in such feedback. Where the provision of confidential medical information may be necessary in order to further protect the health of the worker, then this will only be provided with the written consent of the individual.

**Health education**

Health education involves:

1. Explanation of the symptoms of respiratory sensitisation and latency period;
2. The importance of good hygiene practices, e.g. changing clothes after work and washing hands;
3. Importance of using control measures such as extraction fans and ventilation units and also wearing appropriate protective equipment that should be properly maintained;
4. The symptoms of respiratory sensitisation which the individual should be looking out for and the importance of the procedures for reporting these;
5. The hazards to health of smoking, if relevant.

**Appendix 1**

*Termination of Employment Health Questionnaire for persons working with animal allergens*

**Appendix 2**

*Symptoms of Respiratory Sensitisation*

Any person exposed to respiratory sensitisers may develop a hypersensitivity or allergic response as a result of repeated exposure. Common examples that may be encountered in the University include antibiotics, proteolytic enzymes, flour and dust from some types of beans, some wood dusts and some components of epoxy resins. Manufactures and suppliers of chemicals and preparations that may cause respiratory sensitisation are required to label these accordingly, i.e. "May cause allergy or asthma symptoms or breathing difficulties if inhaled" and assign to it the hazard statement "H334". Supplier’s safety data sheets should also be referred to.

Many of the symptoms of Respiratory Sensitisation are similar to those of hay fever. They include rhinitis (sneezing and running nose), conjunctivitis (sore and runny eyes), and asthma (tightness of the chest and wheezing). In rare cases, an anaphylactic shock (a severe form of shock and collapse) may also occur.

The commonest symptoms are running eyes and nose although the most important health problem that may arise is occupational asthma, as this may develop into a disabling condition with recurrent episodes of wheezing and breathing problems. For those individuals who develop occupational asthma, symptoms may occur during working hours or may be delayed until several hours after exposure has ceased when the employee is away from the workplace. A temporary improvement can occur following longer breaks from work, e.g. weekends and vacations.

The symptoms commonly develop within six months of first starting work with the substance and in most cases within a two-year period. Occasionally symptoms occur for the first time after many years of working with these materials.