Working together for better workplace health

RESPIRATORY : Breathing
Many substances which can harm the respiratory (breathing) system can be found on construction sites.

The respiratory diseases caused to construction workers may include pneumoconiosis arising from silica (silicosis) or asbestos exposure, asthma and other allergic reactions (e.g. due to isocyanate paint or resin exposure) and chronic obstructive pulmonary disease. Some exposures in the construction industry can give rise to an increased risk of cancer of the lung. Smoking may contribute to the respiratory damage and the risk of cancer and some allergic responses.

Occupational Asthma (OA) is an important occupational health problem with serious implications for both affected individuals and their employers. For the affected individual, continued exposure to the causative agent usually leads to deteriorating asthma and the risk of severe and potentially life threatening asthma attacks. Even if exposure ceases, the more severely affected individuals may still be left with persistent asthma and chronic disability.

Occupational exposure to silica in construction work occurs in concrete removal, demolition work, tunnel construction, concrete or granite cutting, drilling, sanding and grinding. Other people in the vicinity of such work may also be exposed. If workers are employed in occupations listed in ‘Health surveillance for those exposed to respirable crystalline silica (RCS) - (G404, HSE 2006) health surveillance for silicosis should be considered. If the risk is low, it may be decided that health surveillance is unnecessary, but where there is a reasonable likelihood of silicosis developing then health surveillance will be appropriate. The decision must be made by the duty-holder, in the light of competent advice, taking account of current (and past) exposure circumstances. Health surveillance could require chest x-rays (at intervals, in addition to symptoms enquiries) and a baseline assessment would be appropriate. However, the benefits of such health surveillance need to be weighed against the risks associated with serial chest x-rays. Silica exposure is not only associated with an increased incidence of silicosis, but also chronic obstructive pulmonary disease (COPD), lung cancer and tuberculosis. It is good practice to monitor workers exposed to respirable crystalline silica for signs of COPD, which could include questionnaire and lung function testing and symptom enquiry may lead to early indications of tuberculosis. The Employer should also appoint a responsible person to report any symptoms that occur between tests.

COPD is a common chronic progressive lung disease which is mainly caused by smoking. It is a lung condition that encompasses chronic bronchitis (regular phlegm production) and emphysema (damage to the air sacs in the lung).

As well as smoking, COPD may be caused by chronic exposures to certain substances in the workplace such as coal-mine dust, silica, flour dust, grain, wood dust, metal fumes, and irritating gases such as nitrogen oxides and sulphur dioxide. Where workers breathe in mists, dusts, vapours or gases from products labelled R34, ‘Causes burns’, R35 ‘Causes severe burns’ or R37 ‘Irritating to the respiratory system’ there may be a risk of COPD. In particular construction work, welding and stonemasonry may be associated with COPD.

COPD by definition results in slowly progressive irreversible decline in lung function. The main emphasis should therefore be on primary prevention, which is best achieved by
smoking cessation, and the elimination or reduction of exposures to causative substances in the workplace. Where there is a strong evidence base for a link between specific exposures and COPD then statutory health surveillance will be appropriate (G401, HSE 2006).

Asbestosis is a serious, long-term lung disease caused by inhaling asbestos dust over a prolonged period of time. Asbestosis is one of a number of conditions that can be caused by exposure to asbestos. Other related conditions include cancer, mesothelioma (a malignant tumour in the lung) and benign pleural thickening (the lining of the lung is thickened and hardened).

Tuberculosis (TB) is an infectious disease caused by the bacterium Mycobacterium tuberculosis, also known as 'the tubercle bacillus' and one that shouldn’t be overlooked; The Health Protection Agency states that about 8000 new cases of TB are currently reported each year in the United Kingdom. Most cases occur in major cities, particularly in London.

**Relevant Regulations**

This list is not exhaustive:

The Health and Safety at Work Act 1974

The Management of Health and Safety at Work Act 1999

Equality Act 2010

The Data Protection Act 1998

Access to Medical Reports Act 1998?

Access to Health Records Act 1990

Control of Substances Hazardous to Health (COSHH) (2002)

The Control of Asbestos Regulations 2012

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)

Under ‘The Control of Substances Hazardous to Health Regulations (COSHH) (2002) and The Management of Health and Safety at Work Regulations (1999) an employer must make an assessment of the risks to any employees liable to be exposed to a substance hazardous to health. It should then be determined whether health surveillance is required. CBH accredited OHSP’s are able to assist the Construction employer as to the level of health surveillance required. Where occupational respiratory disease has been identified as a hazard the OHSP will ascertain an individual’s respiratory health using a questionnaire and where necessary perform a lung function test (spirometry). Spirometry measures how much and how quickly air can be expelled following a deep breath, it can help diagnose various lung conditions.

The Control of Asbestos Regulations 2012 came into force on 6 April 2012 (Asbestos Regulations - SI 2012/6322).These Regulations require a Statutory medical under Regulation 22 for Employees exposed to asbestos above the action level must be placed under adequate medical surveillance by a relevant doctor in accordance with the regulations. This
will include a past history, respiratory questionnaire and a lung function test. Chest X-rays are no longer mandatory, and are only undertaken on clinical requirements. The Regulations require that anyone undertaking a statutory medical for asbestos is an ‘Appointed Doctor’. This could be an Employment Medical Adviser, i.e. a medical inspector from the Health and Safety Executive (HSE), or a doctor appointed by the HSE. CBH can provide further guidance on finding an appointed doctor.

**What should you do?**

Develop a simple policy for hazardous substances. An example COSHH policy statement is given on the back page.

Identify someone who is to be responsible for hazardous substances on site; this could be a manager, supervisor or foreman. Ensure they have been given sufficient training/information to recognise substance related hazards and risks.

**Self check questionnaire**

An example self check questionnaire is available and is intended for use by responsible persons as part of health surveillance programmes for workers exposed to respiratory sensitisers or other respiratory hazards.

The responsible person, i.e. a supervisor or foreman should be properly trained by an occupational health doctor/nurse who should be involved in setting up the health surveillance programme.

All symptoms indicative of respiratory sensitisation or illness reported should be referred immediately to the occupational health doctor/nurse for further investigation. Responsible persons should not be expected to make judgements on the cause of the symptoms.

**Notes for the responsible person:**

- Workers should be instructed about the possible effects of sensitisation/ respiratory disease and should be warned that symptoms may not occur until the person is at home
- a pre-placement questionnaire should be administered prior to work commencing to establish health status
- while working with respiratory sensitisers/ hazards a periodic questionnaire should be used at appropriate intervals, i.e. 6 weeks, 6 months and annually thereafter, or as advised by your Occupational Health Service Provider (OHSP)
- exposed workers who develop any symptoms indicative of respiratory sensitisation/disease should be referred to the OHSP for further investigation

**Risk Assessment**

Identify and list the substances/materials you use.

Identify the potential hazards from this list

Identify who is potentially at risk, e.g. workers, subcontractors, visitors to site, members of public. Look at how you use the substance/material and where you use it (e.g. indoors/outdoors). Once you have assessed who could be harmed, how and when they
could be harmed, then you need to think about putting in some practical control measures to prevent the people you have identified from being exposed to the risk.

**What should you do if you have identified a problem?**

- put some control measures into place and make sure they are regularly checked
- take steps to eliminate or at least minimise the risks by ‘designing out’ the use of harmful substances, e.g. respiratory sensitisers, wherever possible. Where this is not possible, look into substituting the substance for something less hazardous
- consider enclosing the job if possible to prevent workers being exposed to the substance and also other people on site
- reduce the length of time that someone is using or potentially breathing in the substance by dividing up tasks between several workers and rotating them
- Use ventilation or extraction systems, e.g. for welding or dust collection
- provide respiratory protective equipment (RPE): subject to a risk assessment. Dust masks and similar personal protective equipment (PPE) should be a last resort and regularly checked
- ensure that all control measures you put in are maintained and used correctly
- have a maintenance schedule or planned maintenance
- make sure you have a defect reporting system in place so that workers can let you know if something is not working
- housekeeping: do not allow the build up of dusts, clean surfaces regularly (this may require specialists or extra control measures), e.g. damp down area
- provide adequate washing facilities, and cleaning procedures for protective clothing (unless disposable)
- prohibit smoking, drinking and eating in all work areas: smoking multiplies the effect of respiratory sensitisers
- inform supervisors and workers about any substances they work with that can potentially irritate or harm the lungs
- train supervisors and workers to recognise and report the early signs and symptoms of asthma (sensitisation)
- inform and train workers: risks to their health, symptoms of sensitisation, importance of reporting these, proper use of control measures, the need to report failures of control measures, e.g. regular toolbox talks
- carry out health surveillance where necessary
- set up a workable system for reporting work-related asthma, i.e. via a suitably trained first aider or supervisor
- refer at-risk workers to occupational health professionals, for health surveillance and accurate diagnosis of occupational respiratory disease
- carry out workplace monitoring and regular checks to ensure that all control measures are being used and are effective, e.g. PPE/RPE is used correctly and is in good condition. A further risk assessment should be undertaken if there is a change of substance or of its use
Pre-placement health assessment

On commencement of employment with you, do you check to see if your workers have any health issues which may require additional control measures implemented? If not, how do you know whether or not they have respiratory problems that may be affected by further exposure to a hazardous substance?

A pre-placement health assessment is a good way of obtaining base line information about a person, i.e. they may, because of previous jobs, already suffer a degree of respiratory problems, and may require a higher degree of protection.

Remember that this makes good business sense, especially to due to an increase in litigation claims.

It does not have to be a complex or complicated system, it could be as simple as a questionnaire which is sent to the employee who then completes and forwards it to an occupational health provider. This need not be expensive either, a simple assessment costs on average between £18 and £25 per pre placement questionnaire reviewed. The occupational health provider may advise on conducting a baseline health check, i.e. a lung function test.

Please note: A pre-placement health questionnaire should in all cases be assessed by a suitably qualified person, such as an accredited OHSP and NOT left to the HR department!

The purpose is:

To determine the fitness to work with respiratory hazards and to provide a baseline, thereafter as part of a periodic health surveillance programme (where exposure to respiratory hazards is identified on risk assessment)

To identify individuals at greater risk of becoming sensitised (atopy, allergic rhinitis)

Identify individuals with an established condition where subsequent exposure to a respiratory sensitiser would be potentially detrimental to their health (asthmatics)

Enable employers to implement appropriate control strategies for respiratory hazards by providing information on incidence and prevalence of occupational respiratory disease amongst their employees

It also provides an opportunity to educate employees about the risk to health from respiratory hazards, the need to comply with workplace policies and procedures regarding exposure to respiratory hazards and the use of PPE/RPE.

Frequency

Dependant on the risk, new employees’ respiratory health surveillance may be repeated at 6 weeks (high risk) and 12 weeks, and annually thereafter.

Subsequent surveillance:

Periodic health surveillance should be undertaken annually, and comprise of the surveillance relevant to the risk.

Respiratory health surveillance will cease when the employee is not longer exposed to hazards requiring surveillance or when employment is terminated. An exit test should be
undertaken for all employees who have undergone a programme of respiratory health surveillance if an interval of 6 months has elapsed since their last health surveillance appointment.

The type of surveillance may vary depending on the hazard and exposure, i.e. respiratory questionnaire, lung function test or chest x-rays could be required as part of health surveillance for silicosis where indicated.

**Reports**

*A Health Record should be set up, including:*

- Employee surname and forenames
- Gender
- Date of birth
- Permanent address and postcode
- National Insurance number
- Date of commencement of present employment

A historical record of jobs involving exposure to substances requiring health surveillance in this employment.

Date and results of the respiratory checks, with any conclusions only relating to an individual's fitness to work

Conclusions should be expressed in terms of the employee's fitness for task and will include the conclusions of the occupational health professional or responsible person, but NOT “confidential clinical data.” Health records should not contain personal medical information. This must be kept separately and in confidence by the OHSP.

Each health record should be kept up to date and retained for as long as the employee is under health surveillance. It is good practice to offer individual workers a copy of their health records when they leave the job.

**Example COSHH policy statement**

The Control of Substances Hazardous to Health Regulations 2002 apply to our working environment.

We recognise that some substances have the potential to cause ill health and we will introduce measures to identify what substances our workers use or are exposed to in the course of their work.

Wherever we can, we will discontinue the use of harmful substances (so long as this can be done without serious detriment to our business). These substances will be sent for disposal and no more obtained. Where a harmful substance is being used, we will replace it with a suitable and less hazardous substance wherever possible.
Substances that we must use will be assessed and control measures introduced to prevent risk to our workers or others affected by our business operations. Where reasonably practicable, these measures will not involve personal protective equipment (PPE).

We will assess the use of all new substances introduced into the workplace. At least once a year, we will make an inventory of all substances present on site and review our control measures, to ensure that the management controls are still appropriate and effective.

Where PPE/RPE must be used, workers will be provided with the appropriate equipment, which will be maintained, repaired and tested as required by each class of protection.

Information, Instruction and Training will be provided for all workers who may be exposed to hazardous substances. The necessary information and training will also be provided for any non-workers working on site who may be exposed to hazardous substances.

Signed

(Chairman / Managing Director / Senior Partner)

Date

Expert help is available from:
Constructing Better Health
Contact us for impartial and confidential advice:
tel: 0845 873 7726 or click on www.cbhscheme.com

CBH accredited occupational health service providers listed on the CBH website

Further information regarding preventative measures can be found on the HSE website in the Construction Occupational Health Management Essentials toolkit (COHME).

www.hse.gov.uk