

# Respiratory Disease

Guidance Note 37

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## Respiratory Disease

### Introduction

This Guidance Note gives practical information about respiratory disease.

A sample checklist template has been included in Appendix 1. If you wish to use this template to construct your own documents, you must ensure that all references to **Santia Accreditation** have been removed and the final documents are clearly incorporated into your existing safety management system.

A respiratory sensitiser is defined as a substance which can induce changes in the immune system of susceptible workers such that respiratory symptoms will present themselves on future exposure to the substance even at very low doses.

Breathing in substances called respiratory sensitisers at work can cause respiratory diseases such as asthma. Further exposure to hazardous substances can lead to conditions such as chronic obstructive pulmonary disease (COPD) and silicosis.

Respiratory sensitisers are used in a wide range of work activities and when breathed in can trigger an irreversible allergic reaction in the respiratory system. Once sensitisation occurs, further exposure to the substance, even the smallest amount, will produce symptoms. It should be noted that sensitisation does not normally occur immediately, but after several months or even years of breathing in the sensitiser.

It is not advisable to let people work in an environment where there are respiratory sensitisers if they are predisposed to asthma. So, a programme of health screening for new employees and for employees who are transferring departments within the organisation, should be put in place.

### What are the symptoms of sensitisation?

The symptoms are:

- Asthma - attacks of coughing, wheezing and chest tightness
- Rhinitis and conjunctivitis - runny or stuffy nose and watery or prickly eyes.

Further chronic conditions include:

**COPD** - An airflow obstruction that is not fully reversible and is associated with inflammatory responses of the lungs to hazardous substances. Symptoms include a chronic cough, sputum production, and shortness of breath. COPD can be caused by smoking, but exposure to harmful dust, fume and gases are also contributory factors to the development of the disease. Construction workers have higher levels of this disease than the general population.

**Silicosis** - An irreversible lung disease that can take years to develop. Exposure to fine particles of respirable crystalline silica (RCS) can cause damage and inflammation in the lungs which over time, leads to the formation of scar tissue (fibrosis). The main symptoms are breathing difficulties and a chronic cough which may not appear before retirement. This condition can be extremely serious and lead to early death. Stone dust often contains high levels of RCS and construction workers have an increased risk of developing silicosis because of exposure to high levels of silica dust for certain tasks (and there may also be a risk of COPD). If high-speed cutting tools are used on high-silica-content materials without suitable controls, RCS exposures can be very high.

Examples where RCS exposure can be high include:

- Cutting kerbstones
- Stonemasonry
- Scabbling and surface grinding
- Tunnelling
- Crushing and screening demolition material
- Clearing and removing rubble; and
- Chasing out mortar before repointing.

### Legal Requirements

The Control of Substances Hazardous to Health (COSHH) Regulations 2002 is the main piece of legislation dealing with occupational exposure to chemicals and substances, including those that have or may have the potential to cause respiratory disease. These regulations encourage the substitution of hazardous substances wherever possible and if not practical, require adequate controls or precautions so as to safeguard both human health and the environment.

COSHH requires you to carry out an assessment of the risks created by work which are likely to expose your employees to respiratory sensitisers.

Addressing and controlling risks from respiratory disease - the five stages:

- Stage 1: Arrangements
- Stage 2: Assess health risks
- Stage 3: Eliminate risk
- Stage 4: Control risk
- Stage 5: Manage remaining risk

Employees should be **informed, instructed and trained** regarding risks to health, symptoms, reporting, control measures etc.

Please see the separate Guidance Note on COSHH for further details on this aspect.

### Who is affected?

In construction, a broad range of tasks and activities (e.g. painting or carpentry etc.) can create a risk of exposure to the main causes of respiratory disease.

Below is a table listing common sensitisers and other associated activities:

Substance Group	Activity
Isocyanates	Vehicle paint spraying; foam manufacturing
Flour/grain/hay	Handling grain at docks; malting, baking, milling
Glutaraldehyde	Disinfecting instruments
Wood dusts	Woodworking, sawmilling
Electronic soldering flux	Electronic assembly
Latex	Gloves
Some glues/resins	Curing of epoxy resins

### Health surveillance

You will need to set up a system of health surveillance if your employees are exposed to respiratory sensitisers unless you are confident your COSHH assessment shows that there is unlikely to be a risk to their health.

### Dealing with sensitised employees

Following health surveillance, if you believe an employee has become sensitised you will need to:

- Remove the individual from working with the sensitiser and advise them to consult a doctor giving information on the work they do and the substances they may have been breathing
- Review your COSHH assessment and existing control measures and make any necessary changes

### Further guidance

- Control of Substances Hazardous to Health Regulations 2002 Approved Code of Practice and Guidance  
L5  
ISBN: 9780717629813  
Available at:  
<http://books.hse.gov.uk/hse/public/saleproduct.jsf?catalogueCode=9780717629817>
- Workplace Exposure Limits  
EH40/2005  
ISBN: 9780717664467  
Available at: <http://www.hse.gov.uk/pubns/books/eh40.htm>

The HSE website also has sections dedicated to respiratory sensitisers at:

- <http://www.hse.gov.uk/asthma/index.htm>
- <http://www.hse.gov.uk/copd/index.htm>
- <http://www.hse.gov.uk/lung-disease/silicosis.htm>

