G404

COSHH essentials: General guidance

Health surveillance for those exposed to respirable crystalline silica (RCS)

Control approach 4 Special

This information will help employers comply with the Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended, to control exposure and protect workers' health.

It is also useful for trade union safety representatives.

This sheet describes specialist advice on health surveillance for silicosis caused by respirable crystalline silica (RCS).

It sets out what you should expect from a health provider.

It also gives information about how to monitor respiratory health for other diseases that might be caused by RCS such as chronic obstructive pulmonary disease (COPD).

Tell your occupational health professional if workers have developed or noticed recent, persistent worsening of any of the following symptoms:

- **difficulty in breathing; or**
- **coughing.**

If workers smoke, help them to cut down or stop.

Introduction

✓ Your work involves dusts that can cause lung diseases. The risks depend on:

- how long workers are exposed to the dust;
- how much they are exposed to; and
- how much crystalline silica there is in the dust.

✓ Although it arises in obviously dusty environments RCS dust is invisibly fine. It is breathed in through the nose and mouth and can stay in the lungs for many years. It can cause irreversible lung damage before any symptoms develop. The illness it causes may continue to worsen even after exposure stops.

Silicosis

✓ Silicosis is a major disease risk from RCS dust. It causes small hard nodules of scar tissue to develop in the lungs that are seen on a chest X-ray. Silicosis usually takes some years to develop. There is also an acute form of silicosis that occurs at very high exposures. This can start within a short time and can kill within a few months of first exposure.

✓ The main symptoms are cough and difficulty in breathing. Workers with silicosis are at increased risk of tuberculosis and lung cancer and may also develop kidney disease and arthritis (and related diseases). Those who work with silica may be at increased risk of some of those diseases even if they do not develop silicosis.

Chronic obstructive pulmonary disease (COPD)

✓ Exposure to RCS may also cause COPD. This disease interferes with air movement in and out of the lungs and causes breathlessness, often with a chronic cough and sputum (phlegm).

Occupations

✓ Occupations with exposure to RCS include: mining, quarrying, slate works, foundries, potteries, brick and tile making and stonemasonry.

✓ Construction work involving cutting or breaking stone, concrete or brick, abrasive blasting and tunnelling is associated with silicosis.

✓ Industries that use silica flour to manufacture goods are also at risk.

Planning and preparation

✓ Plan what you are going to do if a worker shows signs of lung disease. Make sure your employees are aware of your plans.

What is health surveillance for silicosis?

✓ Health surveillance is collecting and using information about workers' health, related to their work. The early detection of breathing problems or lung damage could mean you need to protect workers' health by reducing exposure to dust.

✓ Involve a health professional (doctor or nurse) in your health surveillance programme – see 'Useful links'. They will develop your scheme.

✓ You should consider undertaking heath surveillance if workers are employed in the occupations listed on page one and if they are exposed to RCS dust.

✓ If the risk of exposure is low you may decide, with the health professional, that health surveillance (involving an x ray and symptom enquiry) is unnecessary.

✓ Where there is a reasonable likelihood of silicosis developing, health surveillance will be necessary. You need to consider, in discussion with your health professional, the risk of silicosis or tuberculosis developing due to RCS and decide what health surveillance is appropriate.

✓ The health professional may, in any case, recommend an X ray as part of the clinical investigation of an individual who reports new or worsening respiratory or other symptoms.

✓ Health surveillance is **never** an alternative to the proper control of exposure. It is not the same as health screening or health promotion.

What would health surveillance involve?

✓ Health surveillance for silicosis could require chest x-rays at intervals in addition to enquiries about new or worsening breathing symptoms.

✓ Baseline assessment is always appropriate where there is a risk of silicosis. Discuss the need for a chest x-ray at the start of employment, with the health professional.

✓ Symptom enquiry is also needed where there is a risk of tuberculosis.

✓ The health professional must explain the test results to the individual, and report to you on the worker's fitness to work.

✓ The health professional also needs to interpret the result trends for groups and individuals and identify any need to revise the risk assessment.

✓ You need to appoint a responsible person, supported by the health professional, to report any symptoms that occur between tests.

✓ You need to keep a health record, and encourage workers to keep a copy of their results in case they change jobs. Keep health records and the results of lung function tests for 40 years.

✓ You need to keep simple attendance records to identify any patterns to sickness absence.

Chronic obstructive pulmonary disease (COPD)

■ We are not certain about the risk of developing COPD from RCS exposure.

✓ It is good practice to monitor all workers exposed to RCS for signs of COPD.
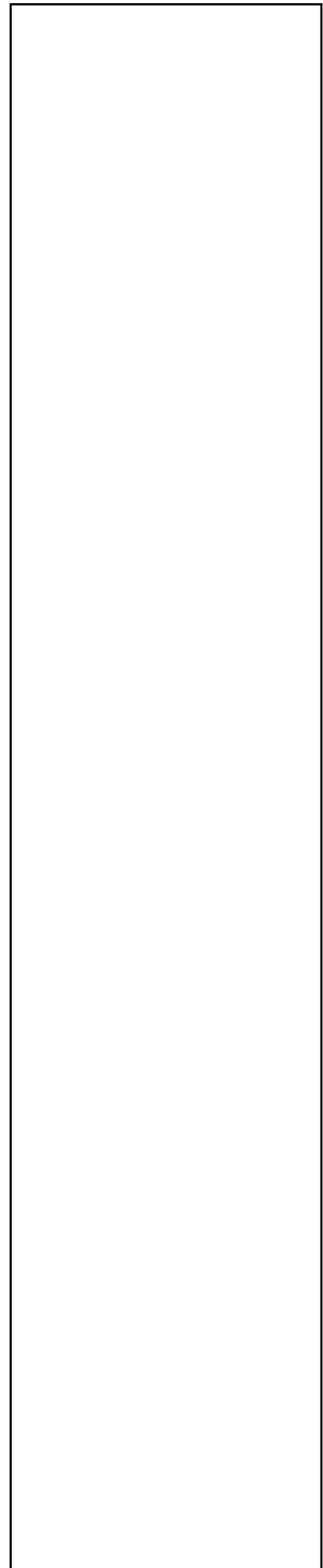
What would this sort of health monitoring for COPD involve?

✓ Involve a health professional (doctor or nurse) in your health monitoring programmes – see 'Useful links'. They will develop your scheme.

✓ This could include the following:

- Assess workers' respiratory and other health before they start a relevant job, to provide a baseline (perhaps using a questionnaire and lung function assessment).
- Regular tests (as advised by the health professional) – this could involve a questionnaire and possibly lung function assessments. They should explain the tests results to the individual, and report to you on the worker's fitness to work.
- Health providers should be suitably qualified, eg with an ARTP diploma. This means that their tests will be 'right'. See 'Useful links'.
- The providers should interpret the result trends for groups and individuals, and identify any need to revise the risk assessment.
- You should appoint a responsible person, supported by the health professional, to report any symptoms that occur between tests.
- Keep a health record, and encourage workers to keep a copy of their results in case they change jobs.
- Keep simple attendance records to identify and any patterns to sickness absence.

Monitoring for other diseases

- There is no way of detecting lung cancer early enough to make a difference.
- We do not know enough about RCS causing other diseases for HSE to recommend monitoring for them.

Record keeping

✓ Record:

- the activity that can cause exposure to RCS;
- worker's name, address and National Insurance number;
- products or process they work on, and how often;
- protective measures provided;
- date of starting work with the product or process; and
- the fitness for work statement.

Useful links

- For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.
- Look in the Yellow Pages under 'Health and safety consultants' and 'Health authorities and services' for 'occupational health'.
- Also see www.nhsplus.nhs.uk.

This document is available at: www.hse.gov.uk/pubns/guidance/ and www.hse.gov.uk/coshh/essentials/

This document contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.