

Control of exposure to grain dust

An employee's guide



Introduction

Grain dust can affect your health. This guidance tells you about:

- where you might be exposed to grain dust at work;
- health problems that may occur if you are exposed to grain dust;
- what your employer should do to protect your health;
- precautions you should take.

What is grain dust?

Grain dust is the dust produced from the harvesting, drying, handling, storage or processing of barley, wheat, oats, maize or rye and includes any contaminants or additives within the dust.

Where might you be exposed to grain dust?

Working in these industry sectors:

- agriculture;
- flour mills and food factories;
- animal feed mills, feed blenders and feed compounders;
- maltings, breweries and distilleries;
- docks and grain terminals;
- commercial stores;
- transportation of grain.

Carrying out these processes:

- harvesting grain and transferring grain from combines into trailers;
- cleaning, dressing and drying grain;
- moving grain about in a grain store;
- transferring grain in or out of grain stores or terminals;
- milling and mixing dry grain;
- feeding dry milled grain;
- maintaining plant and equipment;
- cleaning buildings, vehicles, plant and equipment using compressed air or by manual/mechanical sweeping;
- cleaning silos.

How can grain dust harm your health?

Grain dust is a respiratory sensitiser. When the dust is inhaled it can trigger an allergic reaction in the respiratory system of some people. If this happens, any subsequent exposure – even to very small amounts – may produce respiratory illness.

Short-term effects may include:

- coughing and breathing difficulties;
- watery or prickly eyes (conjunctivitis);
- runny or stuffy nose (rhinitis);
- skin irritation;
- grain fever/organic dust toxic syndrome (a short-lived 'flu-like' illness).

Long-term effects may lead to serious respiratory complaints, including:

- asthma (coughing, wheezing and chest tightness);
- chronic bronchitis (cough and phlegm production);
- chronic obstructive pulmonary disease (a long-term illness that makes breathing difficult);
- farmer's lung (increasing shortness of breath and weight loss).

What should your employer do to protect you?

The Control of Substances Hazardous to Health Regulations 2002 (COSHH) as amended require your employer to:

- assess the risk to your health and the precautions needed for your protection;
- write this down (if more than five employees);
- tell you about the assessment;
- prevent your exposure to grain dust or, where this cannot reasonably be done, adequately control your exposure by:
 - providing you with suitable work equipment and materials to carry out your work safely;
 - controlling exposure at source, including adequate ventilation systems and appropriate organisational measures;
 - where adequate control of exposure cannot be achieved by other means, providing respirators (eg masks) and consulting you over their selection;
 - reducing your exposure to airborne grain dust to as low as is reasonably practicable (ALARP) and, in any case, below the workplace exposure limit (WEL) which is 10 mg/m³ of grain dust averaged over eight hours;
- maintain all dust controls in efficient working order;
- monitor to ensure that controls are effective and that the WEL is not exceeded (may involve measurement of dusts levels);
- arrange appropriate health checks;
- instruct and train you to use control measures properly and tell you about the health risks.

What should you do?

- As repeated exposure can lead to chronic disabling illness, avoid it by protecting yourself.
- Ask how the job should be done safely, without risks to your health.
- Follow safe working procedures.
- Use controls such as dust extraction as you were trained to do.
- Report defects in enclosures, extraction equipment and other control measures to your employer immediately.
- Wear protective clothing properly.
- If you have to wear a respirator, make sure that:
 - you are wearing the right type of respirator for the job;
 - for tight-fitting respirators, you have a face-fit test to ensure it fits properly;
 - you are clean shaven and check the fit of the respirator when you put it on so that it works effectively;
 - you have been trained to use, check and clean the respirator;
 - the filters or disposable respirators are changed regularly;
 - the equipment is stored in a clean, dust-free place;
 - you tell your supervisor or employer if you find any defects, or your respirator does not fit, is dirty or its filter is old. Your employer must put it right.

Should you have health checks?

If you are exposed to grain dust, you should be having suitable health checks on a regular basis. The extent and detail of the health checks should be related to the degree of risk identified by your employer. Health checks should be arranged by your employer and may include:

- an initial assessment that includes details of your past health, especially any breathing problems;
- filling in a respiratory questionnaire that includes questions on symptoms that may relate to health effects of grain dust exposure;
- lung function tests which highlight any aspects of your breathing that may be affected.

Where required, you should attend any health checks arranged by your employer and report any breathing or skin problems to your employer/doctor as soon as they happen.

Find out more

HSE's agriculture web pages: www.hse.gov.uk/agriculture/index.htm and lung diseases web pages: www.hse.gov.uk/lung-disease/index.htm

A step by step guide to COSHH assessment HSG97 (Second edition) HSE Books 2004 ISBN 978 0 7176 2785 1 www.hse.gov.uk/pubns/books/hsg97.htm

Dust in the workplace: General principles of protection Environmental Hygiene Guidance Note EH44 (Fourth edition) HSE Books 2013 www.hse.gov.uk/dust/index.htm

Further information

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.

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