

## WHAT IS SILICA DUST?

Silica dust is created when the 'crystalline silica' that's a natural part of stone, bricks, tiles, some plastic composites and many other products is broken down and released into the air. You make this harmful dust when you do things like drill, saw, cut, grind, carve or sand materials that contain silica – even working with ballast on a railtrack or sweeping up after a task can release unhealthy dust.

Silica dust particles are tiny – much smaller than a single grain of sand. And they float in the air for longer, so there's more chance to breathe them in.

## HOW IS SILICA DUST DANGEROUS?

Silica dust isn't like house dust. The particles are so small that you can breathe them deep into your lungs and damage them. For some people, this can end in serious diseases, including emphysema, silicosis and cancer.



### SILICA DUST FACT

In the EU, 7,000 cases of lung cancer a year are put down to silica dust

**WORKING TOGETHER TO BEAT OCCUPATIONAL CANCER**  
[www.notimetolose.org.uk](http://www.notimetolose.org.uk)

Follow the campaign at  
[twitter.com/\\_NTTL](https://twitter.com/_NTTL)

In association with



Institution of Occupational  
Safety and Health  
The Grange  
Highfield Drive  
Wigston  
Leicestershire  
LE18 1NN  
UK

t +44 (0)116 257 3100  
f +44 (0)116 257 3101  
[www.iosh.com](http://www.iosh.com)

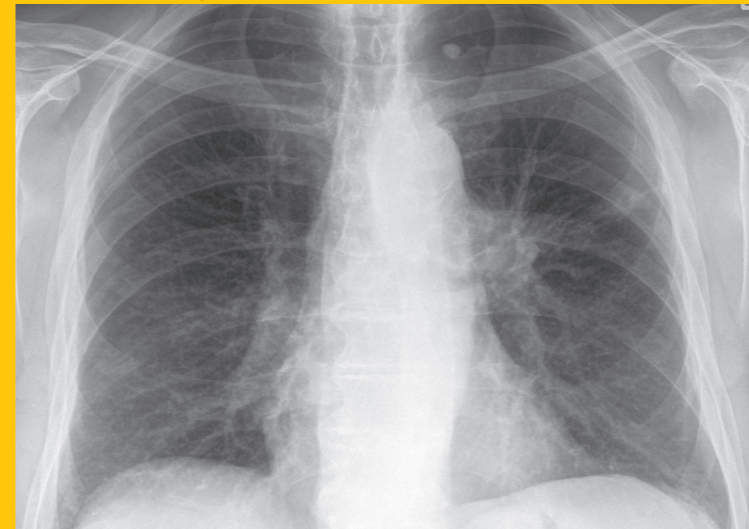
[twitter.com/IOSH\\_tweets](https://twitter.com/IOSH_tweets)  
[facebook.com/IOSHofficial](https://facebook.com/IOSHofficial)  
[tinyurl.com/IOSH-linkedin](https://tinyurl.com/IOSH-linkedin)  
[youtube.com/IOSHchannel](https://youtube.com/IOSHchannel)  
[instagram.com/ioshofficial](https://instagram.com/ioshofficial)

This document is printed on chlorine-free paper produced from managed, sustained forests.



# DUST TO DUST?

Silica dust can kill you.



[www.notimetolose.org.uk](http://www.notimetolose.org.uk)

You can get lung disease – from silicosis to lung cancer – if you don't protect yourself from silica dust.

These diseases are life-changing, and even deadly. And if you damage your lungs, it's permanent – there is no cure. You could end up:

- without enough breath to do simple tasks at work or enjoy your home life
- unable to provide for yourself or your family
- connected to an oxygen cylinder to help your breathing
- facing an early death.



### SILICA DUST FACT

In Australia, it is estimated that 230 people develop lung cancer each year as a result of past exposure to silica dust at work

## WHAT YOUR EMPLOYER SHOULD DO

- Assess the health risks from tasks that could expose people to silica dust – and tell you about the risks and how to avoid them
- Control the risks to silica dust exposure, for example by:
  - changing a design or process so that less silica dust is created in the first place
  - swapping a material that has silica for a safer one
  - fitting enclosures or hoods and using local exhaust ventilation systems for machinery that creates dust
  - fitting extraction devices to hand-held tools to keep dust levels down
  - providing water suppression devices to damp down dust
  - issuing the right respiratory protective gear to prevent people breathing in silica dust
- Train you in when and how to use different controls and equipment
- Explain the 'workplace exposure limit' and what it means in practice
- Test and maintain all equipment to make sure it works properly
- Tell you what to do if machinery or equipment fails
- Give you the results of any monitoring of exposure and the general results of health surveillance

## WHAT YOU SHOULD DO

- Check with your boss if you're not sure if the work you're doing could create silica dust
- Learn about and use the control methods that can protect you – for example, this could include using water or on-tool extraction to keep dust out of the air
- Follow safe work procedures
- Wear respiratory protection if you've been asked to – even if you're using other control measures like local exhaust ventilation. Make sure you wear your mask properly – if you don't, it won't protect you
- Don't 'dry sweep' after a job – remember that this will disturb the dust again. Do wet cleaning or use an industrial vacuum and wear your mask

Ask your employer if you're not sure about anything or you want to get more information.

### SILICA DUST FACT

As well as lung cancer, silica dust also causes silicosis – this serious lung disease killed 46,300 people worldwide in just one year

**IT IS ESTIMATED THAT 5,758 AUSTRALIAN WORKERS WILL DEVELOP SILICA-RELATED LUNG CANCER OVER THE COURSE OF THEIR LIFE**

EXPOSED TO SILICA DUST AT WORK...  
500,000 UK  
5 MILLION EU  
2.2 MILLION USA  
10 MILLION INDIA  
23 MILLION CHINA  
587,000 AUSTRALIA

## COMMON MYTHS ABOUT SILICA DUST

- You won't get lung damage if you blow your nose after breathing in dust
- I'm OK if I'm working outside
- The work I'm doing only takes a short time so I'll be fine
- The dust will clear quickly

**Wrong.** Silica dust particles are tiny enough to get deep into your lungs and damage them – you can't just blow the dust out. Even when you're outside, you can still breathe in the dust you make when working with materials that contain silica – including stone, bricks, concrete and tiles. And just a quick task can result in dangerous dust getting into the air and staying there while you carry on breathing it in.

**Think about the people you're working with. The dust doesn't stop with you.**

Find out more about silica dust risks and whether there could be dangerous exposures where you work – go to [www.notimetolose.org.uk](http://www.notimetolose.org.uk)

## HOW MUCH DUST IS 'SAFE'?



Silica dust

After you've used the right gear and protective equipment, the tiny amount of silica dust next to the coin is the **most** you should be breathing in a day. This is one 40,000th of a teaspoon of silica dust\*.

\*Based on a teaspoon of silica dust weighing 4g. One 40,000th represents 0.1 mg/m<sup>3</sup>, the British workplace exposure limit for silica dust. Limits vary from country to country.