

## **HIDDEN KILLER**

### **silica dust –much more than a nuisance dust**

The dust created when construction workers are cutting concrete products which contain concrete or mortar e.g. roof tiles, kerbs or when renovating stonework e.g. buildings constructed from granite or sandstone; is not just a nuisance, it can seriously damage your health. Construction workers are at high risk of developing silicosis because many of the common jobs on a construction site can create high levels of silica dust.

HSENI are concerned at the large number of times their Inspectors are coming across the following or similar situations:



Anyone who breathes in silica dust should be aware that this can do damage to their lungs and airways. The health effects (called silicosis) are often not immediately obvious and the harm often takes a long time to develop as the dust builds up in the lungs. Unfortunately by the time you notice that your health is affected the damage already caused to your lungs may be serious and life changing. In certain individuals silicosis can come on quickly without previous warning. Silicosis is a progressive disease and in some cases will continue to develop after the exposure has stopped.

The Control of Substances Hazardous to Health Regulations (Northern Ireland) 2003 requires employers to control substances that are hazardous to health, including silica dust.

There are 3 key things which you need to do:

1. Assess the risks
2. Control the risks
3. Review the control.

Preparation is the key factor to controlling the risks, so before work starts look at ways of stopping or reducing the amount of silica dust which will be produced. Examples of this are to use the correct size of building materials so less cutting is needed, use a less powerful tool.

After this you may find that your construction work still produces some silica dust and you should consider how to stop this dust getting into the air. There are 2 main ways of doing this:

**1 Water – using water suppression** damps down the dust clouds but it needs to be used correctly with enough water being supplied at the right levels for the whole time the work is being done. Simply wetting the material once at the start of the job is not enough.



Water suppression on a cut off saw

**2 On- tool extraction which removes the dust** as it is being produced by the construction work. It is a type of local exhaust ventilation system (LEV) and consists of a hood on the tool which captures the dust. This is taken by tubing to the right type of extraction unit e.g. an H or M class vacuum.



Wall chasing using on tool extraction

If you cannot control the dust to reduce the exposure sufficiently, the worker may need to use respiratory protection (RPE) as the last line of protection.

The RPE needs to be:

- Adequate for the amount and type of dust
- Suitable for the work being done
- Compatible with other items of protective equipment (PPE) e.g. safety glasses
- Fit the user
- Worn correctly

If the chosen RPE is a tight fitting mask then the user must have undergone face-fit testing for each type of mask and be clean shaven.

Training is required to tell the workers about the risks from silica dust, how to use the control measures, how to maintain & clean their equipment, how to use and check RPE and what to do if something goes wrong. The person in charge should check to make sure that workers are doing the job in the right way and using the control measures properly.

Health surveillance may be required and you may need advice for this from an occupational health professional.

HSENI's Principal of the Construction group Nancy Henry says, "The industry knows that silica dust is harmful and yet HSENI's experience is that clouds of silica dust are still being created on some construction sites. This is not acceptable and everyone involved in this type of construction work must start putting precautions into place and protecting the health of the workers"