

Clean air programme

The Clean Air programme is WorkSafe's first targeted intervention on work-related health. Its immediate goal is to reduce the risk of respiratory disease caused by exposure to respirable crystalline silica and organic solvents in the construction and manufacturing sectors.

Silica is found on most construction sites, in concrete, wall board, blocks and paving, brick, stone aggregate, tile and sand. Silica dust is produced by cutting, sawing, breaking, hammering, crushing, drilling, chipping, or grinding concrete or masonry, or abrasive blasting. People can easily inhale dusts containing silica into their lungs if they work on products containing silica.

Organic solvents are in many products, including paints, glues and cleaning products. They are often used in the following occupations:

- spray painting metal or furniture
- chemically stripping paint
- degreasing metal parts
- using glue in joinery or shop fitting
- spraying adhesives and resins in boatbuilding and flooring industries.



When breathed in, organic solvents are easily absorbed into the deep tissue of the lungs. From there, they spread into the bloodstream. Once in the bloodstream, solvents can affect various organs, as well as the central nervous system and peripheral nervous system.

Repeated exposure can cause irreversible chronic conditions, including brain damage.

A study¹ found that 58.8% of trades workers reported that they were exposed to oils and solvents during their work. Other occupations that self-reported exposure to solvents included agricultural and fishery workers, plant/machine operators and elementary workers (labourers and service workers).

Raising awareness

A key part of the Clean Air programme is raising awareness of the health risks of these substances and how they can be eliminated or controlled. Staff from our construction programme are already on the road engaging with industry on this issue through nationwide roadshows. Last year, they conducted 26 presentations to 4,000 attendees.

Inspectors are trained on these airborne contaminants and are supporting workplaces to control these risks. From July to December 2015, inspectors conducted 670 silica assessments, and issued 54 notices (36 improvement notices, 9 prohibition notices and 9 written warnings).

The programme is well under way in Christchurch. The Canterbury Rebuild programme has been building awareness of airborne contaminants through events like trade breakfast sessions for construction workers. WorkSafe also organised a mobile work-related health van, staffed by two occupational health nurses, to tour rebuild sites. The nurses saw over 900 construction workers, who all received advice on how to make sure personal protective equipment (PPE) is fitted correctly, plus information on health risks.

What can businesses do?

Eliminate silica and solvents from the workplace

PCBUs must eliminate the risk if it's reasonably practicable. An example of eliminating isocyanate paints from the workplace is to replace them with water-based paints.

Minimise risks

If elimination isn't reasonably practicable, minimise worker exposure to these products. Examples for silica are to fit extraction systems or use water suppression systems.

Respiratory protective equipment (RPE)

If a risk to health still remains, supply RPE to workers and make sure they know why and how to use it.

They are not meant to be the sole method of reducing risk. RPE must be used alongside other minimisation controls.

Fit test the RPE

Fit testing is very important. RPE works if it forms a seal around the wearer's nose and mouth. Fit testing is conducted by trained specialists. Your safety gear supplier can help you locate one.

Monitoring

Monitor workers' lung health annually. This helps ensure the controls are working, and may detect early symptoms of work-related ill health.

Monitor the workers' exposure to solvents or silica to see what levels of dust or solvent vapour are being created. Always consider if they can be further reduced.

Information and training

Make sure workers know about the health risks and controls for silica and solvents. 'Toolbox talks' can be useful here.

Make sure they understand the risks, what they need to do to protect themselves, and why it's important to take part in health monitoring.

What's next?

Our focus is expanding to areas like welding fumes and wood dust. These can cause, among other illnesses, chronic obstructive pulmonary disease and chronic lung disease.

¹ Eng, A. et al (2010). The New Zealand Workforce Study I: Self-Reported Occupational Exposures. Published by Oxford University Press on behalf of the British Occupational Hygiene Society.