

Exposure risk matrix

This matrix was based on work by Monash University Centre for Occupational & Environmental Health^{1,2}. It has been modified by the experience of WorkCover Queensland³ screening of 1053 workers from September 2018 to May 2021 exposed to respirable crystalline silica from engineered stone, and the experience of Mining and Quarrying Occupational Health and Safety Committee (MAQOHSC) South Australia⁴. It is anticipated that future research will refine the utility of this tool when combined with targeted exposure questionnaires across other exposure settings.

The purpose of the risk matrix is to help guide the clinical selection and frequency of strategies for ongoing health surveillance.

Step 1: Duration

Review the person's employment history. Calculate the number of years the person has been in the industry and exposed to engineered stone

$$\text{Duration (years)} = \text{Year ended (or current)} - \text{cumulative years of exposure (at any intensity)}$$

Step 2: Exposure Intensity

Review up to four of the person's dustiest roles in the industry. For each role assess the proportion of time undertaking dry work and working near someone else doing dry work. Select the highest intensity from any of the roles considered. For example, if rarely to question 1 and very frequently to question 2 for role 1 and always for question 1 and 2 for role 2, the overall result is very high.

1. What proportion of time did you spend doing dry work (without use of water)? (Circle answer)

Never 0%	Rarely 1 to <10%	Sometimes 10 to <25%	Frequently 25 to <50%	Very frequently 50 to <100%	Always 100%
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2. What proportion of time have you spent near someone else doing dry work since starting this job? (circle answer)

Never 0%	Rarely 1 to <10%	Sometimes 10 to <25%	Frequently 25 to <50%	Very frequently 50 to <100%	Always 100%
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Exposure intensity scale



Step 3: Exposure Dose

The exposure dose matrix considers the number of years a person has been in the industry (Step 1) and their likely exposure intensity (Step 2).

DURATION (years in industry)		DURATION			
		< 2	2-4	4-6	> 6
EXPOSURE INTENSITY	LOW	LOW	LOW	MEDIUM	MEDIUM
	MEDIUM	MEDIUM	HIGH	HIGH	HIGH
	HIGH	HIGH	HIGH	HIGH	VERY HIGH
	VERY HIGH	VERY HIGH	VERY HIGH	VERY HIGH	VERY HIGH

1. Monash University Centre for Occupational & Environmental Health (MonCOEH) (79); 2. Hoy, Glass (80); 3. WorkSafe Queensland Government (16); 4. Government of South Australia (84)