

**Appendix table A** Assessment of Study Quality

Studies	Selection						Comparability		Outcome					Score
	1A	1B	2	3A	3B	4	5A	5B	6A	6B	7	8A	8B	
Dong D, et al. 1995	1	0	0	1	0	0	0	1	0	1	1	0	1	6
Steenland K, et al. 2001	0	1	0	1	0	1	0	1	0	1	1	0	1	7
Weiner J, et al. 2007	1	0	0	1	0	1	1	1	0	1	1	0	1	8
Radican L, et al. 2008	0	1	0	1	1	1	0	1	0	1	1	1	0	8
Vacek PM, et al. 2011	0	1	0	1	0	1	0	1	0	1	1	0	1	7
Lu Y, et al. 2012	0	1	0	1	1	1	1	0	0	1	1	1	0	8
Chen W, et al. 2012	1	0	1	1	0	1	1	1	0	1	1	0	1	9
Liu Y, et al. 2014	1	0	1	1	0	1	1	1	0	1	1	0	1	9
Liu Y, et al. 2017	1	0	1	1	0	1	1	1	0	1	1	0	1	9
Fan C, et al. 2018	0	1	0	1	0	1	0	0	0	1	1	0	1	6
Lai H, et al. 2018	0	1	1	1	0	1	1	1	1	0	1	0	1	9
Björ B et al. 2009	0	1	1	1	0	1	0	1	0	1	1	1	0	8
Graham WG, et al. 2004	0	1	0	1	0	1	0	1	0	1	1	0	1	7
Miller BG, et al. 2010	0	1	1	1	0	1	1	1	0	1	1	0	1	9
Checkoway H, et al. 1997	1	0	0	1	0	1	0	1	0	1	1	0	1	7
Cherry N, et al. 2012	1	0	0	1	0	1	0	1	0	1	1	0	1	7
McDonald JC, et al. 2005	0	1	0	1	0	1	0	1	0	1	1	0	1	7
Cherry NM, et al. 1998	1	0	0	1	0	1	0	1	0	1	1	0	1	7
Reid PJ, et al. 1996	0	1	0	1	0	1	0	0	0	1	1	0	1	6
Zhang X, et al. 2008	0	1	1	1	0	0	0	1	0	1	1	0	1	7

\*For cohort studies, 1A indicates exposed cohort truly representative; 1B, somewhat representative; 2, non-exposed cohort drawn from the same community; 3A, secure record about ascertainment of exposure; 3B, structured interview; 4, outcome of interest not present at start; 5A, study controls for factor (select the most important factor); 5B, study controls for any additional factor ; 6A, independent blind assessment about assessment of outcome; 6B, record linkage; 7, follow-up long enough for outcomes to occur; 8A, complete follow up - all subjects accounted for; 8B, small number lost.

**Appendix table B** Additional characteristics of cohort studies of occupational silica exposure and cardiovascular disease included in analysis.

Studies	Exposure measures	Exposure assessment	Research categories	Exposure types <sup>a</sup>	Silica types	Exposure levels ( $\mu\text{g}/\text{m}^3$ -years) (Average (SD) or Range value)
Dong D, et al. 1995	Qualitative exposure	Measurements	Retrospective cohort study	Silica dust with asbestos	Other silica	No relevant text
Steenland K, et al. 2001	Cumulative exposure	Job-exposure matrix	Prospective cohort study	Silica mixed dust	Respirable silica	25.9 (10.9)
Weiner J, et al. 2007	Qualitative exposure	Approximations	Prospective cohort study	Silica mixed dust	Respirable silica	No relevant text
Radican L, et al. 2008	Cumulative exposure	Approximations	Prospective cohort study	Silica dust with TCE <sup>b</sup> .	Other silica	No relevant text
Vacek PM, et al. 2011	Cumulative exposure	Job-exposure matrix	Prospective cohort study	Silica dust without asbestos	Respirable silica	10 to 540
Lu Y, et al. 2012	Cumulative exposure	Approximations	Prospective cohort study	Silica mixed dust	Other silica	No relevant text
Chen W, et al. 2012	Cumulative exposure	Job-exposure matrix	Prospective cohort study	Silica dust with asbestos	Respirable silica	80 to 520
Liu Y, et al. 2014	Cumulative exposure	Job-exposure matrix	Prospective cohort study	Silica dust with asbestos	Respirable silica	80 to 520
Liu Y, et al. 2017	Cumulative exposure	Job-exposure matrix	Prospective cohort study	Silica dust with asbestos	Respirable silica	400 (200) to 1400 (1500)
Fan C, et al. 2018	Cumulative exposure	Approximations	Prospective cohort study	Silica mixed dust	Respirable silica	480 (580)
Lai H, et al. 2018	Cumulative exposure	Job-exposure matrix	Retro-prospective cohort study	Silica dust with asbestos	Respirable silica	830 (800)
Björ B et al. 2009	Cumulative exposure	Job-exposure matrix	Retrospective cohort study	Silica mixed dust	Respirable silica	No relevant text
Graham WG, et al. 2004	Mean exposure	Measurements	Prospective cohort study	Silica mixed dust	Respirable silica	No relevant text
Miller BG, et al. 2010	Cumulative exposure	Measurements	Prospective cohort study	Silica mixed dust	Respirable silica	No relevant text
Checkoway H, et al. 1997	Cumulative exposure	Measurements	Retrospective cohort study	Silica dust with asbestos	Respirable silica	2160 (3510)
Cherry N, et al. 2012	Cumulative exposure	Measurements	Prospective cohort study	Silica dust without asbestos	Respirable silica	No original data to extract
McDonald JC, et al. 2005	Cumulative exposure	Measurements	Prospective cohort study	Silica dust without asbestos	Respirable silica	No original data to extract
Cherry NM, et al. 1998	Cumulative exposure	Measurements	Prospective cohort study	Silica dust without asbestos	Respirable silica	No original data to extract
Reid PJ, et al. 1996	Cumulative exposure	Measurements	Prospective cohort study	Silica dust with asbestos	Respirable silica	0.37 to 1.15
Zhang X, et al. 2008	Cumulative exposure	Approximations	Retrospective cohort study	Silica mixed dust	Other silica	No original data to extract

a: Silica dust with/without asbestos means that workers exposed to asbestos were/weren't excluded; b: trichloroethylen.