

Table 2.1. Cohort studies of second-hand tobacco smoke and lung cancer

Reference, study location, period	Cohort Description	Exposure Assessment	Organ Site	No. of cases/deaths	Exposure Categories	Relative risk (95% CI)	Adjustment for potential confounders	Comments
Enstrom & Kabat (2003), USA, American Cancer Society Cancer Prevention Study (CPSI), 1960-1998	Prospective cohort study of 118,094 men and women. 35,561 participants who never smoked married to a current smoker compared to never smokers who were married to never smokers. Deaths from heart disease, lung cancer, and obstructive pulmonary disease were followed from 1960 until 1998.	Self-administered questionnaire 1961, 1963, 1965, and 1972	Lung	126	Never smokers married to never smokers Never smoker married to ever smoker	1.0 (ref) 0.99 (0.72-1.37)	Age, race, education, exercise, BMI, fruit intake, health status	This estimate based on 126 cases is consistent with both no increased risk and an increased risk consistent with the IARC meta-analysis of 6257 cases with RR=1.24 (95% CI: 1.14-1.34)
Wen <i>et al.</i> (2006), Shanghai, China, Shanghai women's health study. 1997-2004	Prospective cohort study in of 72,829 women who had never smoked, 65,180 provided information about husbands smoking, relative risks and 95% confidence intervals for deaths from cardiovascular disease, lung cancer assessed	Self-administered questionnaire and in-person interview	Lung	106	Second-hand tobacco smoke from early life exposure, husbands tobacco smoke and tobacco smoke at work	1.79 (1.09-2.93).	Age, education, family income, physical activity, BMI, intake of meat, intake of vegetables	Exposure to second-hand tobacco smoke related to a moderate increase in lung cancer mortality.

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Hill <i>et al.</i> (2007) The New Zealand Census-Mortality Study 1981 and 1996.	Lifelong nonsmokers aged 44-77 years were identified from responses to the 1981 and 1996 census. Two population cohorts were created by linking individual records from each of two New Zealand censuses (1981 and 1996) with individual mortality records from the 3 years following each census.	286,800 nonsmokers from the 1981 census and 381,462 nonsmokers from the 1996 census. With 23.2% and 14.5%, respectively living in households with at least one current smoker.	Lung	456	Smoking spouse 1996-1999 1981-1984	Adj RR <i>Women</i> 1.38 (0.78-2.41) Too small numbers <i>Men</i> Too small numbers 1.08 (0.56-2.09)	Age, ethnicity, marital status, and socioeconomic position	The absence of a significant association between second-hand tobacco smoke and lung cancer risk may be a result of misclassification since second-hand tobacco smoke exposures outside the home were not assessed. Additionally, the 3 year follow-up period was likely to result in an underestimate of the association with lung cancer. AJE 2007, 165: 530-40

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Kurahashi <i>et al.</i> (2008), Japan, 1990-2004	Japan Public health Center-based Prospective study (JPHC). Prospective population based Cohort of 28,414 non-smoking Japanese women. 377,813 person-years of follow-up, average of 13.3 years	Self-administered questionnaire	Lung	109	<i>Husband second-hand tobacco smoke</i> At home; At work. At home smoking intensity smoking amount At home and at work	Hazard ratios (95% CI) <i>All Lung cancer</i> 1.34 (0.81-2.21) 1.32 (0.85-2.04) <i>ADC</i> 2.03 (1.07-3.86) p=0.02 p =0.03 1.93 (0.88-4.23).	Age, study area, alcohol consumption, a family history of lung cancer, menopausal status.	
Vineis <i>et al.</i> (2005) European Prospective Investigation into Cancer and Nutrition, 10 European countries.	Combined analysis of 10 large prospective studies from Europe, 123,479 from EPIC who never smoked or stop smoking for at least 10 years and provided information on ETS. Follow-up for 7 years.	Self-administered questionnaire on ETS and potential confounding factors.	Lung	97	<i>Second-hand tobacco smoke exps</i> Never smokers Former smokers All non- smokers at work only.	HR (95%CI) 1.05 (0.60-1.82) 2.32 (0.94-5.71) 1.65 (1.04-2.63).	Sex, age (≥5 years), smoking (former or never smoker), country, and school years.	Confirms that second-hand tobacco smoke is a risk factor for lung cancer, particularly in ex-smokers. Second-hand tobacco smoke exposure in childhood.
Veglia <i>et al.</i> (2007) EPIC	Combined analysis. 10 large prospective studies from Europe >222 000 participants	Use of CAREX-based job-exposure matrix for occupational exposures including ETS	Lung	809	Second-hand tobacco smoke exposure at home at work	RR (95%CI) 1.59 (1.2–2.1)	Age, sex	