

Table S3 - Characteristics of selected studies on the relationship between secondhand smoke exposure and oral cancer

Study	Cancer site (ICD classification)	Histology classification	Place of exposure	Cofactors strata	Characteristics of cases and controls	Number (cases/controls) and OR (95% CI) regarding EVER vs NEVER SHS exposure *	Number (cases/controls) and OR (95% CI) regarding DURATION (years) and FREQUENCY (hours) of exposure to SHS *
Lee <i>et al</i> 2008 [12]	oral cavity as defined in Hashibe <i>et al</i> 2007 (C00.3-C00.9, C02.0-C02.3, C03.0, C03.1, C03.9, C04.0, C04.1, C04.8, C04.9, C05.0, C06.0-C06.2, C06.8, and C06.9)	Mostly SCC (all SCC in Tampa and Houston study centers, and 97% of SCC in the remaining study centers with information of type of histology.	Home or Work	Never tobacco smokers and never alcohol drinkers	Most of the controls were frequency-matched to cases by sex, age, hospital (or residence area), and ethnicity. According to study centers, response rates from 49% to 98% for cases and 67.5% to 97% to controls;	SHS exposure Never - (32/ 409) 1.00 Ever at home or work - (51/ 487) 1.17 (0.68, 2.01)	Duration of SHS exposure (years) at home Never - (26/ 477) 1.00 1-15 - (8/ 103) 2.27 (0.84, 6.10) >15 - (10/ 130) 1.37 (0.56, 3.35) Duration of SHS exposure (years) at work Never - (25/ 446) 1.00 1-15 - (5/ 105) 0.90 (0.26, 3.10) >15 - (4/ 56) 2.07 (0.49, 8.72) Frequency of SHS exposure (hour/day) at work** Never - (50/239) 1.00 1 - 3 - (7/24) 2.04 (0.69, 6.07) > 3 - (9/41) 1.16 (0.46, 2.96)
				Never tobacco smokers		SHS exposure Never - (53/ 794) 1.00 Ever at home or work - (76/ 1078) 0.93 (0.61, 1.41)	Duration of SHS exposure (years) at home Never - (46/ 1074) 1.00 1-15 - (12/ 294) 1.58 (0.73, 3.41) >15 - (16/ 251) 1.06 (0.53, 2.11) Duration of SHS exposure (years) at work Never - (46/ 898) 1.00 1-15 - (9/ 309) 0.65 (0.28, 1.51) >15 - (10/ 185) 1.31 (0.57, 3.00) Frequency of SHS exposure (hour/day) at work** Never - (107/499) 1.00 1 - 3 - (19/112) 1.16 (0.001,601) > 3 - (30/132) 1.14 (0.04, 32.76)
Lee <i>et al</i> 2009 [22]	Oral cavity and oropharynx (C00, C01, C02, C03, C04, C05, C06, C09, C10) as defined in the article Lagu <i>et al</i> 2008 (excluding C00.0, C00.1, and C00.2, i.e. external, upper, lower, and not otherwise specified lip)	SCC	Home or Work And both	Never tobacco smokers	Controls were frequency-matched to cases by sex, age, and referral (or residence) area. The participation rates ranged from 35% to 100% for cases and from 26% to 100% for controls.	SHS exposure Never - (21/ 212) 1.00 Ever at home only - (36/ 182) 1.72 (0.91-3.22) Ever at work only - (25/ 122) 2.46 (1.24-4.87) Ever both at home and at work - (29/ 190) 1.62 (0.84-3.14) Ever at home or work - (90/ 494) 1.87 (1.08-3.23) SHS exposure for oral cavity cancer (Ever at home or work) - 2.45 (1.20-5.01)	Duration of SHS exposure (years) at home Never - (46/ 338) 1.00 1-15 - (14/ 104) 0.80 (0.40-1.62) >15 - (44/ 191) 1.50 (0.89-2.53) Duration of SHS exposure (years) at work Never - (56/ 392) 1.00 1-15 - (20/ 137) 1.04 (0.56-1.93) >15 - (33/ 174) 1.92 (1.12-3.28) Duration of SHS exposure (years) both (home and work) Never - (21/ 212) 1.00 1-15 - (22/ 144) 1.38 (0.68-2.78) >15 - (64/ 320) 2.15 (1.21-3.80)
He <i>et al</i> 2016 [21]	C01-C06	Oral cancer (histologic classification not reported)	Not reported	Including cases of tobacco smoking and alcohol drinking; by age of exposure before after or 18yrs, and both	Controls were frequency matched by 5-year age group and ethnicity, and were randomly chosen from hospital inpatients or outpatients The recruitment rate for oral cavity cancer patients was 98.3% and 96.9% for the controls	Only before age 18 SHS exposure No - (111/294) 1.00 Yes - (22/26) 2.12 (1.11-4.07) Only after age 18 SHS exposure No - (111/294) 1.00 Yes - (56/96) 1.52 (1.01-2.31) Both before and after age 18 SHS exposure No - (111/294) 1.00 Yes - (49/54) 2.38 (1.47-3.85)	Only before age 18 Extent of SHS (hours/day) No - (111/294) 1.00 <2 - (10/15) 1.48 (0.60-3.62) >2 - (12/11) 3.05 (1.26-7.39) Duration of SHS (years) No - (111/294) 1.00 <10 - (4/10) 1.03 (0.27-3.22) >10 - (18/16) 2.90 (1.37-6.15) Only after age 18 Extent of SHS (hours/day) No - (111/294) 1.00 <2 - (33/64) 1.34 (0.82-2.20) >2 - (23/32) 1.93 (1.06-3.51) Duration of SHS (years) No - (111/294) 1.00 <10 - (7/13) 1.42 (0.53-3.86) >10 - (49/83) 1.54 (1.01-2.39) Both before and after age 18 Extent of SHS (hours/day) No - (111/294) 1.00 <2 - (29/35) 1.97 (1.10-3.51) >2 - (20/19) 3.26 (1.59-6.68) Duration of SHS (years) No - (111/294) 1.00 <10 - (10/13) 2.29 (0.90-5.82) >10 - (39/41) 2.40 (1.43-4.05)

Study	Cancer site	Histology classification	Place of exposure	Cofactors strata	Characteristics of cases and controls	Number (cases/controls) and OR (95% CI) regarding EVER vs NEVER exposure to SHS *	Number (cases/controls) and OR (95% CI) regarding DURATION (years) and FREQUENCY (hours) of exposure to SHS *
Yan <i>et al</i> 2017 [23]	C01-C06	OC, 80.88% corresponding to oral squamous cell carcinoma (OSCC), followed by 15.05% with adenocarcinoma and 4.07% with other types. (data available for OSCC)	Not reported	Never tobacco smokers and never alcohol drinkers	Controls were frequency matched by 5-year age	SHS exposure for Oral Cancer Never - (176/668) 1.00 Yes - (143/326) 1.54 (1.14-2.08) SHS exposure for Oral SCC Never - (147/668) 1.00 Yes - (111/326) 1.44 (1.04-2.01)	Not reported
Hashibe <i>et al</i> 2019 [20]	oral cavity (C00.3 to C00.9, C02.0 to C02.3, C03.0, C03.1, C03.9, C04.0, C04.1, C04.8, C04.9, C05.0, C06.0 to C06.2, C06.8, and C06.9)	histological classification not reported (all Histology or cytology confirmed)	Not reported;	Never tobacco smokers never alcohol drinkers	Controls were frequency-matched by sex, 5-year age group, ethnicity, and residence area from hospitals at each of the centers. Controls were recruited from the outpatient clinics of each hospital	SHS exposure Never - (79/277) 1.00 Yes - (53/125) 1.68 (1.01, 2.82) Childhood exposure - (22/74) 1.26 (0.89, 1.78) Exposure as an adult - (44/95) 1.55 (0.92, 2.61)	Frequency of SHS exposure (hours/day) 1 - 3 - (28/75) 1.25 (0.67, 2.30) > 3 - (20/48) 2.20 (1.02, 4.73) Years exposed < 15 - (6/36) 0.81 (0.28, 2.35) ≥ 15 - (48/90) 1.99 (1.16, 3.40)
			Ever involuntary smoking took into account involuntary exposure as a child or adult; distinct data for childhood and adult exposure	Never tobacco smokers		SHS exposure Never - (94/305) 1.00 Yes - (73/153) 1.83 (1.14, 2.92) Childhood exposure - (33/89) 1.36 (0.97, 1.90) Exposure as an adult - (61/119) 1.59 (0.99, 2.56)	Frequency of SHS exposure (hours/day) 1 - 3 - (36/90) 1.36 (0.78, 2.38) > 3 - (32/60) 2.34 (1.19, 4.58) Years exposed < 15 - (12/41) 1.44 (0.61, 3.41) ≥ 15 - (62/113) 1.90 (1.16, 3.12)

* bold letters indicate the OR that were included in respective meta-analyses and forest plots for general (ever/never SHS) and exposure response analyses (by duration and frequency)

** only reported for the group of Head and Neck Cancers

SCC Squamous cell cancer; OC, oral cancer; OSCC, oral squamous cell cancer