

**Table 2.57. Case-control studies of active smoking and risk of breast cancer: duration of smoking**

Study	Age range	Cases/controls	Duration (yrs)	OR (95%CI)
<i>Incidence</i>				
Brinton <i>et al.</i> (1986) (ever)		805/1090	Nonsmoker	1.00 (ref)
		111/110	<10	1.40 (1.0–1.9)
		142/165	10–19	1.19 (0.9–1.5)
		216/255	20–29	1.17 (0.9–1.4)
		169/205	30–39	1.13 (0.9–1.4)
		96/101	≥40	1.26 (0.9–1.7) p-trend=0.02
Brownson <i>et al.</i> (1988) (ever) (premenopausal)		68/141	Nonsmoker	1.00 (ref)
		21/32	1–14	1.49 (0.71–3.11)
		25/35	≥15	1.78 (0.87–3.65) p-trend=0.05
Brownson <i>et al.</i> (1988) (ever) (natural menopause)		156/638	Nonsmoker	1.00 (ref)
		11/55	1–14	0.90 (0.45–1.81)
		39/179	≥15	0.92 (0.61–1.38) p-trend=0.39
Brownson <i>et al.</i> (1988) (ever) (surgical menopause)		103/458	Nonsmoker	1.00 (ref)
		10/47	1–14	0.86 (0.41–1.82)
		23/108	≥15	1.01 (0.60–1.69) p-trend=0.49
Chu <i>et al.</i> (1990) (ever)	20–54	1788/1961	Nonsmoker	1.0 (ref)
		473/494	<10	1.1 (0.9–1.2)
		608/552	10–19	1.3 (1.1–1.4)
		717/658	20–29	1.2 (1.1–1.4)
		524/535	≥30	1.1 (0.9–1.3) p-trend=0.76
Ewertz (1990) (ever)		503/446	Nonsmoker	1.00 (ref)
		90/104	<10	0.77 (0.56–1.06)
		164/157	10–19	0.94 (0.72–1.22)
		243/211	20–29	0.99 (0.79–1.25)
		306/267	30–39	0.99 (0.80–1.23)
		147/121	≥40	0.95 (0.71–1.26) p-trend>0.5

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Palmer <i>et al.</i> (1991) Canada (ever)	<70	293/599	Nonsmoker	1.00 (ref)
		1/9	<10	-
		17/33	10-19	1.2 (0.6-2.2)
		45/64	20-29	1.3 (0.8-2.0)
		32/46	30-39	1.3 (0.8-2.1)
		13/26	≥40	1.0 (0.5-2.1)
			p-trend=0.61	
Palmer <i>et al.</i> (1991) U.S. (ever)	30-69	841/392	Nonsmoker	1.00 (ref)
		19/8	<10	1.8 (0.7-4.7)
		72/22	10-19	1.4 (0.8-2.4)
		80/28	20-29	0.9 (0.5-1.4)
		77/24	30-39	1.2 (0.7-2.0)
		48/14	≥40	1.7 (0.9-3.3)
			p-trend=0.72	
Field <i>et al.</i> (1992) (ever)	20-79	682/694	Nonsmoker	1.00 (ref)
		134/134	1-9	1.00 (0.77-1.28)
		148/128	10-19	1.17 (0.91-1.51)
		203/233	20-29	0.89 (0.73-1.10)
		237/229	30-39	1.04 (0.86-1.27)
		211/206	≥40	1.04 (0.84-1.29)
Rautalahti <i>et al.</i> (1993) (ever) (premenopausal)		117 cases+controls TOTAL	Nonsmoker	1.00 (ref)
			<15	0.96 (0.23-3.96)
			≥15	2.95 (1.05-8.31)
Rautalahti <i>et al.</i> (1993) (ever) (postmenopausal)		106 cases+controls TOTAL	Nonsmoker	1.00 (ref)
			<15	2.86 (0.80-10.15)
			≥15	1.85 (0.67-5.14)
Bennicke <i>et al.</i> (1995) (ever)	15-92		Nonsmoker	1.00 (ref)
			1-10	1.1 (0.6-2.4)
			11-20	0.9 (0.5-1.7)
			21-30	1.3 (0.8-2.1)
			≥31	1.6 (1.1-2.2)
Baron <i>et al.</i> (1996) (ever)	<75	3297/4633	Nonsmoker	1.00 (ref)
		421/710	≤10	0.96 (0.83-1.10)
		584/923	10-≤20	1.02 (0.90-1.15)
		872/1149	20-≤30	1.12 (1.00-1.25)
		873/1076	30-≤40	1.12 (1.00-1.25)
		609/797	40-≤50	1.01 (0.89-1.15)
		180/197	>50	1.07 (0.84-1.37)

**Table 2.57. Case-control studies of active smoking and risk of breast cancer: duration of smoking**

Study	Age range	Cases/controls	Duration (yrs)	OR (95%CI)
Gammon <i>et al.</i> (1998) (current)	<45	913/817	Nonsmoker	1.00 (ref)
		21/36	≤8	0.63 (0.34–1.15)
		82/76	9–14	0.98 (0.68–1.41)
		134/122	15–21	0.92 (0.68–1.23)
		132/136	>21	0.70 (0.52–0.94)
				p-trend=0.06
Gammon <i>et al.</i> (1998) (former)	<45	913/817	Nonsmoker	1.00 (ref)
		178/155	≤8	0.98 (0.76–1.28)
		113/97	9–14	0.98 (0.71–1.35)
		50/45	15–21	0.91 (0.57–1.44)
		20/12	>21	1.27 (0.58–2.77)
				p-trend=0.95
Millikan <i>et al.</i> (1998) (ever)	20–74	248/253	Nonsmoker	1.0 (ref)
		63/62	≤10	1.0 (0.7–1.5)
		57/68	11–20	0.8 (0.5–1.2)
		129/89	>20	1.6 (1.1–2.3)
Lash & Aschengrau (1999) (ever)		40/139	Nonsmoker	1.0 (ref)
		34/54	0–19	2.6 (1.2–5.5)
		46/117	20–39	1.5 (0.7–3.2)
		54/147	≥40	2.4 (1.1–5.5)
Delfino <i>et al.</i> (2000) (ever)	≥40	33/96	Nonsmoker	1.00 (ref)
		14/42	<13	0.94 (0.43–2.03)
		10/42	13–26	0.70 (0.30–1.62)
		20/38	>26	0.74 (0.34–1.61)
Johnson <i>et al.</i> (2000) (ever) (premenopausal)	25–74	14/35	Nonsmoker	1.0 (ref)
		109/91	1–11	2.7 (1.2–6.1)
		72/90	12–20	1.9 (0.8–4.5)
		114/98	≥21	2.1 (0.9–4.7)
				p-trend=0.91
Johnson <i>et al.</i> (2000) (ever) (postmenopausal)	25–74	52/92	Nonsmoker	1.0 (ref)
		160/179	1–20	1.2 (0.8–1.9)
		154/159	21–34	1.3 (0.8–2.1)
		194/165	≥35	1.7 (1.1–2.7)
				p-trend=0.003
Marcus <i>et al.</i> (2000) (ever)	20–74	445/423	Nonsmoker	1.0 (ref)
		216/205	<20	0.9 (0.7–1.2)
		202/161	≥20	1.3 (1.1–1.8)

**Table 2.57. Case-control studies of active smoking and risk of breast cancer: duration of smoking**

Study	Age range	Cases/controls	Duration (yrs)	OR (95%CI)
Band <i>et al.</i> (2002) (ever) (premenopausal)	<75	128/166	Nonsmoker	1.00 (ref)
		88/94	<20	1.34 (0.91–1.99)
		96/79	≥20	1.60 (1.08–2.37)
Band <i>et al.</i> (2002) (postmenopausal)	<75	315/304	Nonsmoker	1.00 (ref)
		78/97	<20	0.77 (0.54–1.08)
		290/275	≥20	1.01 (0.80–1.28)
Kropp & Chang-Claude (2002) (ever)	≤50	44/144	Nonsmoker	1.00 (ref)
		47/153	1–9	0.99 (0.61–1.60)
		91/202	10–19	1.40 (0.90–2.16)
		133/278	≥20	1.45 (0.96–2.19) p-trend=0.047
Lash & Aschengrau (2002) (ever)		80/53	Nonsmoker	1.00 (ref)
		71/77	<20	0.69 (0.48,1.0)
		145/139	20–<40	0.87 (0.74,1.0)
		117/117	≥40	0.90 (0.80,1.0)
Zheng <i>et al.</i> (2002) (ever)	30–80	142/154	Nonsmoker	1.0 (ref)
		51/62	<15	0.9 (0.6–1.4)
		70/75	15–30	1.1 (0.7–1.6)
		75/54	>30	1.3 (0.8–2.0)
van der Hel <i>et al.</i> (2003) (ever)	20–59	76/104	Nonsmoker	1.00 (ref)
		34/41	<15	1.22 (0.68–2.18)
		68/71	15–30	1.37 (0.86–2.16)
		51/47	≥30	1.55 (0.92–2.61) p-trend=0.07
Li <i>et al.</i> (2005b) (ever)	65–79	432/504	Nonsmoker	1.0 (ref)
		105/111	<20	1.0 (0.8–1.4)
		169/149	20–39	1.3 (1.0–1.7)
		231/198	40+	1.4 (1.1–1.7) p-trend=0.006
Lissowska <i>et al.</i> (2006) (ever)	20–74	1034/1162	Nonsmoker	1.00 (ref)
		457/437	<10	1.04 (0.85–1.29)
		329/325	10–20	1.06 (0.85–1.32)
		530/555	>20	0.99 (0.83–1.20) p-trend=0.86

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Study	Age range	Cases/controls	Duration (yrs)	OR (95%CI)
Mechanic <i>et al.</i> (2006) (Afro-Americans) (ever)	21-74	161/172	Nonsmoker	1.0 (ref)
		106/99	≤10	1.3 (0.9-1.9)
		96/85	11-20	1.4 (1.0-2.1)
		198/132	>20	1.8 (1.2-2.6)
				p-trend=0.003
Mechanic <i>et al.</i> (2006) (Caucasians) (ever)	21-74	287/235	Nonsmokers	1.0 (ref)
		192/172	≤10	0.9 (0.7-1.2)
		162/150	11-20	0.9 (0.7-1.3)
		335/292	>20	1.1 (0.9-1.5)
				p-trend=0.43
Magnusson <i>et al.</i> (2007) (current)	50-74	1526/1453	Nonsmoker	1.0 (ref)
		22/28	1-10	0.7 (0.4-1.3)
		173/147	11-20	1.0 (0.8-1.3)
		457/406	>20	1.1 (0.9-1.2)
				p-trend=0.58
Magnusson <i>et al.</i> (2007) (former)	50-74	1526/1453	Nonsmoker	1.0 (ref)
		255/216	1-10	1.0 (0.8-1.3)
		282/257	11-20	1.0 (0.8-1.2)
		61/65	>20	0.9 (0.7-1.4)
				p-trend=0.95
Prescott <i>et al.</i> (2007) (ever)	20-49	991/261	Nonsmoker	1.00 (ref)
		238/68	≤11	0.94 (0.68-1.30)
		216/56	11-≤20	0.93 (0.66-1.31)
		283/56	>20	1.12 (0.79-1.59)
				p-trend=0.74
Rollison <i>et al.</i> (2008) (ever)	40-79	124/161	Nonsmoker	1.00 (ref)
		23/26	<10	1.36 (0.72-2.55)
		27/33	10-19	1.13 (0.64-2.01)
		34/26	20-29	1.80 (1.02-3.20)
		36/32	30-39	1.31 (0.76-2.25)
		27/21	40-49	1.50 (0.79-2.82)
		15/12	50-62	1.21 (0.52-2.84)