

**MORTALITY FROM SMOKING
IN DEVELOPED COUNTRIES
1950–2000**

(2nd edition, revised June 2006:
www.deathsfromsmoking.net)

Richard Peto, Alan D Lopez,
Jillian Boreham and Michael Thun

CANADA

Raw data (pages 110–11, 112–13)

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CANADA: 1995, 2000

Male smoking-attributed deaths (Sm.) and total deaths (Total)

		ALL CAUSES	ALL CANCER	Lung cancer	Upper aero-digestive ca. (see below)	Other cancer	COPD	Other respiratory	Vascular disease	Liver cirrhosis	Other medical	Non-medical
1995												
0-34	Sm.	-	-	-	-	-	-	-	-	-	-	-
	Total	6896	390	17	6	367	24	99	255	14	2533	3581
35-69	Sm.	11826	6098	4265	706	1127	762	204	3116	-	1646	-
	Total	38329 (31%)	13586 (45%)	4642 (92%)	1133 (62%)	7811 (14%)	995 (77%)	782 (26%)	11869 (26%)	1012	6024 (27%)	4061
70+	Sm.	15671	6812	4687	515	1610	3379	474	3656	-	1350	-
	Total	66171 (24%)	17356 (39%)	5110 (92%)	826 (62%)	11420 (14%)	4496 (75%)	3814 (12%)	27967 (13%)	477	10475 (13%)	1586
Any age	Sm.	27497	12910	8952	1221	2737	4141	678	6772	-	2996	-
	Total	111396 (25%)	31332 (41%)	9769 (92%)	1965 (62%)	19598 (14%)	5515 (75%)	4695 (14%)	40091 (17%)	1503	19032 (16%)	9228
2000												
0-34	Sm.	-	-	-	-	-	-	-	-	-	-	-
	Total	5145	385	7	6	372	14	62	206	9	1639	2830
35-69	Sm.	9954	5466	3882	608	976	621	151	2382	-	1334	-
	Total	36314 (27%)	13411 (41%)	4300 (90%)	1065 (57%)	8046 (12%)	850 (73%)	659 (23%)	10448 (23%)	1011	5746 (23%)	4189
70+	Sm.	15655	7148	4856	590	1702	3403	348	3214	-	1542	-
	Total	70282 (22%)	19564 (37%)	5343 (91%)	991 (60%)	13230 (13%)	4654 (73%)	3099 (11%)	27426 (12%)	448	13296 (12%)	1795
Any age	Sm.	25609	12614	8738	1198	2678	4024	499	5596	-	2876	-
	Total	111741 (23%)	33360 (38%)	9650 (91%)	2062 (58%)	21648 (12%)	5518 (73%)	3820 (13%)	38080 (15%)	1468	20681 (14%)	8814

To be conservative, no deaths before age 35, and none from liver cirrhosis or non-medical causes, were attributed to smoking

Male death rates used for calculations: ICD codes as on previous page

	All ages	0-34	35-69	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+/ <i>NK</i>
POPULATION (1000s; UN, 2004 revision)													
1995	14503	7531	6015	1288	1149	1029	791	642	594	524	420	270	266
2000	15197	7324	6767	1353	1303	1153	1019	773	616	550	458	336	313
NUMBER OF DEATHS (Source: WHO)													
All causes													
1995	111396	6896	38329	2225	2572	3308	4118	5380	8412	12314	15650	16340	34181
2000	111741	5145	36314	1740	2432	3205	4482	5762	7607	11086	15074	17947	37261
Lung cancer													
1995	9769	17	4642	43	111	262	445	776	1233	1772	1956	1523	1631
2000	9650	7	4300	22	103	220	488	765	1156	1546	1928	1716	1699
ANNUAL DEATH RATE / 100,000 (*The rates for the age groups 0-34 and 35-69 are the means of seven five-yearly rates, but the all-ages rates are standardised to the conventional "European" age distribution)													
All causes													
1995	836.7*	89.5*	834.7*	172.8	223.8	321.6	520.8	838.7	1417.1	2348.2	3725.3	6045.1	12840.3
2000	739.3*	71.0*	718.7*	128.6	186.6	278.0	439.8	745.3	1235.9	2016.7	3293.4	5347.7	11896.9
All cancer													
1995	240.1*	4.9*	311.4*	21.6	39.7	90.0	181.2	339.0	590.1	918.2	1331.6	1797.6	2593.2
2000	224.4*	5.1*	278.9*	16.9	38.9	73.7	163.8	306.4	538.1	814.3	1278.3	1727.9	2526.8
Lung cancer													
1995	75.4*	0.2*	108.8*	3.3	9.7	25.5	56.3	121.0	207.7	337.9	465.6	563.4	612.7
2000	65.7*	0.1*	92.1*	1.6	7.9	19.1	47.9	99.0	187.8	281.2	421.2	511.3	542.5
Upper aerodigestive cancer (mouth, oesophagus, pharynx and larynx)													
1995	15.3*	0.1*	25.8*	0.9	3.5	7.0	17.8	31.8	51.5	68.3	83.8	75.8	101.1
2000	14.1*	0.1*	21.5*	1.3	3.1	6.6	16.2	27.7	39.0	56.8	79.5	90.0	103.8
Other cancer													
1995	149.3*	4.7*	176.8*	17.3	26.5	57.6	107.1	186.3	330.9	512.0	782.2	1158.3	1879.4
2000	144.6*	5.0*	165.3*	14.0	27.9	48.0	99.7	179.8	311.3	476.3	777.6	1126.6	1880.6
Chronic obstructive pulmonary disease (COPD)													
1995	41.4*	0.3*	24.8*	0.8	0.5	2.7	6.8	15.0	37.1	110.8	215.4	402.5	940.3
2000	35.8*	0.2*	19.7*	0.7	0.3	2.0	4.7	12.7	32.5	85.1	174.4	357.0	848.7
Other respiratory disease													
1995	35.3*	1.3*	17.8*	1.9	3.6	5.4	10.9	14.2	27.8	60.6	127.8	260.1	966.9
2000	24.8*	0.9*	13.2*	2.5	3.1	4.8	7.5	12.8	20.3	41.7	87.6	174.3	674.6
Vascular disease													
1995	304.0*	3.2*	271.8*	21.0	43.7	78.3	152.0	273.6	490.1	844.0	1424.9	2528.3	5690.1
2000	250.6*	2.8*	216.5*	16.7	34.3	67.5	120.2	225.5	382.1	668.9	1130.0	2000.0	4962.3
Liver cirrhosis													
1995	11.7*	0.2*	21.8*	1.9	5.7	10.8	17.3	28.1	37.7	51.3	54.3	55.1	37.6
2000	10.1*	0.1*	19.5*	2.1	5.5	10.6	13.8	22.8	33.6	48.2	44.1	42.0	33.5
Other medical causes													
1995	140.9*	33.3*	120.1*	52.8	60.4	71.4	85.6	107.4	173.3	290.0	485.4	869.4	2286.3
2000	137.3*	24.2*	109.4*	28.7	38.6	53.5	71.8	107.1	174.5	291.8	502.7	919.5	2525.2
All non-medical causes													
1995	63.3*	46.2*	66.9*	72.8	70.2	63.0	66.9	61.4	61.0	73.2	85.9	132.1	326.1
2000	56.4*	37.7*	61.5*	61.0	65.8	66.0	58.0	58.1	54.8	66.8	76.3	126.9	325.7

Rates and calculations for some earlier years are in Peto, Lopez et al, 1994

1995, 2000: CANADA

Female smoking-attributed deaths (Sm.) and total deaths (Total)

		ALL CAUSES	ALL CANCER	Lung cancer	Upper aero-digestive ca. (see below)	Other cancer	COPD	Other respiratory	Vascular disease	Liver cirrhosis	Other medical	Non-medical
1995												
0-34	Sm.	-	-	-	-	-	-	-	-	-	-	-
	Total	3311	399	22	4	373	17	83	188	9	1579	1036
35-69	Sm.	5578	2704	2199	168	337	529	127	1338	-	880	-
	Total	22509	11050	2634	296	8120	708	488	5091	412	3351	1409
		(25%)	(24%)	(83%)	(57%)	(4%)	(75%)	(26%)	(26%)		(26%)	
70+	Sm.	10124	2927	2209	235	483	2159	399	3193	-	1446	-
	Total	73517	15029	2651	422	11956	2945	4437	33746	311	15159	1890
		(14%)	(19%)	(83%)	(56%)	(4%)	(73%)	(9%)	(9%)		(10%)	
Any age	Sm.	15702	5631	4408	403	820	2688	526	4531	-	2326	-
	Total	99337	26478	5307	722	20449	3670	5008	39025	732	20089	4335
		(16%)	(21%)	(83%)	(56%)	(4%)	(73%)	(11%)	(12%)		(12%)	
2000												
0-34	Sm.	-	-	-	-	-	-	-	-	-	-	-
	Total	2706	354	10	9	335	21	43	143	3	1243	899
35-69	Sm.	5880	3099	2579	149	371	487	116	1163	-	1015	-
	Total	22367	11645	3055	256	8334	640	419	4193	382	3666	1422
		(26%)	(27%)	(84%)	(58%)	(4%)	(76%)	(28%)	(28%)		(28%)	
70+	Sm.	12951	3849	2923	284	642	2793	387	3706	-	2216	-
	Total	81247	17313	3419	472	13422	3640	3643	34010	314	20213	2114
		(16%)	(22%)	(85%)	(60%)	(5%)	(77%)	(11%)	(11%)		(11%)	
Any age	Sm.	18831	6948	5502	433	1013	3280	503	4869	-	3231	-
	Total	106320	29312	6484	737	22091	4301	4105	38346	699	25122	4435
		(18%)	(24%)	(85%)	(59%)	(5%)	(76%)	(12%)	(13%)		(13%)	

To be conservative, no deaths before age 35, and none from liver cirrhosis or non-medical causes, were attributed to smoking

Female death rates used for calculations

	All ages	0-34	35-69	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+/ NK
POPULATION (1000s; UN, 2004 revision)													
1995	14799	7241	6117	1283	1157	1030	793	652	614	588	536	391	514
2000	15492	7025	6845	1333	1303	1163	1028	787	641	592	547	473	603
NUMBER OF DEATHS (Source: WHO)													
All causes													
1995	99337	3311	22509	984	1366	2038	2501	3333	4784	7503	10895	13302	49320
2000	106320	2706	22367	941	1456	2009	2993	3577	4599	6792	10338	14946	55963
Lung cancer													
1995	5307	22	2634	57	113	213	314	430	631	876	994	750	907
2000	6484	10	3055	33	139	244	387	610	711	931	1128	1074	1217
ANNUAL DEATH RATE / 100,000 (*The rates for the age groups 0-34 and 35-69 are the means of seven five-yearly rates, but the all-ages rates are standardised to the conventional "European" age distribution)													
All causes													
1995	514.8*	45.5*	467.8*	76.7	118.1	197.9	315.4	511.1	778.6	1276.7	2031.5	3406.4	9599.1
2000	480.5*	39.7*	423.9*	70.6	111.8	172.7	291.3	454.6	717.9	1148.3	1890.3	3161.2	9286.9
All cancer													
1995	157.2*	5.1*	228.8*	28.7	55.8	107.5	177.7	274.7	393.1	563.9	766.7	963.1	1392.8
2000	154.0*	4.8*	219.6*	28.3	52.8	91.6	169.3	263.2	388.2	543.9	757.2	986.7	1411.7
Lung cancer													
1995	33.3*	0.2*	56.0*	4.4	9.8	20.7	39.6	65.9	102.7	149.1	185.3	192.1	176.5
2000	36.4*	0.1*	59.7*	2.5	10.7	21.0	37.7	77.5	111.0	157.4	206.3	227.2	202.0
Upper aerodigestive cancer (mouth, oesophagus, pharynx and larynx)													
1995	4.2*	0.0*	6.5*	0.4	0.9	1.7	3.7	5.8	12.7	20.2	19.6	26.1	41.8
2000	3.8*	0.1*	5.1*	0.7	0.8	1.1	3.6	3.8	8.4	17.2	21.0	26.6	38.3
Other cancer													
1995	119.7*	4.8*	166.3*	23.8	45.2	85.2	134.4	202.9	277.7	394.6	561.8	744.9	1174.4
2000	113.8*	4.6*	154.8*	25.1	41.3	69.5	128.1	181.9	268.8	369.2	529.9	732.9	1171.4
Chronic obstructive pulmonary disease (COPD)													
1995	18.8*	0.2*	16.1*	0.4	1.0	2.7	4.7	16.1	28.3	59.2	106.3	186.9	320.2
2000	18.8*	0.3*	13.6*	0.4	0.9	1.8	5.3	11.4	24.2	51.2	105.7	176.0	370.1
Other respiratory disease													
1995	22.7*	1.2*	10.3*	1.6	2.2	3.5	6.6	10.6	13.5	34.2	60.6	138.3	695.2
2000	16.3*	0.6*	8.2*	1.1	2.1	2.7	4.1	7.8	14.0	25.7	46.4	95.8	487.2
Vascular disease													
1995	184.2*	2.4*	111.8*	8.2	14.1	28.8	52.6	108.3	192.4	377.9	702.4	1405.1	4766.8
2000	154.8*	2.0*	85.1*	6.6	13.2	21.9	41.5	76.1	147.8	288.4	567.4	1141.9	4233.0
Liver cirrhosis													
1995	4.7*	0.1*	8.4*	1.0	2.8	3.8	8.2	10.1	12.7	20.2	22.0	24.3	19.1
2000	4.0*	0.0*	7.0*	1.6	2.1	3.4	5.9	6.5	12.3	17.4	19.6	20.9	17.9
Other medical causes													
1995	102.1*	22.4*	68.9*	15.3	20.0	30.1	42.9	69.6	112.8	191.6	332.6	614.6	2136.0
2000	109.7*	19.3*	69.2*	15.2	20.0	29.6	43.8	67.7	110.8	197.0	356.2	676.4	2500.3
All non-medical causes													
1995	25.0*	14.1*	23.6*	21.4	22.2	21.5	22.8	21.8	25.9	29.6	40.8	74.0	269.0
2000	23.0*	12.6*	21.2*	17.4	20.5	21.8	21.4	21.9	20.4	24.7	37.8	63.5	266.7

Rates and calculations for some earlier years are in Peto, Lopez et al, 1994

CANADA: 2000

Relative importance of deaths in MIDDLE age (35–69) in the year 2000

Age range (years)	Deaths attributed to SMOKING /total deaths (thousands)		Mean years lost PER DEATH FROM SMOKING
	Male	Female	
0–34	– / 5.1	– / 2.7	–
35–69	10 / 36	5.9 / 22	23 years
70+	16 / 70	13 / 81	8 years
All ages	26 / 112	19 / 106	13 years

Deaths, by cause, attributed to SMOKING / total deaths (thousands) in the year 2000

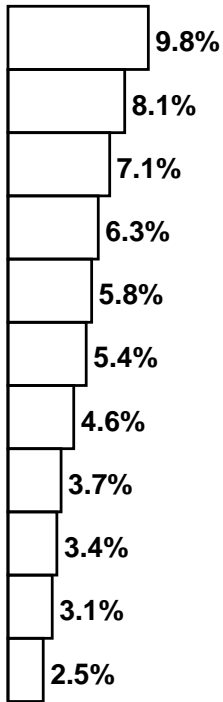
Cause	Male (by age)				Female (by age)			
	0–34	35–69	70+	All	0–34	35–69	70+	All
Lung Cancer	–/0.0	3.9/4.3	4.9/5.3	8.7/9.6	–/0.0	2.6/3.1	2.9/3.4	5.5/6.5
All Cancer	–/0.4	5.5/13 (41%)	7.1/20 (37%)	13/33	–/0.4	3.1/12 (27%)	3.8/17 (22%)	6.9/29
Vascular	–/0.2	2.4/10	3.2/27	5.6/38	–/0.1	1.2/4.2	3.7/34	4.9/38
Respiratory	–/0.1	0.8/1.5	3.8/7.8	4.5/9.3	–/0.1	0.6/1.1	3.2/7.3	3.8/8.4
All Other	–/4.5	1.3/11	1.5/16	2.9/31	–/2.1	1.0/5.5	2.2/23	3.2/30
All Causes	–/5.1	10/36 (27%)	16/70 (22%)	26/112	–/2.7	5.9/22 (26%)	13/81 (16%)	19/106

Cancer deaths, and all deaths, attributed to SMOKING / total deaths (thousands) in the year 2000

Cause	Male	Female	Male + Female
All Cancer	13 / 33 (38%)	6.9 / 29 (24%)	20 / 63 (31%)
All Causes	26 / 112 (23%)	19 / 106 (18%)	44 / 218 (20%)

1950-2000: CANADA

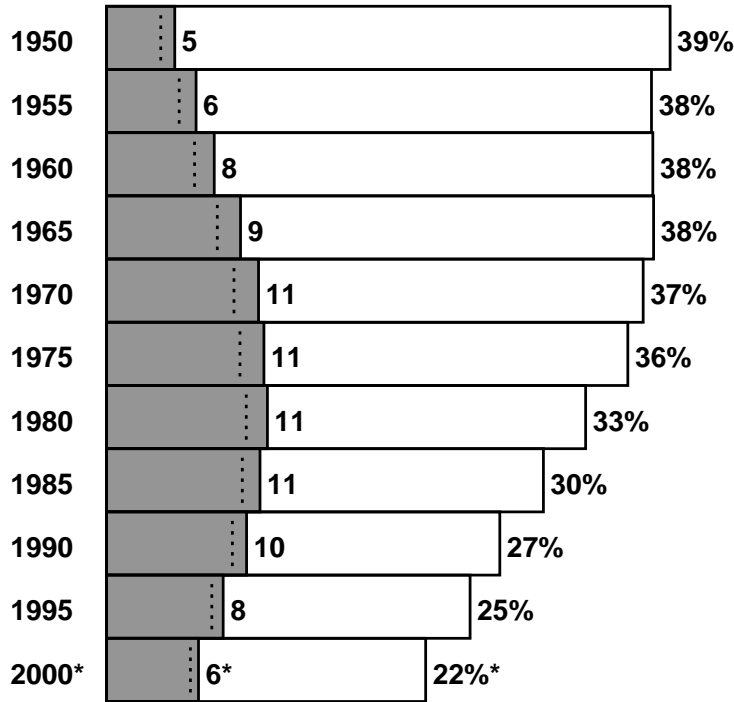
Population risk of dying at ages 0-34



Population risk of a 35-year-old dying at ages 35-69 from smoking (shaded) or from any cause (shaded and white)

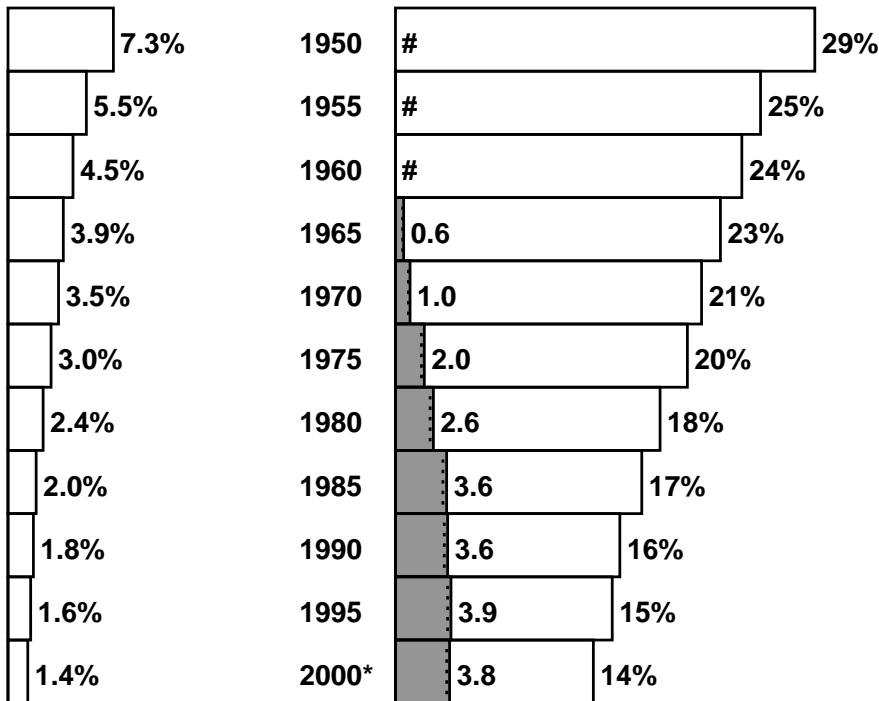
*eg, at year 2000 male death rates, out of 100 men aged 35, 22 would die before age 70 (with 6 of these deaths attributed to smoking)

MALE



Note: Most of those killed by smoking would otherwise have survived beyond age 70, but a minority (shaded area to right of dotted line) would have died by 70 anyway

FEMALE



Real risk too low to estimate reliably

CANADA: 1950-2000

Numbers of deaths attributed to smoking / total deaths (thousands)

Year	Male (by age)				Female (by age)			
	0-34	35-69	70+	All	0-34	35-69	70+	All
1950	-/15	3.5/28 (13%)	0.5/27 (2%)	4.0/70	-/11	0.0/18	0.0/25	0.0/53
1955	-/14	4.9/29 (17%)	1.4/32 (4%)	6.3/75	-/9.4	0.1/17	0.0/27	0.1/53
1960	-/14	6.3/31 (20%)	2.6/37 (7%)	8.9/82	-/8.8	0.0/18	0.0/31	0.0/58
1965	-/12	8.4/34 (25%)	3.9/41 (10%)	12/87	-/7.5	0.5/19 (3%)	0.0/36	0.5/62
1970	-/11	11/38 (28%)	5.8/42 (14%)	17/91	-/6.4	1.0/20 (5%)	0.3/38 (0.7%)	1.3/65
1975	-/11	12/40 (30%)	8.0/45 (18%)	20/97	-/5.7	2.2/22 (10%)	0.7/43 (2%)	2.9/70
1980	-/10	13/40 (33%)	9.9/48 (21%)	23/98	-/4.9	3.1/22 (14%)	2.3/47 (5%)	5.4/74
1985	-/8.2	13/38 (35%)	12/54 (23%)	25/100	-/4.0	4.5/22 (21%)	4.5/55 (8%)	9.0/81
1990	-/7.7	13/38 (35%)	14/58 (24%)	27/104	-/3.7	5.0/22 (23%)	6.9/62 (11%)	12/88
1995	-/6.9	12/38 (31%)	16/66 (24%)	27/111	-/3.3	5.6/23 (25%)	10/74 (14%)	16/99
2000	-/5.1	10/36 (27%)	16/70 (22%)	26/112	-/2.7	5.9/22 (26%)	13/81 (16%)	19/106

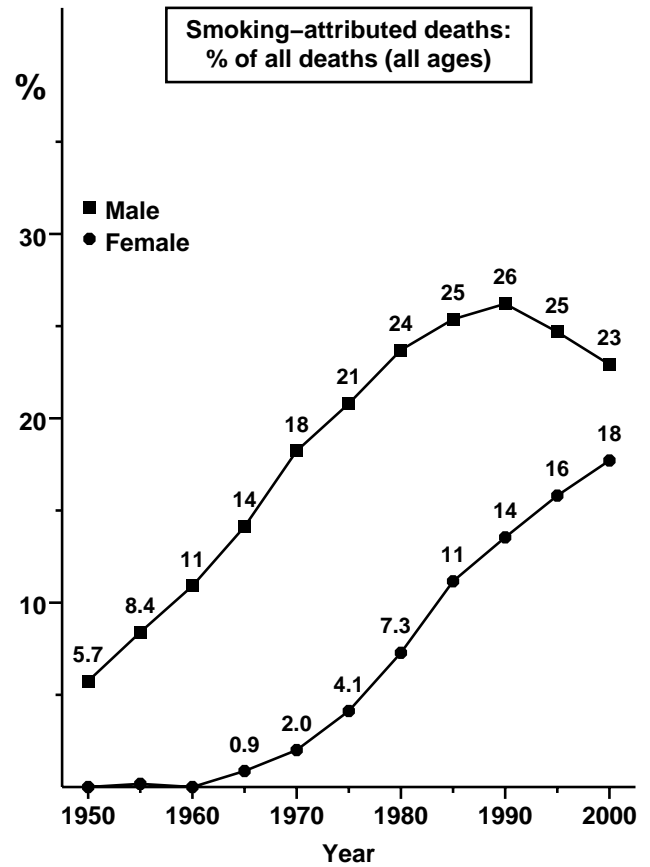
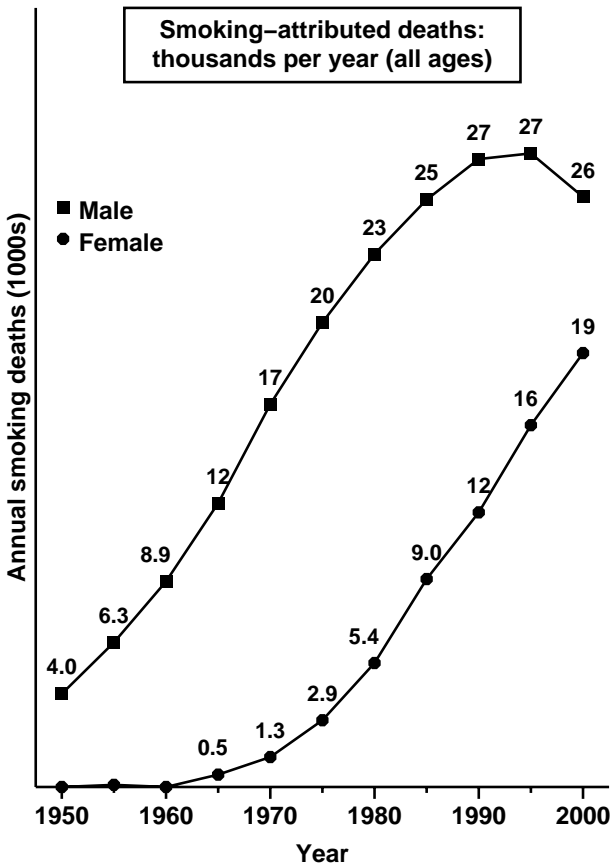
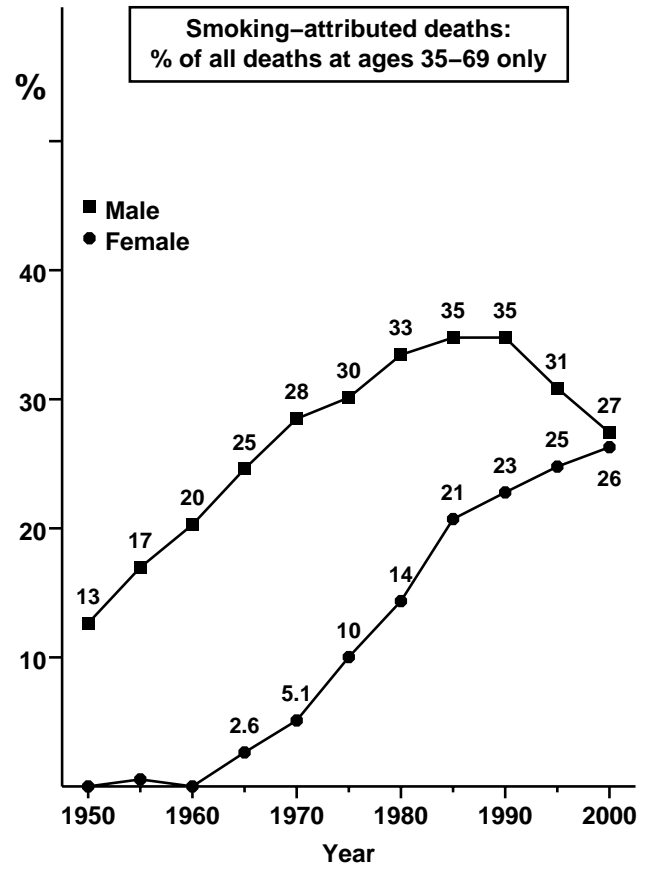
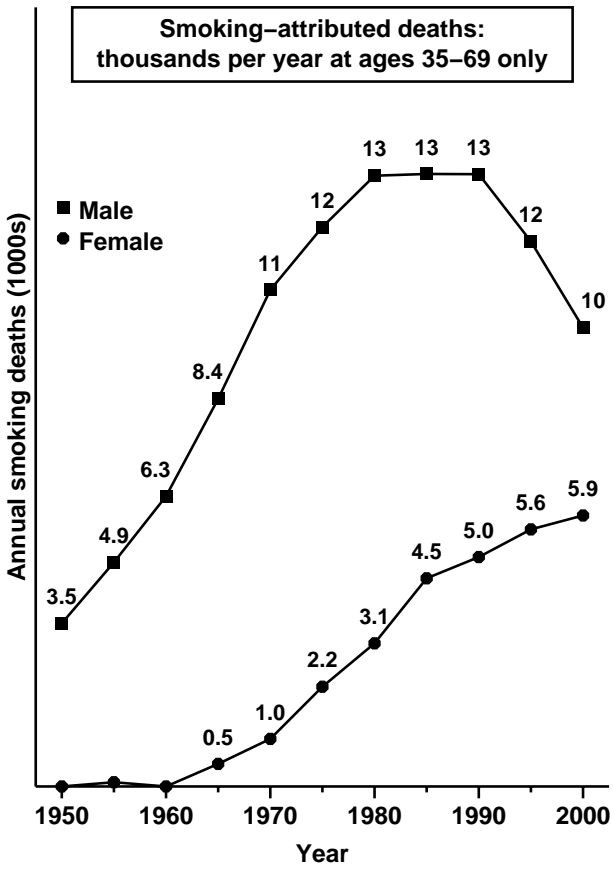
50-year total* (thousands), mid-1950 to mid-2000: 1200 / 8363

1950-2000 by age & sex:

-/524	505/1797 (28%)	412/2386 (17%)	917/4707	-/299	128/1013 (13%)	154/2344 (7%)	283/3656
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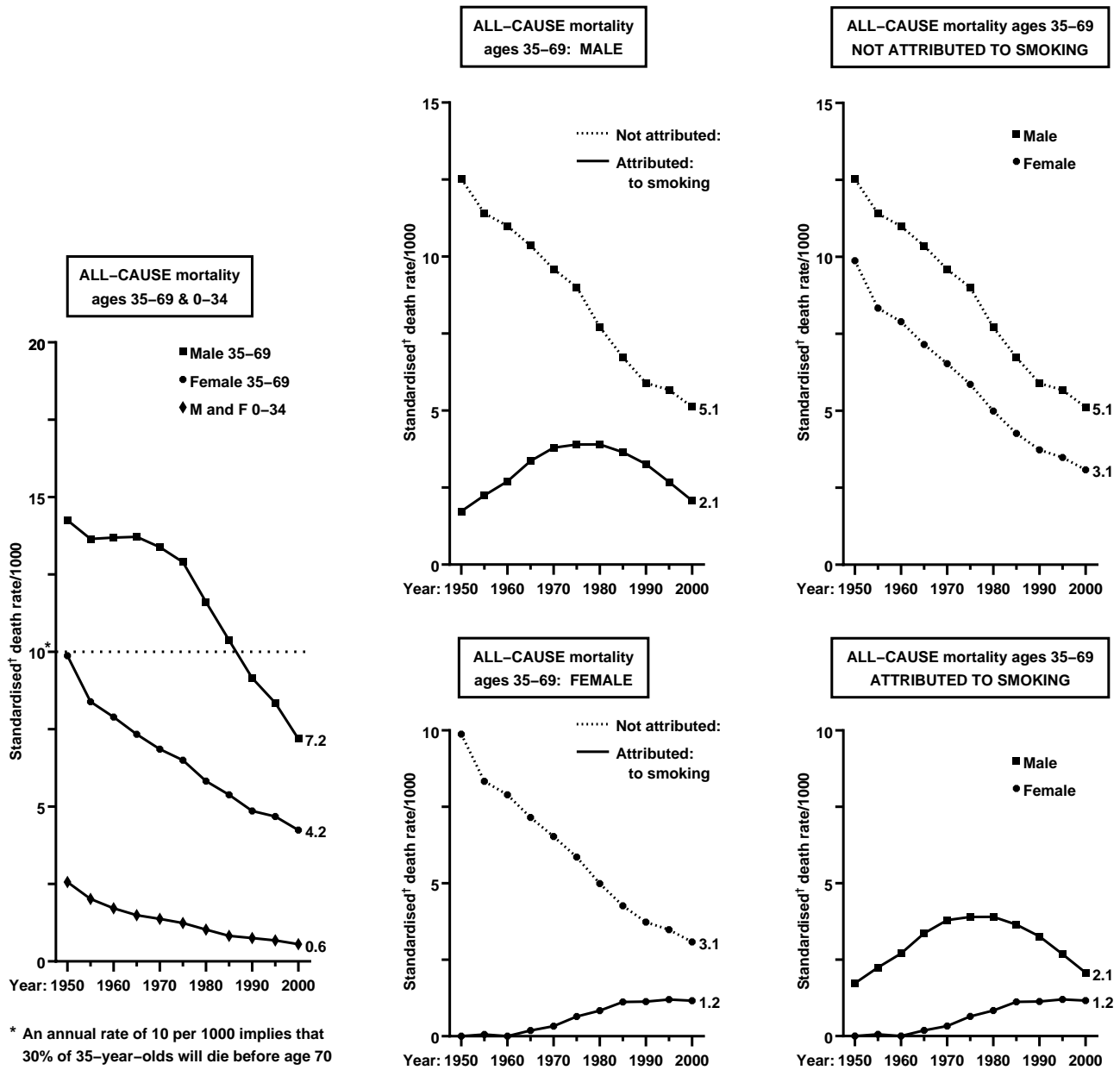
*Estimated as 10 times the sum of the annual numbers for 1955, 1965, 1975, 1985 & 1995

1950-2000: CANADA



CANADA: 1950-2000

ALL-CAUSE mortality rates attributed and not attributed to smoking

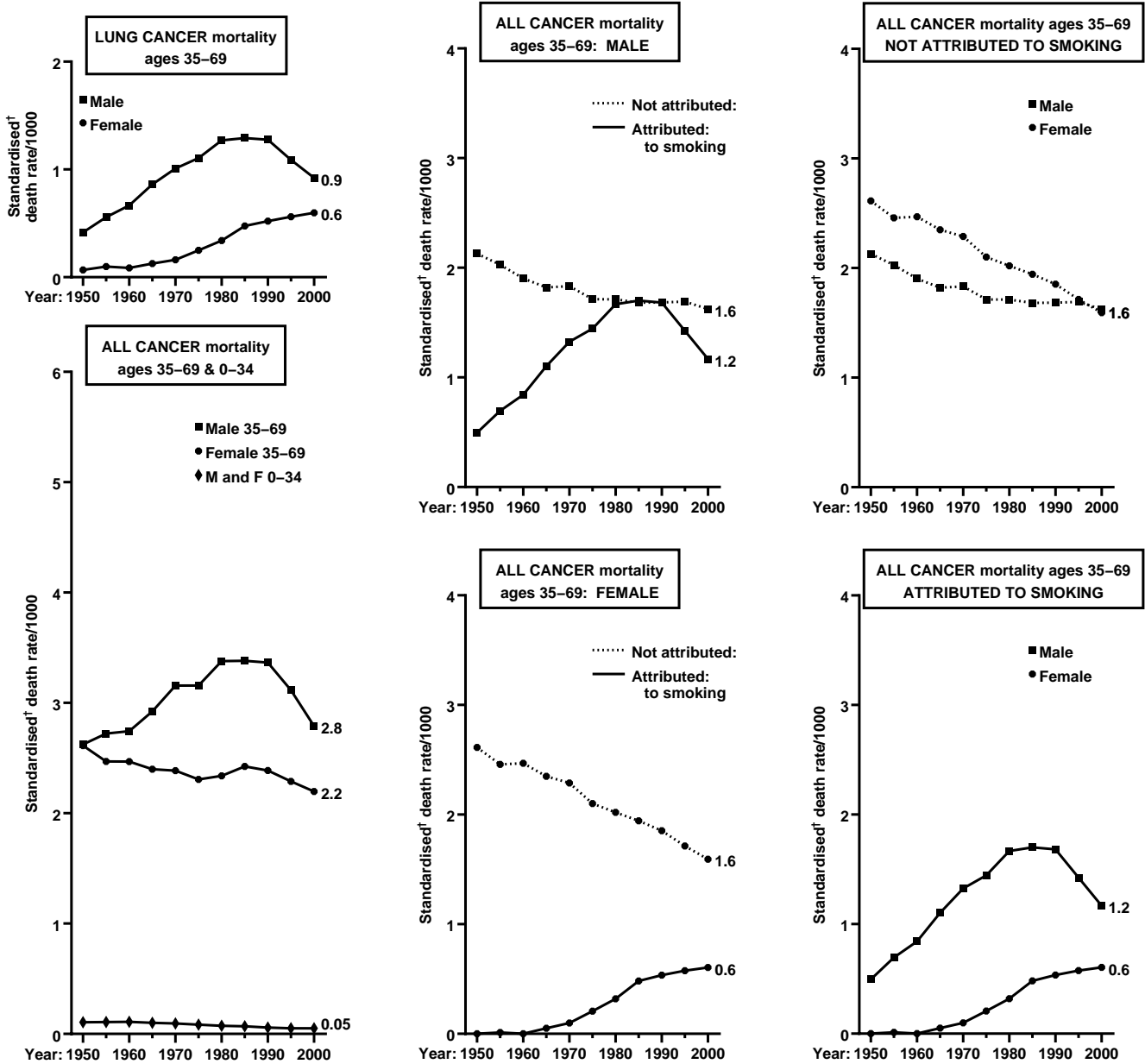


Year	MALE all-cause mortality (annual rate/1000, by age)								FEMALE all-cause mortality (annual rate/1000, by age)									
	0-34		35-69		70-79		0-34		35-69		70-79		0-34		35-69		70-79	
	Attributed to smoking?	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
1950	-	2.94	1.73	12.5	1.46	68.1	-	2.18	0.00	9.87	0.00	56.2						
1955	-	2.42	2.24	11.4	3.41	65.5	-	1.60	0.06	8.33	0.00	51.1						
1960	-	2.10	2.70	11.0	5.67	63.3	-	1.32	0.00	7.89	0.00	47.3						
1965	-	1.86	3.36	10.4	7.81	60.2	-	1.12	0.18	7.15	0.11	43.4						
1970	-	1.72	3.79	9.59	11.0	55.4	-	1.02	0.33	6.53	0.42	38.6						
1975	-	1.60	3.89	9.00	13.1	50.7	-	0.87	0.64	5.86	0.91	35.6						
1980	-	1.34	3.90	7.71	14.0	46.0	-	0.71	0.83	4.99	2.17	30.7						
1985	-	1.08	3.64	6.73	14.4	42.4	-	0.57	1.12	4.26	3.40	27.3						
1990	-	0.99	3.26	5.89	14.1	37.4	-	0.51	1.13	3.73	4.25	23.9						
1995	-	0.89	2.68	5.67	13.0	35.8	-	0.46	1.20	3.48	5.06	22.1						
2000	-	0.71	2.07	5.12	11.1	32.1	-	0.40	1.16	3.08	5.42	19.8						

0-34 and 35-69 = means of 7 age-specific rates; 70-79 = mean of 2 rates (70-74 & 75-79)

1950-2000: CANADA

ALL CANCER mortality rates attributed and not attributed to smoking



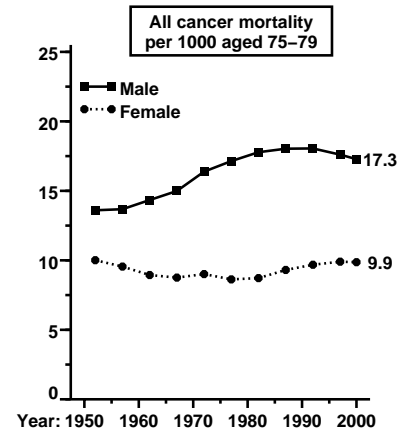
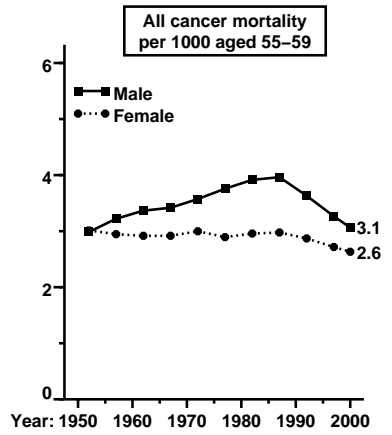
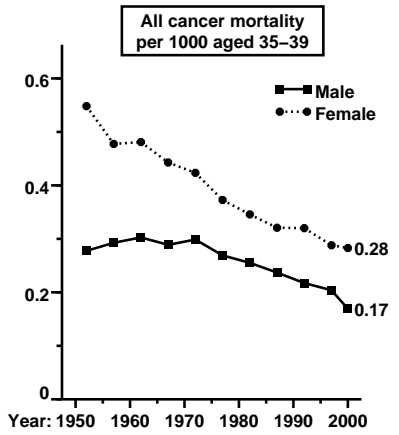
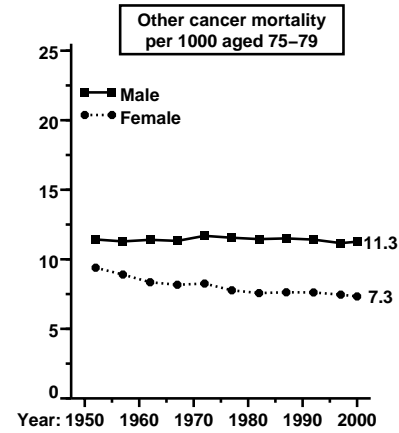
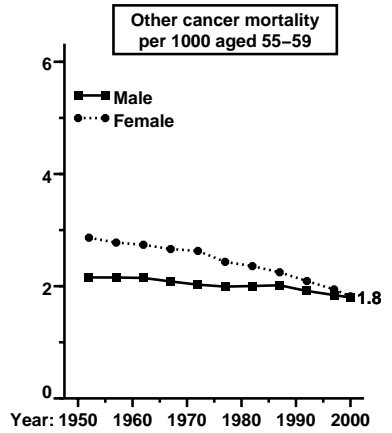
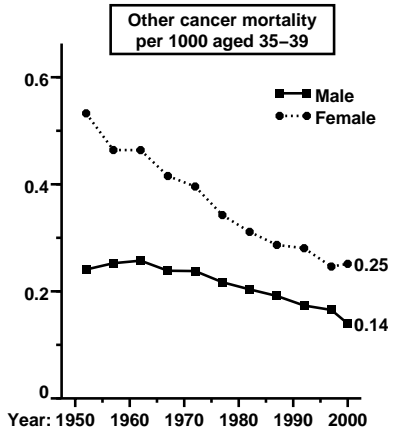
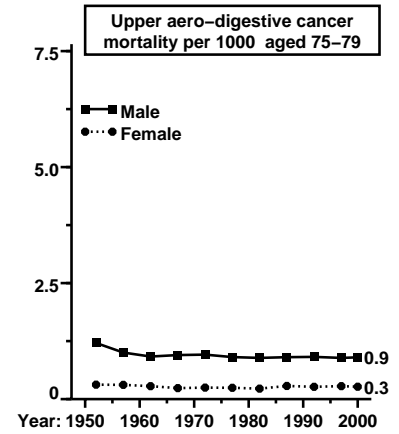
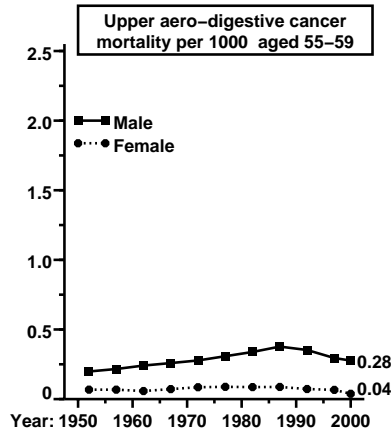
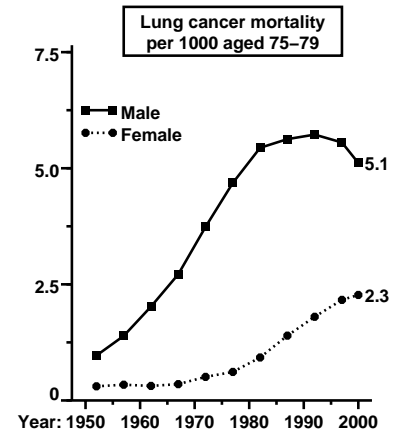
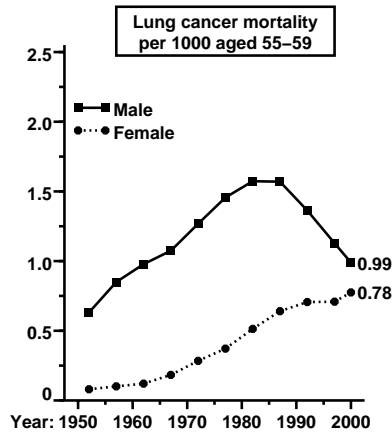
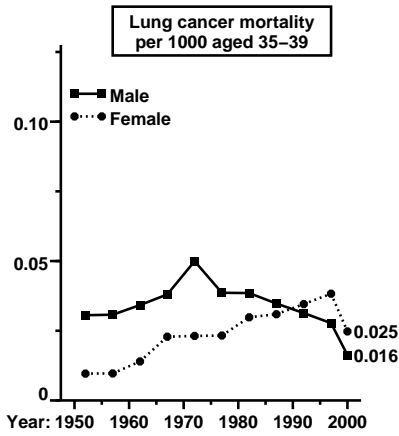
† Mean of 7 age-specific rates, ages 35-69 (or ages 0-34)

Year	MALE cancer mortality (annual rate/1000, by age)								FEMALE cancer mortality (annual rate/1000, by age)							
	0-34		35-69		70-79		0-34		35-69		70-79					
	Attributed to smoking?	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No			
1950	-	0.10	0.49	2.13	0.55	10.5	-	0.11	0.00	2.61	0.00	8.68				
1955	-	0.11	0.69	2.03	1.37	10.7	-	0.11	0.01	2.46	0.00	8.39				
1960	-	0.12	0.84	1.90	2.21	10.5	-	0.10	0.00	2.47	0.00	8.25				
1965	-	0.11	1.10	1.82	2.97	9.82	-	0.09	0.05	2.35	0.02	7.90				
1970	-	0.10	1.32	1.83	4.26	9.99	-	0.09	0.10	2.29	0.11	7.65				
1975	-	0.09	1.44	1.71	5.27	9.29	-	0.07	0.21	2.10	0.25	7.53				
1980	-	0.08	1.67	1.71	6.16	9.10	-	0.07	0.32	2.02	0.70	7.06				
1985	-	0.07	1.70	1.68	6.51	9.15	-	0.07	0.48	1.94	1.21	7.13				
1990	-	0.06	1.68	1.68	6.86	8.86	-	0.05	0.53	1.85	1.61	6.83				
1995	-	0.05	1.42	1.69	6.60	9.05	-	0.05	0.57	1.71	1.98	6.67				
2000	-	0.05	1.17	1.62	5.98	9.05	-	0.05	0.60	1.59	2.32	6.40				

0-34 and 35-69 = means of 7 age-specific rates; 70-79 = mean of 2 rates (70-74 & 75-79)

CANADA: 1950-2000

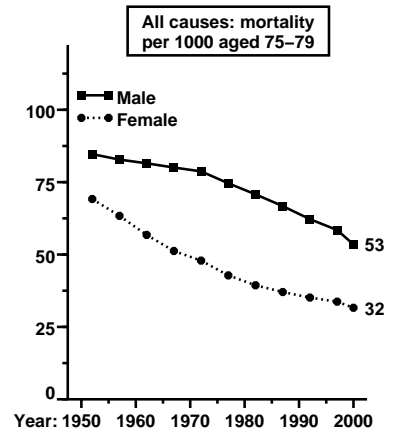
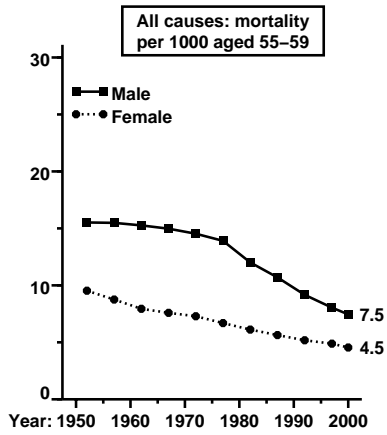
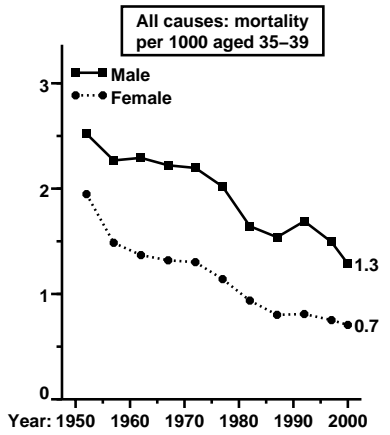
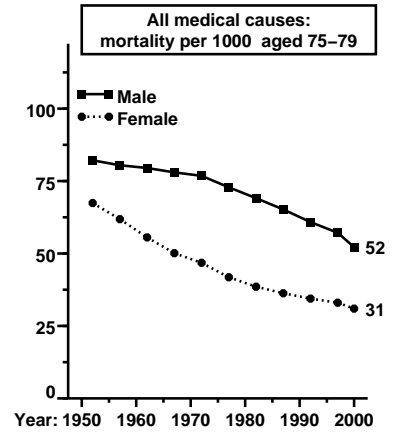
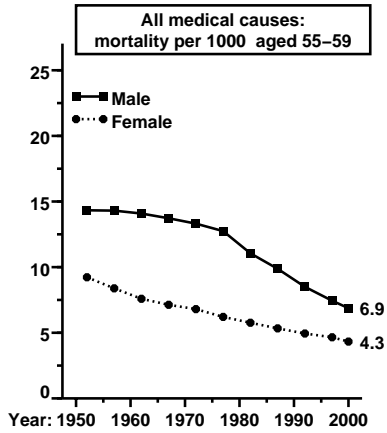
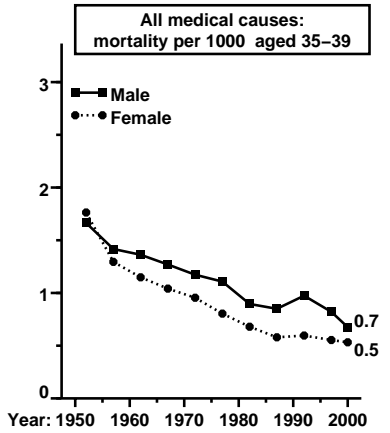
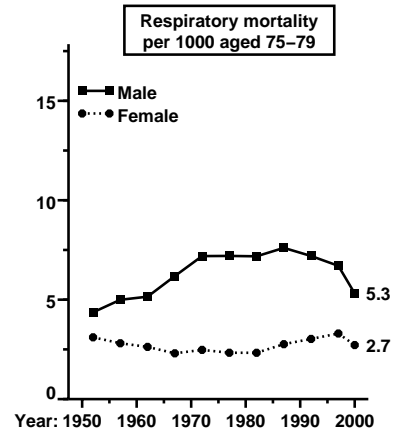
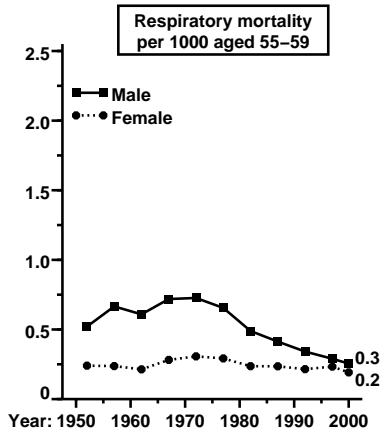
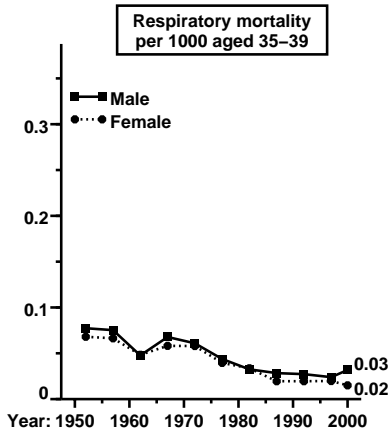
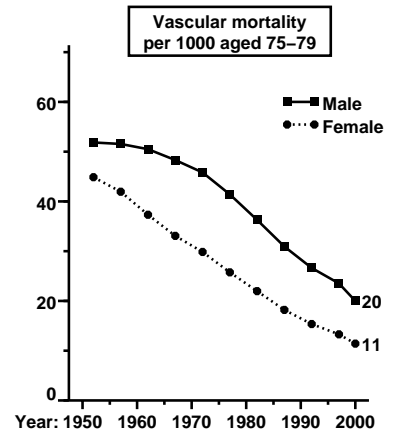
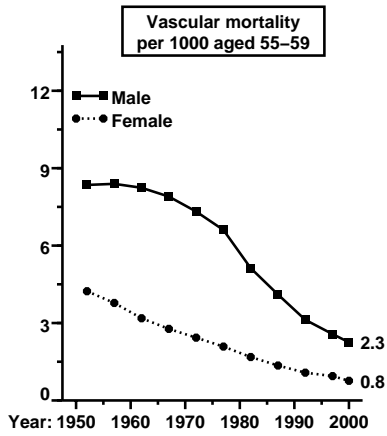
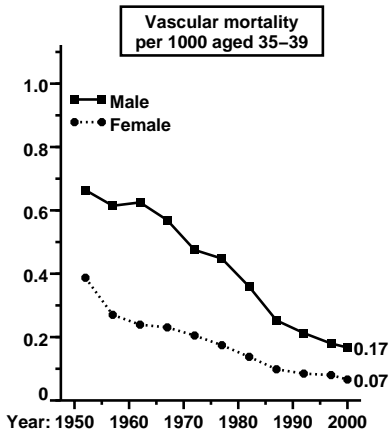
Mortality* trends at selected ages: 35-39, 55-59 & 75-79



* Annual mortality per 1000: averages of years available in 1950-54,.....,1995-99; then year 2000 separately

1950-2000: CANADA

Mortality* trends at selected ages: 35-39, 55-59 & 75-79



* Annual mortality per 1000: averages of years available in 1950-54,.....,1995-99; then year 2000 separately