

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

(2nd edition, revised June 2006:
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UNITED STATES

Raw data (pages 506–7, 508–9)

Analyses (pages 510–11, 512–13, 514–15)

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UNITED STATES: 2000

		No. of deaths (Source: WHO)			Standardised rates (defined overleaf)			Annual death rates / 100,000 (zero denoted by -)						
		All ages	0-34	35-69	All ages	0-34	35-69	0-4	5-9	10-14	15-19	20-24	25-29	30-34
ALL CAUSES	M	1177578	73904	404951	853.5	104.2	916.9	182.5	17.4	24.1	94.5	137.0	127.5	146.1
	F	1225773	38281	267773	597.6	55.8	571.5	149.6	13.8	16.0	39.5	46.7	52.5	72.5
Tuberculosis	M	534	24	224	0.4	0.0	0.5	0.0	-	0.0	0.0	0.1	0.0	0.1
	F	367	17	85	0.2	0.0	0.2	0.1	-	0.0	-	0.0	0.0	0.0
HIV	M	10868	1737	8949	7.6	2.4	13.6	0.1	0.1	0.1	0.2	0.8	3.7	11.8
	F	3610	949	2601	2.4	1.4	3.7	0.1	0.1	0.2	0.2	0.7	2.9	5.4
Other infective and parasitic	M	20397	910	8277	14.8	1.3	17.5	3.7	0.4	0.3	0.7	0.9	1.1	1.7
	F	23231	732	5983	11.7	1.1	12.4	3.3	0.4	0.3	0.5	0.7	0.9	1.4
ALL CANCER	M	286082	3728	116716	214.9	5.2	285.7	2.8	2.5	2.8	4.3	5.9	7.0	11.1
	F	267009	3427	102686	152.9	4.9	221.5	2.4	2.2	2.2	3.1	4.2	6.9	13.5
Mouth and pharynx cancer	M	4952	45	2977	3.9	0.1	6.8	-	-	0.0	0.1	0.1	0.1	0.2
	F	2540	35	968	1.4	0.1	2.1	-	-	-	0.0	0.1	0.1	0.2
Oesophagus cancer	M	9279	34	4944	7.2	0.0	11.9	0.0	-	-	-	0.0	0.1	0.2
	F	2953	9	1022	1.7	0.0	2.3	-	-	-	0.0	-	0.0	0.1
Stomach cancer	M	7328	75	3075	5.5	0.1	7.3	-	-	-	-	0.1	0.2	0.4
	F	5317	64	1627	2.8	0.1	3.4	-	-	0.0	0.0	0.1	0.1	0.4
Colorectal cancer	M	28462	179	11133	21.2	0.2	27.1	-	-	0.0	0.1	0.2	0.4	1.1
	F	29015	136	8326	15.1	0.2	18.3	-	-	0.0	0.1	0.1	0.4	0.8
Liver cancer	M	6843	88	3699	5.3	0.1	8.4	0.1	0.1	0.0	0.1	0.1	0.2	0.3
	F	3349	53	1123	1.9	0.1	2.4	0.1	0.0	0.1	0.0	0.1	0.1	0.1
Pancreas cancer	M	14238	38	6524	10.9	0.1	15.9	0.0	-	-	0.0	0.0	0.1	0.2
	F	15094	26	4640	8.2	0.0	10.5	0.0	-	0.0	-	0.0	0.1	0.2
Larynx cancer	M	3041	2	1556	2.4	0.0	3.8	-	-	-	-	-	-	0.0
	F	820	5	381	0.5	0.0	0.9	-	-	0.0	0.0	-	-	0.0
Lung cancer	M	90469	119	40791	69.6	0.2	103.5	0.0	-	-	0.0	0.1	0.3	0.7
	F	65052	105	27039	39.1	0.1	61.8	0.0	-	0.0	-	0.1	0.1	0.8
Malignant melanoma	M	4592	132	2485	3.5	0.2	5.4	-	-	0.0	0.0	0.2	0.3	0.7
	F	2828	96	1396	1.7	0.1	2.7	-	-	-	0.0	0.2	0.3	0.5
Female breast cancer	F	41872	475	20737	25.2	0.7	41.4	-	-	-	0.0	0.1	0.8	3.7
Cervix cancer	F	4200	248	2699	2.7	0.4	4.8	-	-	0.0	0.0	0.1	0.8	1.5
Other uterine cancer	F	6586	30	2567	3.8	0.0	5.8	-	-	-	-	0.0	0.0	0.2
Ovarian cancer	F	14224	126	6243	8.5	0.2	13.4	-	0.0	-	0.1	0.2	0.4	0.6
Prostate cancer	M	31078	1	4791	21.6	0.0	13.5	-	-	-	-	-	0.0	-
Bladder cancer	M	8163	5	2138	5.9	0.0	5.6	-	-	-	0.0	0.0	-	0.0
	F	3839	9	755	1.8	0.0	1.7	-	-	0.0	-	-	0.0	0.1
Other and ill-defined cancer sites	M	47749	1696	21479	36.0	2.4	50.1	1.6	1.6	1.6	2.0	2.6	3.0	4.2
	F	42690	1131	15193	24.0	1.6	32.6	1.3	1.4	1.3	1.5	1.6	1.8	2.5
Hodgkin's disease	M	686	118	326	0.5	0.2	0.7	-	0.0	0.0	0.1	0.3	0.3	0.5
	F	601	108	236	0.4	0.2	0.4	-	0.0	0.0	0.2	0.2	0.3	0.4
Myeloma and non-Hodgkin lymphomas	M	17425	340	6845	13.0	0.5	16.4	0.1	0.2	0.1	0.4	0.8	0.6	1.1
	F	16467	200	4988	8.9	0.3	11.2	0.0	0.1	0.1	0.1	0.4	0.6	0.6
Leukaemia	M	11777	856	3953	8.6	1.2	9.5	0.9	0.8	1.0	1.5	1.5	1.3	1.5
	F	9562	571	2746	5.1	0.8	5.8	0.9	0.6	0.6	0.9	0.8	1.0	0.9
Diabetes	M	31602	489	12471	23.4	0.7	29.6	0.1	0.0	0.1	0.3	0.6	1.2	2.5
	F	37699	332	10649	19.8	0.5	23.7	0.0	0.0	0.1	0.2	0.5	0.9	1.5
ALL VASCULAR DISEASE	M	437893	3933	131708	314.5	5.5	312.3	4.8	0.8	1.2	2.9	5.1	8.3	15.5
	F	503631	2613	69425	220.1	3.8	155.3	4.3	0.6	1.0	2.1	3.7	5.6	9.2
Rheumatic heart disease and fever	M	1072	33	429	0.8	0.0	1.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
	F	2510	29	711	1.3	0.0	1.5	0.0	0.0	-	0.0	0.0	0.1	0.1
Hypertensive disease	M	17934	233	7083	13.1	0.3	15.6	0.0	0.0	0.0	0.0	0.3	0.6	1.3
	F	26685	143	4591	12.0	0.2	9.8	0.0	0.0	0.0	0.1	0.2	0.4	0.7
Ischaemic heart disease	M	260574	818	82956	188.7	1.1	198.8	0.2	0.0	0.0	0.2	0.6	1.8	5.0
	F	254630	296	34447	111.4	0.4	79.5	0.2	0.0	0.0	0.1	0.3	0.6	1.7
Pulmonary embolism and other venous	M	4907	214	2185	3.6	0.3	4.7	0.1	0.1	0.0	0.1	0.3	0.5	0.9
	F	6940	277	2297	3.7	0.4	4.6	0.0	0.0	0.0	0.2	0.6	0.8	1.1
Cerebrovascular disease	M	64769	540	14541	45.4	0.8	34.9	0.9	0.1	0.2	0.4	0.7	1.1	1.9
	F	102892	508	12696	44.0	0.7	27.7	0.8	0.1	0.3	0.3	0.7	1.0	1.9
Other vascular disease	M	88637	2095	24514	63.0	2.9	57.3	3.5	0.5	0.9	2.1	3.1	4.2	6.3
	F	109974	1360	14683	47.7	2.0	32.2	3.2	0.4	0.6	1.3	1.9	2.6	3.7
Chronic obstructive pulmonary disease	M	60008	401	13817	42.9	0.6	37.0	0.4	0.2	0.5	0.6	0.6	0.7	0.9
	F	62009	286	12950	31.0	0.4	31.0	0.3	0.2	0.3	0.3	0.4	0.6	0.8
Other respiratory disease	M	50708	1144	9643	35.1	1.6	23.0	4.6	0.5	0.4	0.8	1.3	1.5	2.2
	F	58354	941	7140	25.1	1.4	15.6	3.9	0.4	0.5	0.7	1.0	1.3	1.9
Peptic ulcer	M	2176	13	746	1.6	0.0	1.7	-	-	-	0.0	0.0	0.0	0.0
	F	2328	10	404	1.1	0.0	0.9	-	-	-	0.0	0.0	0.0	0.1
Liver cirrhosis	M	17109	296	12960	13.3	0.4	25.8	0.0	-	-	0.0	0.1	0.6	2.1
	F	9003	141	5364	5.8	0.2	10.3	0.0	-	-	0.0	0.1	0.2	1.0
Renal disease	M	18234	309	4577	12.9	0.4	11.0	1.2	0.1	0.1	0.2	0.2	0.4	0.8
	F	20171	246	3919	9.6	0.4	8.8	0.7	0.0	0.1	0.1	0.4	0.4	0.8
Pregnancy, birth	F	404	277	127	0.3	0.4	0.2	-	-	-	0.2	0.8	0.9	0.9
Congenital and perinatal causes	M	13485	12005	1051	10.5	16.9	2.0	110.4	1.1	1.1	1.4	1.4	1.3	1.5
	F	11162	9610	955	8.8	14.2	1.8	93.3	1.0	1.0	0.9	0.9	0.9	1.1
Ill-defined causes	M	15863	4033	6378	11.5	5.7	11.9	22.6	0.5	0.5	1.9	3.9	4.6	5.8
	F	16015	2453	3358	8.2	3.6	6.1	16.5	0.4	0.4	1.2	1.8	2.1	2.8
Other medical causes	M	107935	4945	30659	76.0	6.9	66.5	11.5	2.4	3.1	4.6	7.2	8.3	11.5
	F	164196	3756	24704	72.6	5.5	51.0	9.4	2.2	2.8	3.5	5.1	6.4	8.7
ALL NON-MEDICAL CAUSES	M	104684	39937	46775	74.2	56.5	78.9	20.4	8.8	13.9	76.5	108.7	88.7	78.6
	F	46584	12491	17423	28.1	18.2	29.1	15.3	6.3	7.0	26.6	26.3	22.5	23.5
Road traffic accidents	M	28999	13868	11797	20.6	19.6	20.1	4.0	3.8	5.4	33.8	40.4	27.9	22.1
	F	13857	5815	5377	9.2	8.5	9.2	3.4	3.4	3.6	17.5	14.1	9.5	8.1
Fire	M	2025	617	919	1.5	0.9	1.7	1.9	1.0	0.3	0.4	0.8	0.8	0.8
	F	1352	409	479	0.9	0.6	0.9	1.4	0.7	0.5	0.4	0.4	0.4	0.4
Suicide	M	23597	7599	12384	16.8	10.8	21.0	-	0.1	2.3	13.1	21.2	19.7	18.9
	F	5722	1485	3612	3.9	2.2	5.8	-	0.0	0.6	2.8	3.2	4.0	4.5
Homicide	M	12678	8138	4206	8.9	11.6	6.5	3.9	0.7	1.4	15.7	26.5	19.2	13.6
	F	3912	1977	1638	2.7	2.9	2.5	3.1	0.6	0.8	3.1	4.		

2000: UNITED STATES

Annual death rates / 100,000
(zero denoted by -)

9th ICD/10th ICD categories

35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+/NK			
204.0	302.9	447.5	640.6	972.5	1513.2	2337.7	3597.7	5529.3	12148.8	M	ALL CAUSES	001-999/A00-Y89
112.5	170.4	247.5	379.5	599.2	967.9	1523.4	2353.7	3791.2	10665.4	F		
0.1	0.2	0.4	0.5	0.4	0.7	1.1	1.3	2.5	5.0	M	Tuberculosis	010-018, 137/ A15-A19, B90
0.1	0.1	0.0	0.1	0.1	0.3	0.6	1.0	1.8	2.3	F		
19.1	20.2	19.9	14.9	9.9	6.9	4.5	2.9	1.7	0.4	M	HIV	279.5, 279.6/B20-B24
6.3	6.6	5.2	3.4	2.0	1.5	1.0	0.7	0.3	0.2	F		
3.7	7.1	13.9	16.8	18.1	25.3	37.8	57.2	92.7	191.6	M	Other infective and parasitic	Rest of 001-139/rest of A00-B99 excl A33,A34
2.5	4.5	7.0	9.0	13.0	20.2	30.7	47.0	73.3	183.8	F		
21.1	44.0	91.7	173.5	315.7	527.7	826.1	1165.0	1540.3	2255.1	M	ALL CANCER	140-208/C00-C97
27.6	52.2	92.0	158.1	255.1	395.6	570.0	767.5	977.3	1346.2	F		
0.5	1.4	3.1	6.0	9.3	12.5	15.0	16.5	18.2	22.3	M	Mouth and pharynx cancer	140-149/C00-C14
0.2	0.4	1.0	1.6	2.2	3.9	5.4	7.3	8.4	13.6	F		
0.6	1.7	4.1	8.6	14.9	22.7	30.3	37.2	42.7	47.1	M	Oesophagus cancer	150/C15
0.1	0.2	0.6	1.4	2.7	4.4	7.1	9.7	11.1	16.1	F		
0.9	1.6	2.9	4.8	7.6	13.8	19.3	27.7	38.3	59.5	M	Stomach cancer	151/C16
0.6	1.2	1.7	2.4	3.5	5.8	8.9	12.8	18.6	36.5	F		
2.4	4.3	8.9	17.0	30.0	50.2	76.6	113.3	154.8	247.5	M	Colorectal cancer	153, 154/C18-C21
1.8	3.5	7.3	12.4	19.9	33.7	49.1	74.5	105.1	205.6	F		
0.6	1.7	5.3	7.5	10.1	13.8	19.5	24.9	30.5	35.2	M	Liver cancer	155.0/C22 excl C221
0.3	0.6	1.0	1.5	2.7	4.3	6.7	10.5	13.4	17.9	F		
0.8	2.1	5.3	11.1	18.2	29.6	44.2	55.8	78.1	95.6	M	Pancreas cancer	157/C25
0.5	1.5	2.9	6.4	11.7	19.9	31.0	47.3	64.0	88.7	F		
0.1	0.4	1.2	2.5	4.8	7.8	9.9	12.6	14.4	16.8	M	Larynx cancer	161/C32
0.0	0.1	0.3	0.6	0.9	1.4	2.6	2.9	3.3	2.5	F		
3.2	10.4	25.2	53.1	113.9	199.3	319.1	431.1	501.7	529.3	M	Lung cancer	162/C33, C34
2.6	8.0	16.2	34.5	69.5	120.6	181.1	235.9	267.1	245.3	F		
1.0	2.1	3.2	5.2	6.3	8.6	11.1	14.3	17.8	26.8	M	Malignant melanoma	172/C43
1.0	1.3	2.1	2.4	2.9	4.0	5.1	6.3	7.6	11.6	F		
8.5	16.1	26.1	40.2	53.0	65.6	80.0	97.8	119.7	177.6	F	Female breast cancer	174/C50
2.6	3.5	4.3	5.2	5.9	5.8	6.7	7.0	7.4	9.8	F	Cervix cancer	180/C53
0.4	0.8	1.8	3.5	6.8	11.3	15.7	19.9	24.0	32.8	F	Other uterine cancer	179, 182/C54, C55
1.3	2.9	6.0	10.8	16.1	23.5	33.2	39.9	53.5	59.6	F	Ovarian cancer	183/C56, C570-C574
0.1	0.2	1.1	3.0	9.4	25.0	55.5	108.9	201.4	497.2	M	Prostate cancer	185/C61
0.2	0.4	1.1	2.5	5.6	10.5	18.8	31.5	49.2	102.5	M	Bladder cancer	188/C67
0.2	0.3	0.5	0.8	1.7	3.3	5.5	9.7	14.1	33.1	F		
6.9	11.9	20.4	36.1	57.5	88.7	129.1	176.0	228.5	330.6	M	Other and ill-defined cancer sites	Rest of 140-199/ rest of C00-C80, C97
4.8	8.1	13.9	23.8	37.2	56.9	83.3	114.7	154.5	233.8	F		
0.4	0.4	0.5	0.6	0.5	1.1	1.3	1.9	2.3	3.0	M	Hodgkin's disease	201/C81
0.3	0.3	0.3	0.4	0.5	0.6	0.7	1.3	1.5	2.2	F		
1.9	3.2	6.1	10.4	18.0	28.3	47.2	68.1	99.4	140.3	M	Myeloma and non- Hodgkin lymphomas	200, 202-203/ C82-C90, C96
1.0	1.8	3.5	6.4	12.2	20.8	32.6	47.0	68.7	99.8	F		
1.6	2.1	3.5	5.0	9.5	15.8	28.9	45.2	63.2	101.3	M	Leukaemia	204-208/C91-C95
1.6	1.7	2.6	3.9	5.8	9.6	15.4	23.0	35.4	59.7	F		
3.5	6.7	11.1	19.7	32.8	53.1	80.0	117.1	168.7	276.2	M	Diabetes	250/E10-E14
2.5	4.2	7.6	14.9	25.8	42.5	68.5	100.4	145.7	257.7	F		
31.7	68.4	125.8	210.2	346.3	551.3	852.2	1379.4	2247.1	5624.0	M	ALL VASCULAR DISEASE	390-459/I00-199
17.5	31.6	51.5	87.8	152.1	273.0	473.9	809.2	1509.0	5443.0	F		
0.2	0.3	0.5	0.6	1.1	1.8	2.2	3.5	5.6	9.4	M	Rheumatic heart disease and fever	390-398/I00-109
0.2	0.5	0.7	0.9	1.6	2.5	4.5	7.2	9.8	16.6	F		
2.5	5.6	8.8	13.7	18.1	27.1	33.4	50.1	74.5	199.9	M	Hypertensive disease	401-405/I10-I15
1.5	2.9	4.6	6.3	10.6	16.8	26.0	40.5	74.8	278.8	F		
14.6	36.7	75.4	133.8	228.8	357.5	544.9	860.8	1354.3	3181.6	M	Ischaemic heart disease	410-414/I20-I25
5.0	10.1	19.6	41.1	78.9	146.8	255.2	432.2	786.9	2743.7	F		
1.4	1.9	2.8	4.1	4.7	7.5	10.8	14.7	22.5	38.7	M	Pulmonary embolism and other venous	415.1, 451-453/ I26, I80-I82
1.5	2.1	2.7	3.7	4.7	7.5	10.1	14.7	20.6	45.9	F		
3.8	7.7	13.9	21.3	34.6	61.4	101.5	188.8	357.0	985.0	M	Cerebrovascular disease	430-438/I60-I69
3.9	7.4	11.8	17.2	26.2	45.8	81.4	151.1	311.0	1146.9	F		
9.2	16.3	24.4	36.7	59.1	96.0	159.4	261.5	433.2	1209.4	M	Other vascular disease	Rest of 390-459/ rest of I00-199
5.5	8.5	12.1	18.7	30.2	53.6	96.8	163.5	306.0	1211.2	F		
1.3	2.6	6.1	12.1	31.3	67.0	138.3	252.3	392.7	744.9	M	Chronic obstructive pulmonary disease	490-496/ J40-J47, J67
1.4	2.8	5.4	11.5	27.1	57.2	111.3	188.0	276.9	458.8	F		
3.4	6.3	8.4	13.5	22.0	37.5	70.2	133.7	254.7	846.3	M	Other respiratory disease	Rest of 460-519/ rest of J00-J98
2.8	4.1	6.0	9.4	15.1	25.8	45.8	82.4	160.4	654.9	F		
0.3	0.4	0.8	1.5	2.0	2.9	3.8	6.7	10.8	25.9	M	Peptic ulcer	531-533/K25-K27
0.1	0.2	0.4	0.5	0.9	1.6	2.4	3.6	6.9	24.0	F		
6.2	14.1	24.8	28.4	31.1	37.1	38.6	39.6	39.2	33.1	M	Liver cirrhosis	571/K70, K74
3.2	5.9	8.2	8.9	12.1	15.0	18.9	22.3	24.7	22.2	F		
1.4	2.5	4.4	6.5	10.7	18.5	33.0	53.8	99.3	257.4	M	Renal disease	580-590/N00-N19
1.2	1.7	2.6	4.8	8.4	15.8	27.5	43.0	68.2	182.3	F		
0.8	0.3	0.0	0.0	-	-	-	-	-	-	F	Pregnancy, birth	630-676/A34,000-099
1.4	1.5	1.6	2.2	2.0	2.6	2.7	2.6	3.2	7.3	M	Congenital and perinatal causes	740-779/A33, P00-P96, Q00-Q99
1.1	1.1	1.3	1.5	2.4	2.5	2.5	2.3	3.3	5.7	F		
7.5	10.1	11.5	11.2	11.2	13.2	18.7	22.0	35.1	110.6	M	Ill-defined causes	780-799/R00-R99
3.7	4.9	5.5	5.0	5.8	7.3	10.2	16.5	26.2	137.7	F		
18.0	28.1	41.2	52.9	69.2	99.5	156.5	266.0	500.0	1464.9	M	Other medical causes	Rest of 001-799/ rest of A00-R99
12.9	19.8	26.2	37.9	52.9	80.6	126.7	223.7	447.0	1757.1	F		
85.4	90.7	85.8	76.6	70.0	69.9	74.2	98.2	141.4	306.1	M	ALL NON- MEDICAL CAUSES	E800-E999/V01-Y89
28.8	30.3	28.6	26.9	26.4	29.1	33.4	46.1	70.1	189.5	F		
22.0	21.7	20.6	19.3	19.0	19.2	18.9	22.9	30.2	46.9	M	Road traffic accidents	E810-E819, E826-E829/ part of V01-V99, Y850
9.1	8.3	8.3	8.2	8.9	10.1	11.2	13.6	17.9	20.3	F		
1.2	1.2	1.4	1.8	1.9	2.2	2.4	3.1	4.3	7.3	M	Fire	E890-E899/X00-X09
0.5	0.7	0.7	0.7	0.9	1.2	1.6	1.8	2.8	4.3	F		
21.5	23.6	22.8	21.3	19.7	18.4	19.5	25.5	33.9	48.8	M	Suicide	E950-E959/X60-X84
5.7	6.9	6.5	6.7	5.7	4.9	4.0	4.1	3.8	4.3	F		
10.7	9.5	7.5	5.8	4.9	3.7	3.2	3.3	2.6	3.9	M	Homicide	E960-E969/ X85-X99, Y00-Y09
4.3	3.5	2.7	2.0	1.6	1.5	1.6	1.6	2.0	2.2	F		
11399	11239	10084	8630	6625	5214	4446	3988	3135	3144	M	POPULATION	
11458	11510	10388	9021	7063	5703	5107	4928	4336	5995	F	(1000s; UN, 2004 revision)	

UNITED STATES: 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.	-	-	-	-	-	-	-	-	-	-	-
0-34 Total	93053	4306	180	80	4046	470	1465	4657	461	34531	47163
35-69 Sm.	136454	57018	40649	6048	10321	10648	2926	41657	-	24205	-
35-69 Total	422758 (32%)	119206 (48%)	43891 (93%)	9365 (65%)	65950 (16%)	13653 (78%)	10240 (29%)	144784 (29%)	12182	79368 (30%)	43325
70+ Sm.	145043	61765	43614	4433	13718	29416	4840	37460	-	11562	-
70+ Total	657148 (22%)	158099 (39%)	47785 (91%)	7296 (61%)	103018 (13%)	39815 (74%)	41224 (12%)	303011 (12%)	3882	94625 (12%)	16492
Any age Sm.	281497	118783	84263	10481	24039	40064	7766	79117	-	35767	-
Any age Total	1172959 (24%)	281611 (42%)	91856 (92%)	16741 (63%)	173014 (14%)	53938 (74%)	52929 (15%)	452452 (17%)	16525	208524 (17%)	106980
2000											
0-34 Sm.	-	-	-	-	-	-	-	-	-	-	-
0-34 Total	73904	3728	119	81	3528	401	1144	3933	296	24465	39937
35-69 Sm.	118464	52012	37274	5733	9005	10378	2476	34075	-	19523	-
35-69 Total	404951 (29%)	116716 (45%)	40791 (91%)	9477 (60%)	66448 (14%)	13817 (75%)	9643 (26%)	131708 (26%)	12960	73332 (27%)	46775
70+ Sm.	150445	63408	45015	4587	13806	33402	4455	35014	-	14166	-
70+ Total	698723 (22%)	165638 (38%)	49559 (91%)	7714 (59%)	108365 (13%)	45790 (73%)	39921 (11%)	302252 (12%)	3853	123297 (11%)	17972
Any age Sm.	268909	115420	82289	10320	22811	43780	6931	69089	-	33689	-
Any age Total	1177578 (23%)	286082 (40%)	90469 (91%)	17272 (60%)	178341 (13%)	60008 (73%)	50708 (14%)	437893 (16%)	17109	221094 (15%)	104684

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	132388	70784	52309	11321	10221	8807	6859	5542	4910	4649	3970	2803	2522
2000	139643	71741	57636	11399	11239	10084	8630	6625	5214	4446	3988	3135	3144
NUMBER OF DEATHS (Source: WHO)													
All causes													
1995	1172959	93053	422758	32339	37792	42609	48313	58848	83442	119415	154586	164372	338190
2000	1177578	73904	404951	23252	34045	45121	55277	64425	78896	103935	143473	173327	381923
Lung cancer													
1995	91856	180	43891	401	1092	2447	4694	7388	11434	16435	18349	14531	14905
2000	90469	119	40791	370	1172	2540	4583	7546	10391	14189	17193	15726	16640
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	948.0*	129.2*	1024.8*	285.7	369.8	483.8	704.3	1061.8	1699.5	2568.6	3893.8	5865.0	13407.5
2000	853.5*	104.2*	916.9*	204.0	302.9	447.5	640.6	972.5	1513.2	2337.7	3597.7	5529.3	12148.8
All cancer													
1995	234.4*	5.9*	313.3*	24.0	48.6	96.7	193.8	348.3	589.9	891.5	1246.2	1602.5	2525.8
2000	214.9*	5.2*	285.7*	21.1	44.0	91.7	173.5	315.7	527.7	826.1	1165.0	1540.3	2255.1
Lung cancer													
1995	77.7*	0.2*	118.6*	3.5	10.7	27.8	68.4	133.3	232.9	353.5	462.2	518.5	590.9
2000	69.6*	0.2*	103.5*	3.2	10.4	25.2	53.1	113.9	199.3	319.1	431.1	501.7	529.3
Upper aerodigestive cancer (mouth, oesophagus, pharynx and larynx)													
1995	14.4*	0.1*	24.2*	1.3	3.9	8.8	19.0	30.7	45.1	60.6	69.1	77.1	94.8
2000	13.5*	0.1*	22.5*	1.2	3.5	8.4	17.2	29.1	43.0	55.3	66.3	75.2	86.3
Other cancer													
1995	142.3*	5.6*	170.4*	19.2	34.0	60.2	106.3	184.2	311.9	477.3	714.8	1007.0	1840.2
2000	131.8*	4.9*	159.7*	16.6	30.0	58.1	103.2	172.7	285.5	451.7	667.6	963.4	1639.5
Chronic obstructive pulmonary disease (COPD)													
1995	43.4*	0.7*	38.3*	1.4	2.1	5.3	13.1	31.9	72.2	142.2	247.1	395.7	749.9
2000	42.9*	0.6*	37.0*	1.3	2.6	6.1	12.1	31.3	67.0	138.3	252.3	392.7	744.9
Other respiratory disease													
1995	42.1*	2.0*	26.0*	4.9	6.9	10.2	14.6	22.5	43.7	79.3	154.3	299.5	1058.6
2000	35.1*	1.6*	23.0*	3.4	6.3	8.4	13.5	22.0	37.5	70.2	133.7	254.7	846.3
Vascular disease													
1995	369.5*	6.3*	372.2*	38.1	76.4	143.2	252.2	401.7	666.3	1027.5	1627.2	2580.7	6584.4
2000	314.5*	5.5*	312.3*	31.7	68.4	125.8	210.2	346.3	551.3	852.2	1379.4	2247.1	5624.0
Liver cirrhosis													
1995	14.0*	0.6*	26.8*	8.2	17.4	22.7	27.6	31.2	39.5	41.3	44.2	39.7	40.1
2000	13.3*	0.4*	25.8*	6.2	14.1	24.8	28.4	31.1	37.1	38.6	39.6	39.2	33.1
Other medical causes													
1995	164.1*	46.7*	167.4*	115.8	127.8	125.7	129.5	155.5	212.4	305.4	472.8	800.9	2117.4
2000	158.7*	34.3*	154.2*	54.9	76.8	104.8	126.2	156.2	222.7	338.0	529.4	913.8	2339.3
All non-medical causes													
1995	80.6*	67.0*	80.7*	93.2	90.6	80.0	73.6	70.8	75.4	81.4	102.0	145.8	331.2
2000	74.2*	56.5*	78.9*	85.4	90.7	85.8	76.6	70.0	69.9	74.2	98.2	141.4	306.1

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

1995, 2000: UNITED STATES

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	43508	3795	131	41	3623	373	1171	2920	212	20836	14201
35-69	Sm.	74467	27994	22919	1525	3550	9380	1994	21894	-	13205	-
	Total	262371	103622	26802	2523	74297	12083	6811	74053	5140	45608	15054
		(28%)	(27%)	(86%)	(60%)	(5%)	(78%)	(29%)	(30%)		(29%)	
70+	Sm.	140352	36195	28056	2237	5902	28610	5973	51019	-	18555	-
	Total	833294	149427	32411	3595	113421	36505	51271	426166	3345	152006	14574
		(17%)	(24%)	(87%)	(62%)	(5%)	(78%)	(12%)	(12%)		(12%)	
Any age	Sm.	214819	64189	50975	3762	9452	37990	7967	72913	-	31760	-
	Total	1139173	256844	59344	6159	191341	48961	59253	503139	8697	218450	43829
		(19%)	(25%)	(86%)	(61%)	(5%)	(78%)	(13%)	(14%)		(15%)	
2000												
0-34	Sm.	-	-	-	-	-	-	-	-	-	-	-
	Total	38281	3427	105	49	3273	286	941	2613	141	18382	12491
35-69	Sm.	73149	27457	22843	1384	3230	9909	1980	19453	-	14350	-
	Total	267773	102686	27039	2371	73276	12950	7140	69425	5364	52785	17423
		(27%)	(27%)	(84%)	(58%)	(4%)	(77%)	(28%)	(28%)		(27%)	
70+	Sm.	169988	42451	33188	2507	6756	38979	6357	55250	-	26951	-
	Total	919719	160896	37908	3893	119095	48773	50273	431593	3498	208016	16670
		(18%)	(26%)	(88%)	(64%)	(6%)	(80%)	(13%)	(13%)		(13%)	
Any age	Sm.	243137	69908	56031	3891	9986	48888	8337	74703	-	41301	-
	Total	1225773	267009	65052	6313	195644	62009	58354	503631	9003	279183	46584
		(20%)	(26%)	(86%)	(62%)	(5%)	(79%)	(14%)	(15%)		(15%)	

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	137215	68294	54865	11469	10422	9097	7177	5894	5402	5403	5037	3976	5042
2000	144511	69002	60250	11458	11510	10388	9021	7063	5703	5107	4928	4336	5995
NUMBER OF DEATHS (Source: WHO)													
All causes													
1995	1139173	43508	262371	14148	17991	23014	29064	37793	55429	84932	121957	151144	560193
2000	1225773	38281	267773	12888	19613	25711	34232	42326	55199	77804	115997	164373	639349
Lung cancer													
1995	59344	131	26802	345	725	1682	2987	4549	6826	9688	11257	9681	11473
2000	65052	105	27039	294	920	1680	3112	4907	6877	9249	11627	11579	14702
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)													
1995	622.3*	62.2*	599.0*	123.4	172.6	253.0	404.9	641.2	1026.0	1572.0	2421.2	3801.0	11109.9
2000	597.6*	55.8*	571.5*	112.5	170.4	247.5	379.5	599.2	967.9	1523.4	2353.7	3791.2	10665.4
All cancer													
1995	161.9*	5.3*	239.2*	31.3	56.0	104.3	179.6	284.3	423.5	595.8	789.3	974.9	1406.2
2000	152.9*	4.9*	221.5*	27.6	52.2	92.0	158.1	255.1	395.6	570.0	767.5	977.3	1346.2
Lung cancer													
1995	39.2*	0.2*	64.7*	3.0	7.0	18.5	41.6	77.2	126.4	179.3	223.5	243.5	227.5
2000	39.1*	0.1*	61.8*	2.6	8.0	16.2	34.5	69.5	120.6	181.1	235.9	267.1	245.3
Upper aerodigestive cancer (mouth, oesophagus, pharynx and larynx)													
1995	3.9*	0.1*	6.0*	0.4	0.8	1.9	4.0	7.3	11.7	16.1	19.5	22.5	34.1
2000	3.6*	0.1*	5.3*	0.3	0.7	1.9	3.5	5.8	9.7	15.1	19.8	22.8	32.2
Other cancer													
1995	118.8*	5.0*	168.5*	27.9	48.2	83.9	134.0	199.8	285.5	400.4	546.3	708.9	1144.6
2000	110.2*	4.7*	154.5*	24.7	43.5	74.0	120.0	179.8	265.3	373.8	511.8	687.4	1068.8
Chronic obstructive pulmonary disease (COPD)													
1995	27.5*	0.5*	29.9*	1.4	3.0	5.1	12.9	28.4	55.6	102.7	161.8	236.6	375.8
2000	31.0*	0.4*	31.0*	1.4	2.8	5.4	11.5	27.1	57.2	111.3	188.0	276.9	458.8
Other respiratory disease													
1995	28.5*	1.7*	15.7*	3.2	4.5	6.0	9.8	15.5	25.6	45.0	87.3	171.8	794.2
2000	25.1*	1.4*	15.6*	2.8	4.1	6.0	9.4	15.1	25.8	45.8	82.4	160.4	654.9
Vascular disease													
1995	249.7*	4.1*	176.5*	18.3	31.2	54.2	99.9	176.6	317.5	537.6	928.2	1674.4	6204.1
2000	220.1*	3.8*	155.3*	17.5	31.6	51.5	87.8	152.1	273.0	473.9	809.2	1509.0	5443.0
Liver cirrhosis													
1995	6.1*	0.3*	10.9*	3.6	5.6	7.5	9.4	13.0	17.0	20.2	22.6	25.9	23.3
2000	5.8*	0.2*	10.3*	3.2	5.9	8.2	8.9	12.1	15.0	18.9	22.3	24.7	22.2
Other medical causes													
1995	120.0*	29.6*	99.2*	37.6	44.5	50.9	68.0	98.5	158.1	237.0	384.0	647.8	2120.2
2000	134.7*	26.9*	108.7*	31.2	43.4	55.8	77.0	111.3	172.2	270.0	438.2	772.7	2550.9
All non-medical causes													
1995	28.6*	20.8*	27.7*	28.0	27.9	25.0	25.4	24.9	28.8	33.6	48.1	69.7	186.0
2000	28.1*	18.2*	29.1*	28.8	30.3	28.6	26.9	26.4	29.1	33.4	46.1	70.1	189.5

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

UNITED STATES: 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	– / 74	– / 38	–
35–69	118 / 405	73 / 268	23 years
70+	150 / 699	170 / 920	8 years
All ages	269 / 1178	243 / 1226	14 years

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

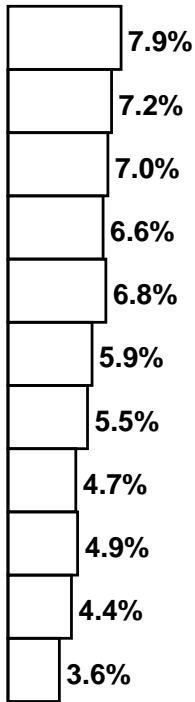
Cause	Male (by age)				Female (by age)			
	0–34	35–69	70+	All	0–34	35–69	70+	All
Lung Cancer	–/0.1	37/41	45/50	82/90	–/0.1	23/27	33/38	56/65
All Cancer	–/3.7	52/117 (45%)	63/166 (38%)	115/286	–/3.4	27/103 (27%)	42/161 (26%)	70/267
Vascular	–/3.9	34/132	35/302	69/438	–/2.6	19/69	55/432	75/504
Respiratory	–/1.5	13/23	38/86	51/111	–/1.2	12/20	45/99	57/120
All Other	–/65	20/133	14/145	34/343	–/31	14/76	27/228	41/335
All Causes	–/74	118/405 (29%)	150/699 (22%)	269/1178	–/38	73/268 (27%)	170/920 (18%)	243/1226

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

Cause	Male	Female	Male + Female
All Cancer	115 / 286 (40%)	70 / 267 (26%)	185 / 553 (34%)
All Causes	269 / 1178 (23%)	243 / 1226 (20%)	512 / 2403 (21%)

1950-2000: UNITED STATES

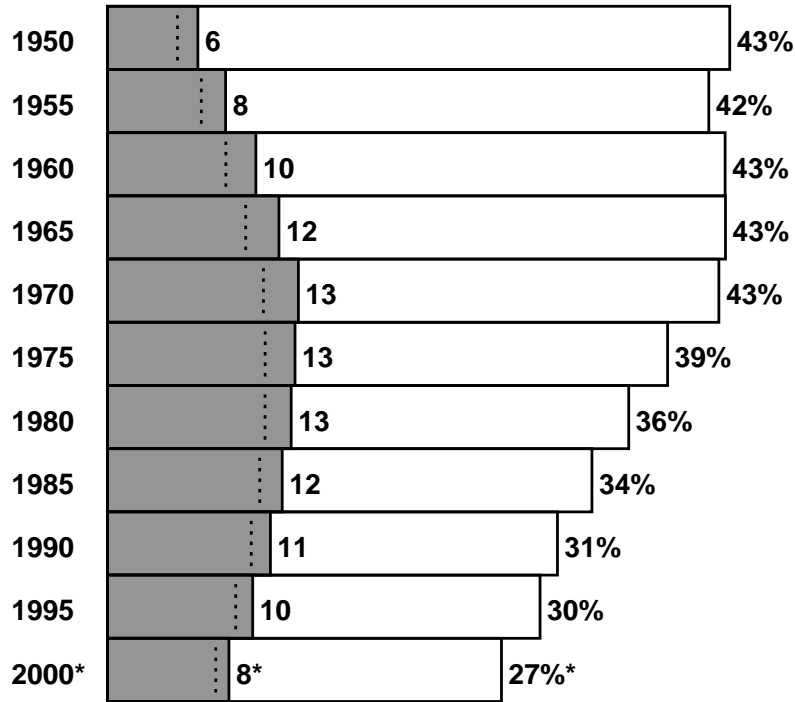
Population risk of dying at ages 0-34



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

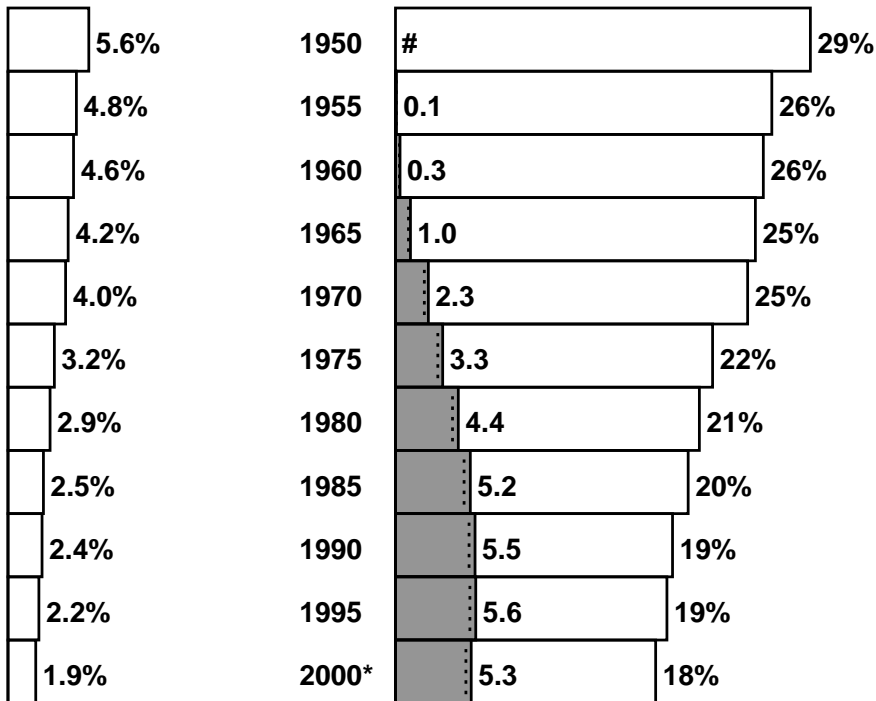
*eg, at year 2000 male death rates, out of 100 men aged 35, 27 would die before age 70 (with 8 of these deaths attributed to smoking)

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

UNITED STATES: 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	-/122	62/398 (16%)	8.2/308 (3%)	70/828	-/85	0.0/248	0.0/292	0.0/625
1955	-/119	83/403 (20%)	17/350 (5%)	99/873	-/79	0.7/241 (0.3%)	0.0/336	0.7/656
1960	-/123	109/439 (25%)	30/413 (7%)	139/976	-/81	3.6/254 (1%)	0.0/401	3.6/736
1965	-/118	131/460 (28%)	47/458 (10%)	178/1035	-/74	12/265 (5%)	0.8/454 (0.2%)	13/793
1970	-/119	153/482 (32%)	66/477 (14%)	219/1078	-/68	27/276 (10%)	6.5/498 (1%)	34/843
1975	-/109	155/457 (34%)	83/485 (17%)	237/1051	-/56	40/262 (15%)	15/524 (3%)	55/842
1980	-/110	155/439 (35%)	104/526 (20%)	259/1075	-/54	54/261 (21%)	37/600 (6%)	91/915
1985	-/98	152/425 (36%)	122/575 (21%)	274/1098	-/48	66/261 (25%)	65/680 (10%)	132/989
1990	-/103	147/415 (35%)	133/595 (22%)	280/1113	-/48	72/257 (28%)	102/730 (14%)	174/1035
1995	-/93	136/423 (32%)	145/657 (22%)	281/1173	-/44	74/262 (28%)	140/833 (17%)	215/1139
2000	-/74	118/405 (29%)	150/699 (22%)	269/1178	-/38	73/268 (27%)	170/920 (18%)	243/1226

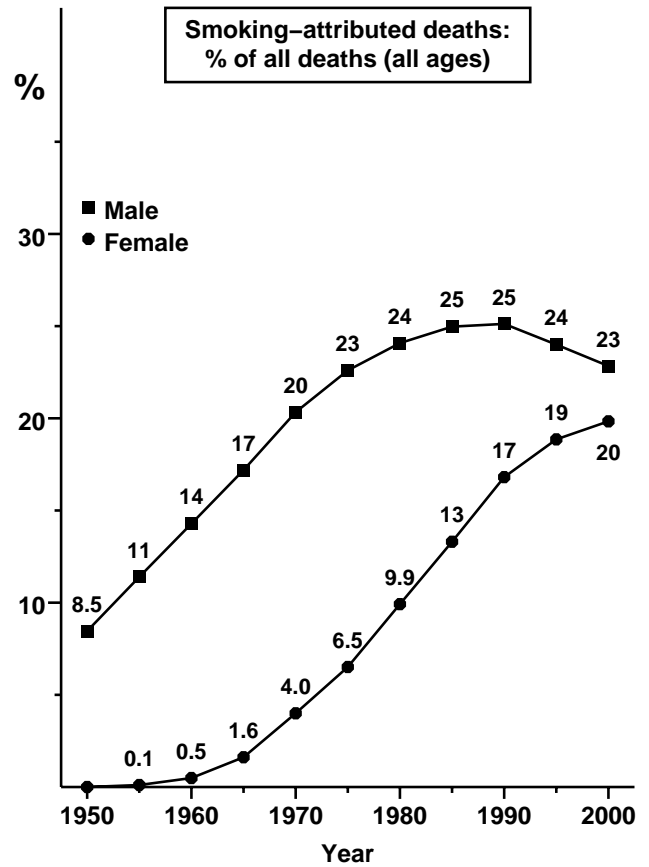
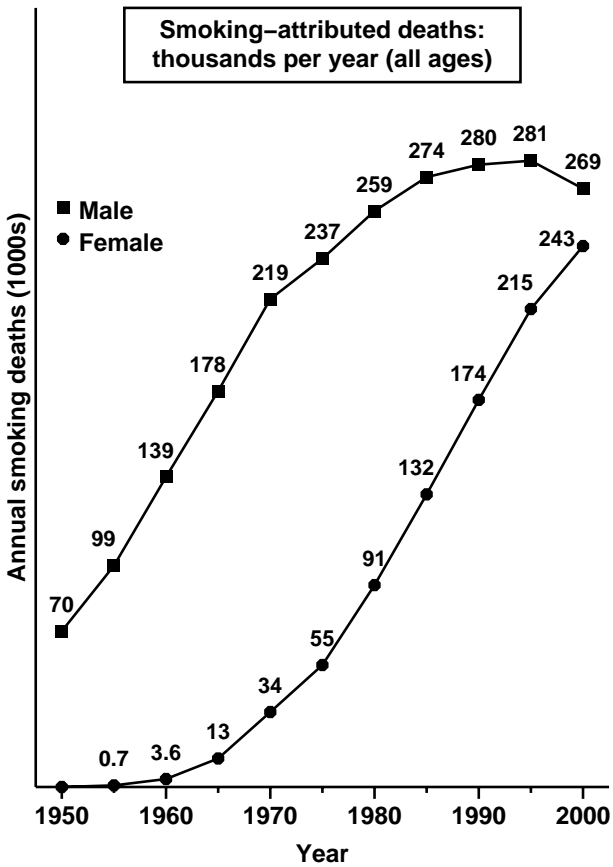
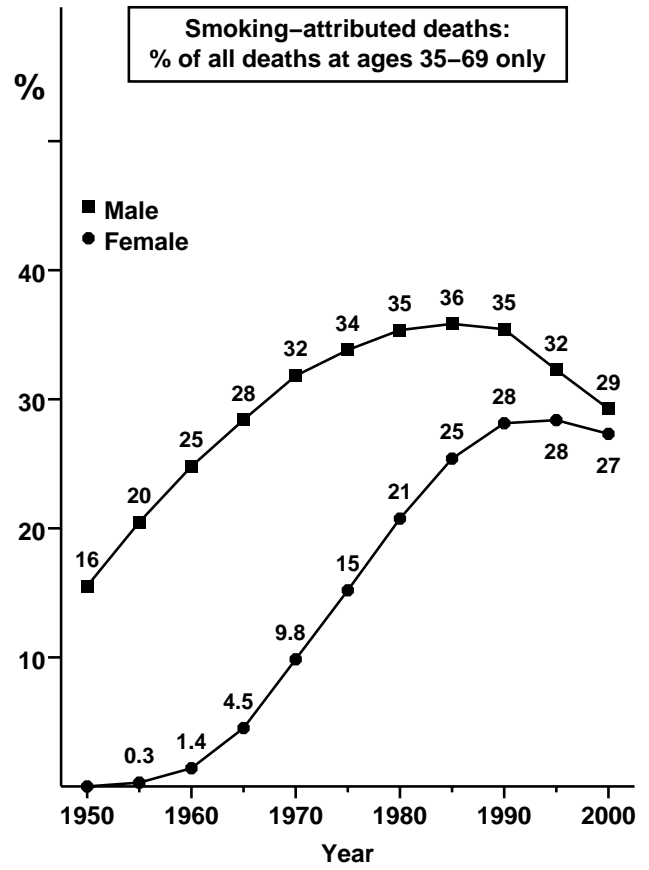
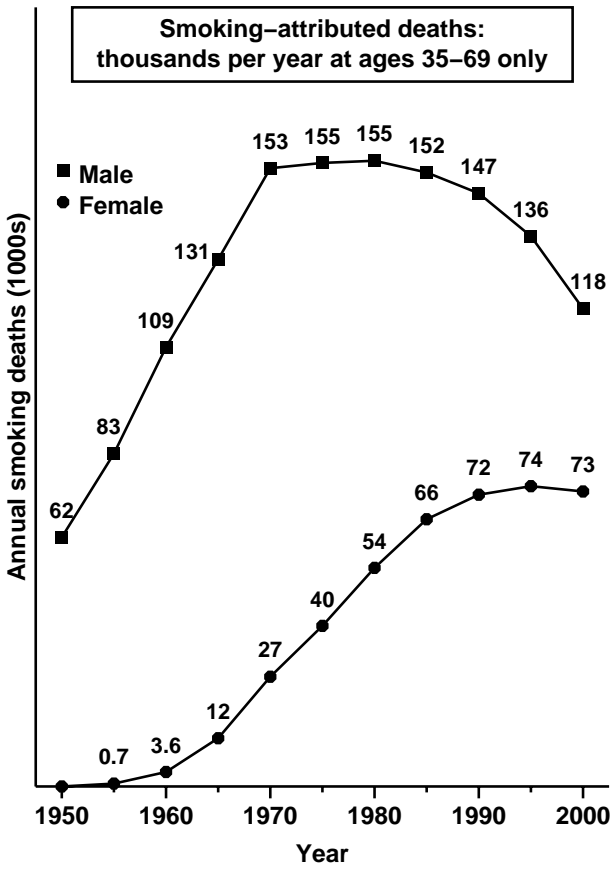
50-year total* (M=millions), mid-1950 to mid-2000: 15/ 96M

1950-2000 by age & sex:

-/5.4M	6.6/22M (30%)	4.1/25M (16%)	11/52M	-/3.0M	1.9/13M (15%)	2.2/28M (8%)	4.1/44M
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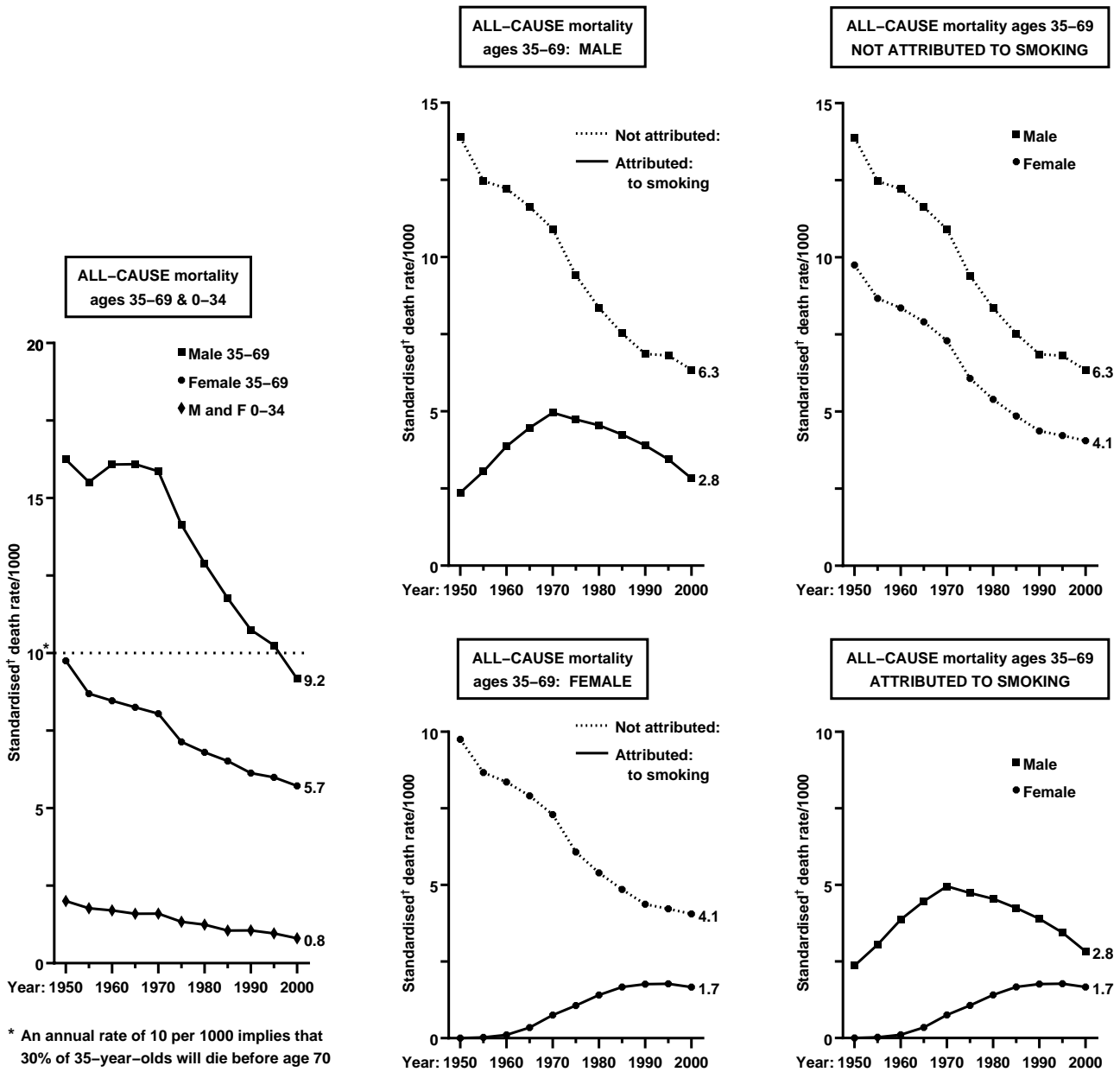
*Estimated as 10 times the sum of the annual numbers for 1955, 1965, 1975, 1985 & 1995

1950-2000: UNITED STATES



UNITED STATES: 1950-2000

ALL-CAUSE mortality rates attributed and not attributed to smoking



* An annual rate of 10 per 1000 implies that 30% of 35-year-olds will die before age 70

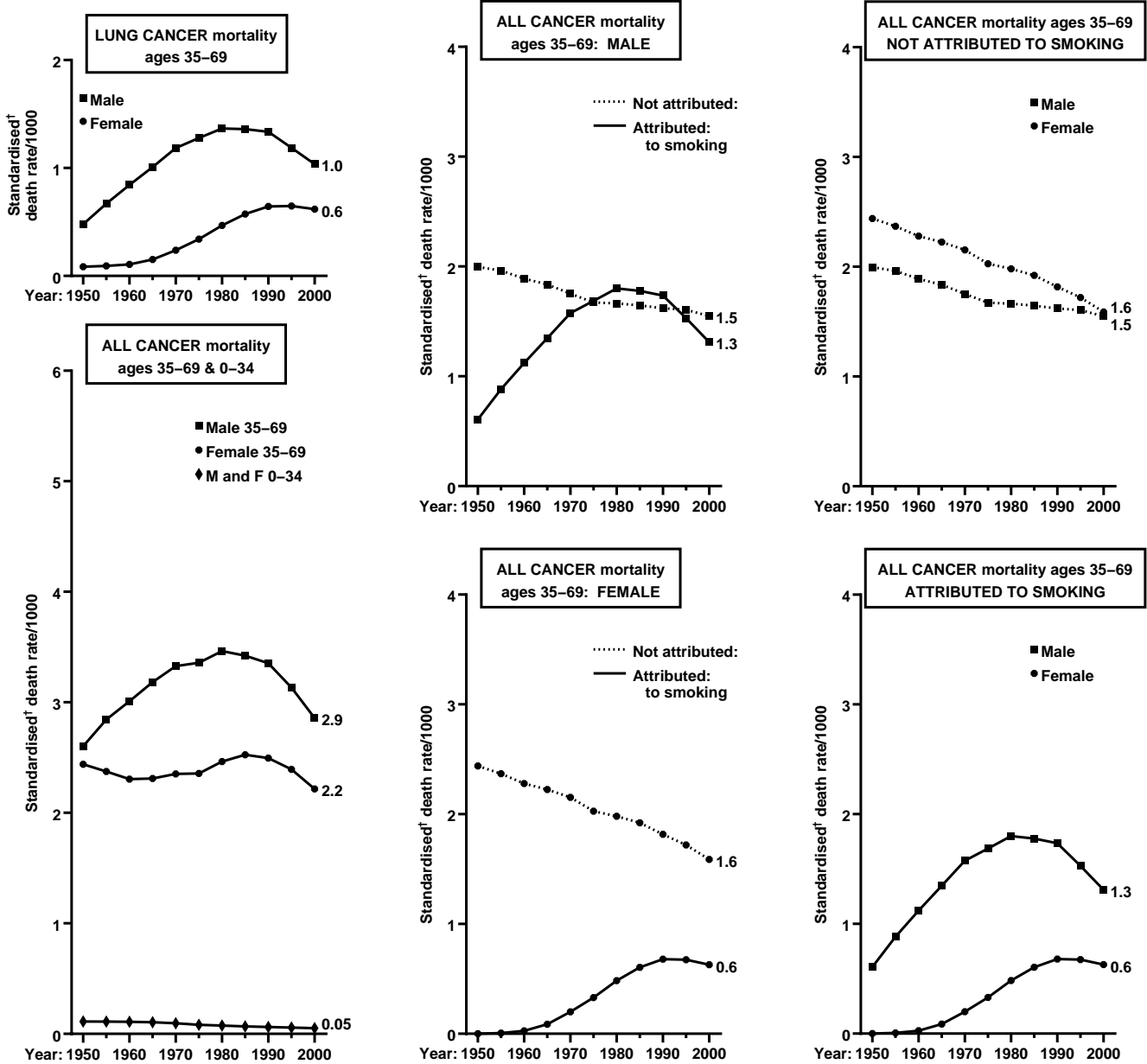
† Mean of 7 age-specific rates, ages 35-69 (or ages 0-34)

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	-	2.35	2.36	13.9	2.23	71.1	-	1.66	0.00	9.75	0.00	54.2	-	1.66	0.00	8.67	0.00	48.7
1955	-	2.14	3.05	12.5	3.91	66.7	-	1.40	0.02	8.67	0.00	46.2	-	1.34	0.10	8.36	0.00	46.2
1960	-	2.06	3.86	12.2	6.21	65.9	-	1.22	0.34	7.91	0.14	42.7	-	1.17	0.75	7.29	0.70	39.7
1965	-	1.96	4.46	11.6	8.66	62.7	-	0.94	1.06	6.07	1.49	35.0	-	0.85	1.41	5.39	2.91	31.5
1970	-	2.02	4.95	10.9	11.3	58.7	-	0.71	1.67	4.85	4.49	28.8	-	0.69	1.76	4.37	6.00	25.4
1975	-	1.72	4.73	9.40	14.3	48.3	-	0.62	1.77	4.22	7.05	24.1	-	0.56	1.66	4.05	7.64	23.1
1980	-	1.63	4.54	8.35	14.3	44.3	-	0.62	1.77	4.22	7.05	24.1	-	0.56	1.66	4.05	7.64	23.1
1985	-	1.38	4.24	7.52	14.3	44.3	-	0.62	1.77	4.22	7.05	24.1	-	0.56	1.66	4.05	7.64	23.1
1990	-	1.42	3.89	6.86	13.4	38.6	-	0.62	1.77	4.22	7.05	24.1	-	0.56	1.66	4.05	7.64	23.1
1995	-	1.29	3.44	6.81	12.6	36.2	-	0.62	1.77	4.22	7.05	24.1	-	0.56	1.66	4.05	7.64	23.1
2000	-	1.04	2.83	6.34	11.7	33.9	-	0.56	1.66	4.05	7.64	23.1	-	0.56	1.66	4.05	7.64	23.1

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

1950-2000: UNITED STATES

ALL CANCER mortality rates attributed and not attributed to smoking



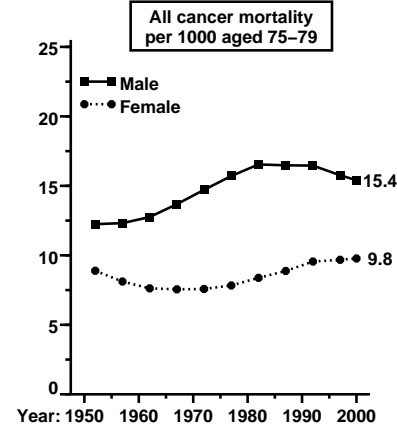
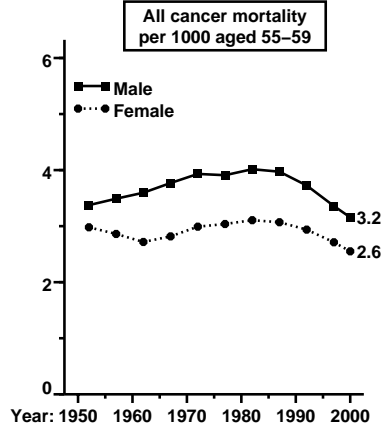
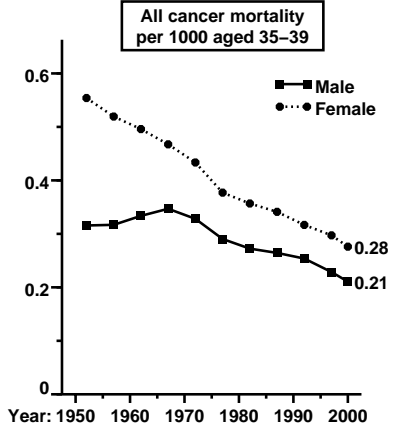
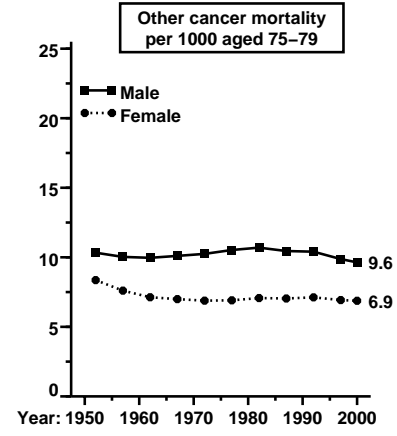
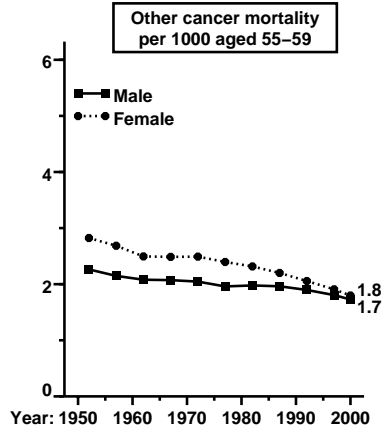
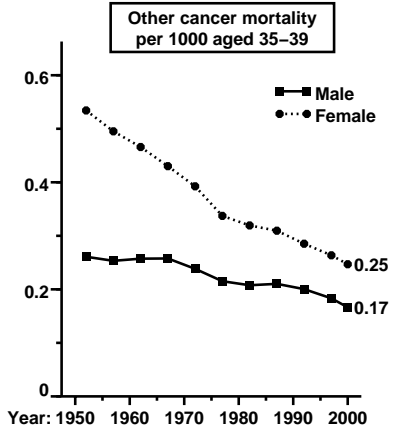
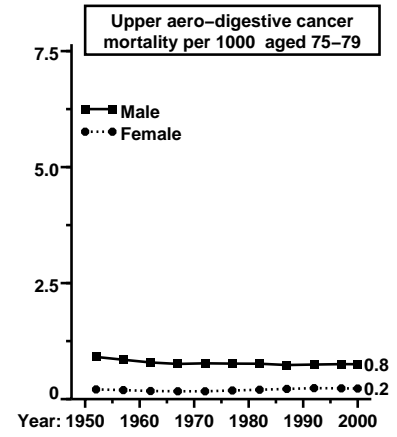
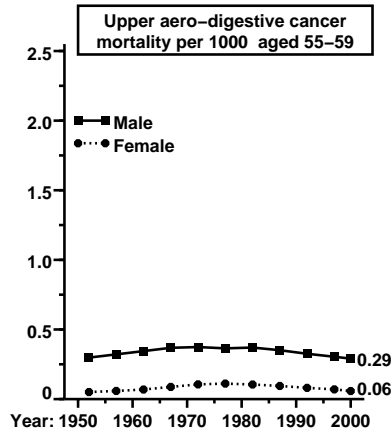
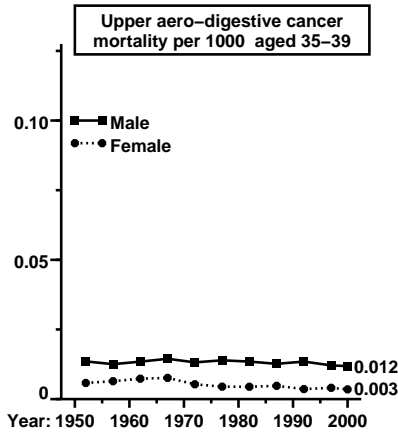
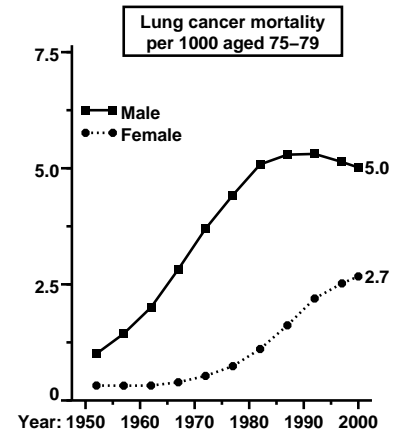
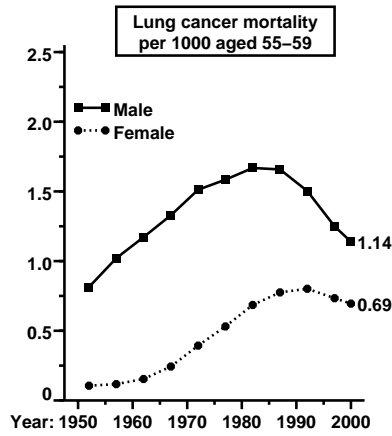
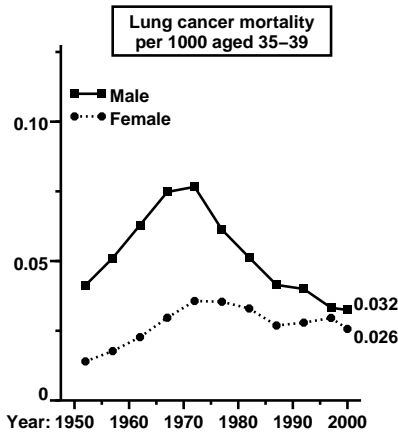
† Mean of 7 age-specific rates, ages 35-69 (or ages 0-34)

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		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	-	0.11	0.61	1.99	0.83	9.79	-	0.11	0.00	2.44	0.00	7.91	-	0.11	0.01	2.37	0.00	7.54
1955	-	0.11	0.88	1.96	1.48	9.60	-	0.11	0.01	2.37	0.00	7.54	-	0.10	0.03	2.28	0.00	7.02
1960	-	0.11	1.12	1.89	2.22	9.22	-	0.10	0.03	2.28	0.00	7.02	-	0.10	0.09	2.22	0.03	6.80
1965	-	0.11	1.35	1.84	3.09	8.95	-	0.10	0.20	2.15	0.18	6.68	-	0.09	0.20	2.15	0.18	6.68
1970	-	0.10	1.57	1.75	4.13	8.67	-	0.09	0.33	2.03	0.41	6.71	-	0.08	0.48	1.98	0.89	6.59
1975	-	0.09	1.69	1.67	5.13	8.77	-	0.08	0.48	1.98	0.89	6.59	-	0.07	0.60	1.92	1.42	6.55
1980	-	0.08	1.80	1.66	5.99	8.69	-	0.07	0.60	1.92	1.42	6.55	-	0.06	0.68	1.82	2.07	6.43
1985	-	0.07	1.78	1.64	6.20	8.49	-	0.06	0.68	1.82	2.07	6.43	-	0.06	0.67	1.72	2.50	6.32
1990	-	0.06	1.73	1.62	6.30	8.39	-	0.06	0.67	1.72	2.50	6.32	-	0.05	0.63	1.59	2.70	6.03
1995	-	0.06	1.53	1.60	6.10	8.15	-	0.05	0.63	1.59	2.70	6.03	-	0.05	0.63	1.59	2.70	6.03
2000	-	0.05	1.31	1.55	5.72	7.80	-	0.05	0.63	1.59	2.70	6.03	-	0.05	0.63	1.59	2.70	6.03

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

UNITED STATES: 1950-2000

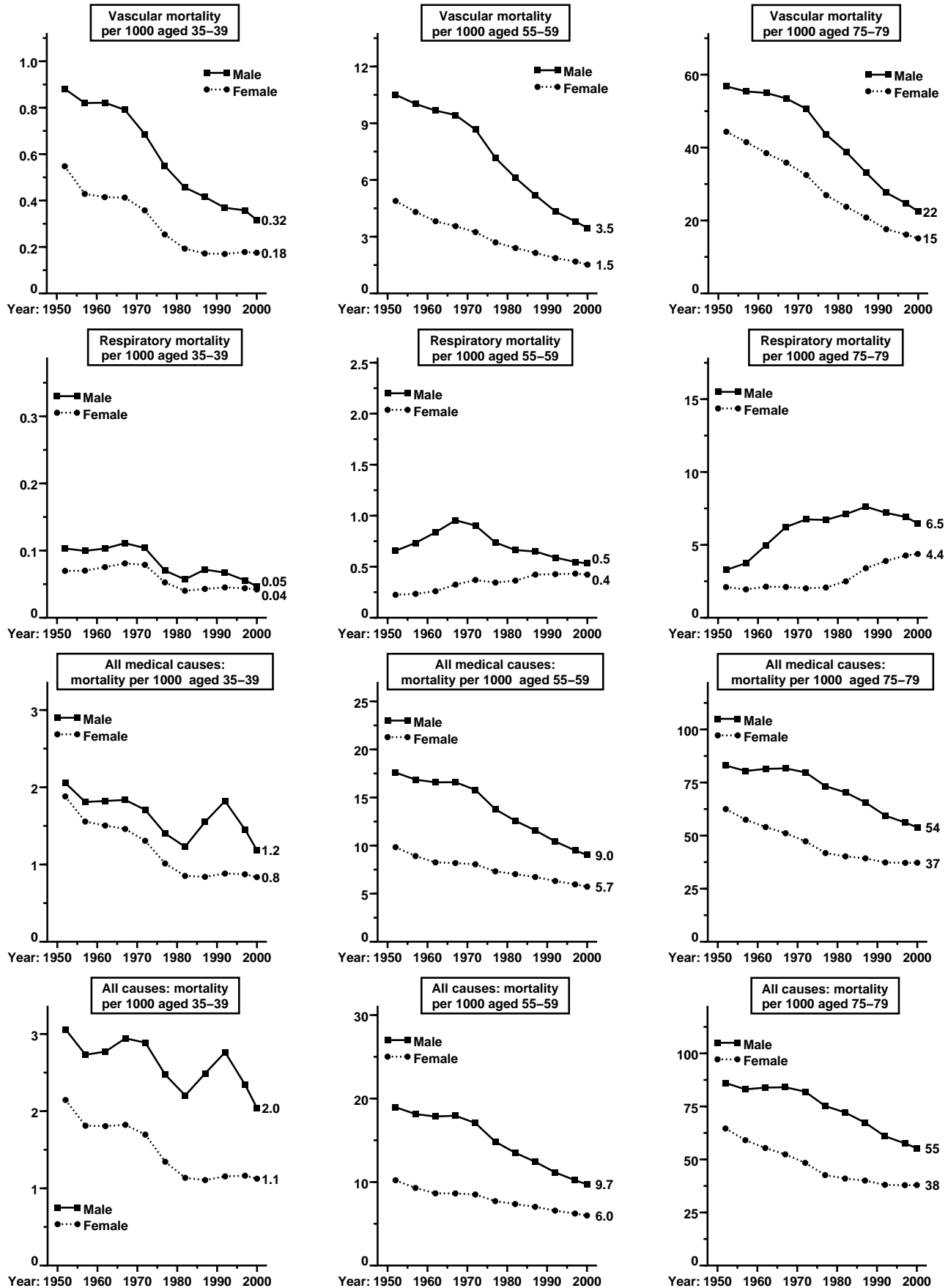
Mortality* trends at selected ages: 35-39, 55-59 & 75-79



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

1950-2000: UNITED STATES

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