International Smoking Statistics

Web Edition

A collection of worldwide historical data

USA

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Preface

International Smoking Statistics is a collection of smoking data covering most of Europe and various other economically developed countries. The second edition (published by Wolfson Institute of Preventive Medicine and OUP, 2002, www.oup.co.uk/isbn/0-19-850856-5) included data for 30 countries up to 1995. Since 2006, work has been ongoing to make individual country updates available online. Please register at www.pnlee.co.uk if you wish to be informed when updates are posted.

The methods used in the web edition are essentially unchanged from those of the second edition, although some minor changes are included in the online Methods chapter. Readers are strongly recommended to consult the Methods chapter.

The two main types of data presented are sales data and survey data. We give the results of the original authors as closely as possible, whilst presenting them in a uniform format.

Sales data give the total national consumption of tobacco. Data on sales of cigarettes and of all tobacco products are presented, usually from about 1920. Estimates of the consumption of hand-rolled cigarettes are included where possible, as are data on the types of manufactured cigarettes sold. The Tobacco Research Council provided most of the sales data until 1973, while later sales data were obtained from government and industry sources.

Survey data provide information on the prevalence and amount of smoking according to age and sex. These were obtained from a wide variety of surveys. Some survey data are available for the early part of the 20th century, but for most countries they are available only from the 1950s or 1960s onwards.

In additional tables we calculate further statistics by combining sales and survey data using certain standardized assumptions. The figures are intended to provide an easily interpretable summary of the data presented in the tables, and the commentary has deliberately been kept to a minimum.

Downloads

Updates currently available to download from www.pnlee.co.uk include:

Methods, including
Appendix I: *Estimated size of adult population;*
Appendix II: *Comparisons of manufactured and hand-rolled cigarettes and differences in the way they are smoked;*
Appendix III: *Consumption category estimation*;

Comparisons between countries;

Updated country chapters (see *Methods* for current list);

Tables from each updated chapter, in Excel format, including extended versions of Tables 4 and 6 and Figure 3 for chapters issued since January 2011;

Supplement 1: *Estimation of sex-specific smoking statistics by standardized age groups and time periods*. [The web edition comprises a brief Update

Note, together with tables (in Excel format only) for the countries with a chapter in the web edition. The original Supplement 1 to the second edition (an extended version of Appendix IV to the second edition) is also available and gives a full description and tables for the other countries].

Also available from the same source are:

Supplement 2 to the second edition: *Estimating past smoking habits by an indirect method. An investigation into a method based on recall, with application to Great Britain.* [This supplement is an extended version of Appendix V to the second edition];

IMASS, a comprehensive Excel database system, based on WHO mortality data and smoking statistics from Supplement 1. The IMASS system includes powerful routines for creating graphs and tables.

Acknowledgements

We would like to acknowledge the tobacco industry for their financial support and for providing some of the sales data in International Smoking Statistics.

We would also like to thank the many government and research organizations and individuals who supplied much of the information included.

We thank Yvonne Cooper, Pauline Wassell and Diana Morris for maintenance of our references database.

We are indebted to G. F. Todd, past director of the Tobacco Research Council, who, shortly before he died in 1988, had prepared a draft report from which the first edition of International Smoking Statistics developed.

Professor Nicholas Wald was an editor of earlier editions, and we thank him for his support and encouragement.

We alone bear the responsibility for the analysis and interpretation of the data presented.

Introduction

Sales data

See Tables 1-3 and *Notes on sources of sales data*.

From 1920 until 1963 the consumption of manufactured cigarettes per adult increased, apart from some fluctuations during the depression years, from about 2 to 11 cigarettes per day. Consumption then decreased slowly to less than 4 cigarettes per day by 2010. There was a rapid shift from plain to filter cigarettes, from 1% filter in 1950 to 51% in 1960. This continued more gradually, reaching 90% in the late 1970s and about 99% since 2000. The smoking of hand-rolled cigarettes increased during the depression years to nearly 2 cigarettes per adult per day in 1935. It then declined and has been relatively unimportant since the Second World War, although there has been a small revival in the 2000s.

Limited data from the late 19th century show that the consumption of tobacco products per adult was about 7 g per day in 1880, rising to about 11 g around 1905. It remained about this level through the 1920s, and then fell to 9 g by 1933. Thereafter it rose steadily and in the 1950s and 1960s, consumption was about 12-14 g per day. It had fallen to 5 g per day by 2000 and declined only slightly during the 2000s.

In the 1880s and 1890s, chewing tobacco and cigars were the main tobacco products used, forming 50-60% and 25-30% of all tobacco consumption respectively. From about 1900, the proportion consumed in manufactured cigarettes increased rapidly, reaching 15-20% by 1920, and about 80% by the early 1960s. It remained steady until the early 2000s when it fell slightly. From the 1950s, the proportion consumed as pipe and hand-rolling tobacco has decreased to low levels. Chewing tobacco has remained fairly steady around 4-7%, while snuff has tended to increase, reaching 9% of all tobacco consumed in 2005. (A small part of the apparent increase for snuff is due to a reclassification of fine-cut chewing tobacco as snuff in 1982.) Consumption of cigars had decreased to 4% by the mid-1990s, but has since increased to 10%.

Survey data

See Tables 4-8 and *Notes on sources of survey data*.

Limited nationally-based data supported by various regional surveys suggest that the prevalence of cigarette smoking among men exceeded 50% through the 1920s, 1930s and 1940s, with perhaps 70-80% smoking tobacco in some form. Smoking by women only began to be socially acceptable in the 1920s, with prevalence probably reaching 25% around 1940 (US Surgeon General (1980)). By the mid 1950s, the prevalence of cigarette smoking among those aged 15 years and over was about 50% in men and 30% in women. The prevalence of regular cigarette smoking among men has reduced steadily since then to just below 20% in 2004. The prevalence among women remained around 30% until about 1980, then fell to about 15%. The prevalence of occasional smoking has increased, although the estimates vary substantially between sources – about 11% of men and 8% of women in the 2000s according to source 7, but only 4% of men and 3% of women according to sources 2 and 4. Data on percentages of men and women who smoke products other than cigarettes are scarce; since 1999, (source 7) 5% of men and

0.5% of women smoked other products but not cigarettes, and a further 3% of men and a negligible proportion of women used smokeless tobacco but did not smoke.

Data on adult smoking by age are available since the 1930s. In general, more men than women smoked in each reported age group. From the late 1960s, the prevalence of smoking decreased in men at every age, but less so above age 65; in women some decrease was seen below age 45, but until the mid 1980s there was an increase above age 65. However, a lower prevalence of smoking in older age groups continued to be more marked in women than in men.

The prevalence of teenage smoking among girls was lower than among boys in local surveys in the 1950s and when first surveyed nationally in 1968, but increased until the mid-1970s. Most surveys indicate that the prevalence among girls was higher than among boys from the late 1970s to the late 1980s, since when they have been about equal. More boys than girls additionally use smokeless tobacco. Some surveys are conducted in school settings (e.g. sources 13-15), while other surveys have reported higher smoking prevalence among school drop-outs or absentees (e.g. sources 19, 20). Definitions of regular smoking vary considerably in surveys of teenagers, and comparisons should be made with caution.

Comparison of survey and sales data suggests that surveys under-reported consumption by 30-40% up to the mid-1990s, and by 35-45% since. The estimated number of cigarettes smoked per person per day (sales-adjusted) peaked for men in the mid-1960s at 14 and declined to 6 by 2004. For women it reached 8 cigarettes per day in the mid-1970s, and declined to 4 by 2004.

Table 1.1 Total annual sales of tobacco products, 1920-1973

Year	Manufactured cigarettes		Cigars		Pipe and hand-rolling tobacco	Chewing tobacco	Snuff	All tobacco products
	tonnes	millions	tonnes	millions	tonnes	tonnes	tonnes	tonnes
1920	44 660	44 656	72 630	8 609	164 970		16 370	298 640
1921	50 910	50 899	62 730	7 435	159 120		16 190	288 950
1922	53 590	53 582	63 500	7 527	173 320		17 330	307 740
1923	64 480	64 469	63 320	7 505	169 050		17 870	314 720
1924	71 040	71 024	60 650	7 189	169 640		31 300	332 630
1925	79 990	79 976	58 630	6 949	168 920		17 150	324 680
1926	89 470	89 460	59 120	7 008	168 740		17 280	334 620
1927	97 200	97 188	59 120	7 008	160 530		18 230	335 090
1928	105 940	105 927	57 990	6 874	155 810		18 460	338 210
1929	119 070	119 049	58 820	6 972	153 180		18 140	349 210
1930	119 650	119 632	52 920	6 272	149 140		18 190	339 900
1931	113 470	113 455	47 720	5 656	148 780		17 920	327 890
1932	103 610	103 589	39 860	4 724	141 660		16 510	301 630
1933	111 780	111 766	38 410	4 553	138 300		16 470	304 960
1934	125 720	125 700	40 650	4 818	139 300		16 870	322 540
1935	134 630	134 610	41 700	4 943	138 030		17 280	331 640
1936	153 190	153 169	45 240	5 362	140 430		16 370	355 240
1937	162 660	162 629	46 540	5 516	136 490		16 740	362 420
1938	163 790	163 761	44 660	5 294	138 750		16 920	364 120
1939	172 500	172 469	46 140	5 469	137 350		17 240	373 220
1940	180 690	180 664	46 330	5 491	138 030		17 190	382 240
1941	206 470	206 432	50 060	5 933	135 490		17 960	409 970
1942	235 880	235 841	53 480	6 339	127 230		18 690	435 280
1943	257 790	257 743	45 140	5 350	119 070		19 600	441 580
1944	239 330	239 287	41 150	4 878	114 210		19 050	413 750
1945	267 700	267 652	42 410	5 027	122 560		19 780	452 440
1946	321 530	321 475	50 020	5 929	95 750		18 010	485 310
1947	336 020	335 965	48 140	5 706	90 360		17 830	492 340
1948	348 790	348 731	49 440	5 860	90 580		18 640	507 450
1949	351 870	351 809	47 460	5 625	47 990	39 690	18 600	505 600
1950	360 260	360 199	47 310	5 608	47 310	38 960	18 140	511 990
1951	379 790	379 725	48 750	5 778	44 180	38 240	17 780	528 730
1952	394 170	394 109	50 930	6 037	42 140	37 560	17 600	542 400
1953	386 890	386 826	51 520	6 107	38 240	37 190	17 640	531 490
1954	368 790	368 725	50 820	6 024	36 830	35 970	17 510	509 920
1955	382 120	382 061	51 280	6 078	35 290	35 150	17 690	521 540
1956	393 220	393 154	50 950	6 039	31 750	33 660	17 050	526 630
1957	409 500	409 436	52 260	6 194	31 250	32 110	16 370	541 500
1958	436 040	436 354	53 770	6 586	33 750	30 840	15 780	570 180
1959	446 200	453 681	60 230	7 377	32 610	30 250	15 240	584 540
1960	452 820	470 136	57 940	7 097	32 750	28 940	15 740	588 190
1961	476 500	488 119	57 830	7 083	32 980	29 210	15 290	611 800
1962	474 910	494 463	57 990	7 103	31 660	28 940	15 010	608 520
1963	515 730	509 588	60 700	7 434	31 620	29 260	14 470	651 770
1964	495 770	497 447	72 180	9 899	37 060	29 710	14 200	648 920
1965	510 290	511 464	68 080	8 949	31 660	28 980	13 380	652 390
1966	502 120	522 533	65 380	8 610	31 120	29 120	13 380	641 120
1967	495 320	527 800	63 770	8 403	30 120	29 170	13 110	631 480
1968	491 690	523 008	62 700	8 331	31 570	29 660	12 560	628 190
1969	470 370	510 531	63 120	8 579	30 980	31 430	12 200	608 110
1970	471 280	532 769	64 400	8 881	33 570	30 930	12 110	612 290
1971	460 390	528 858	62 720	8 830	31 520	32 570	12 070	599 270
1972	490 330	551 017	61 550	11 125	30 300	32 890	11 660	626 720
1973	508 020	590 300	59 610	11 225	26 990	33 790	11 570	639 980

Source: see *Notes on sources of sales data: Sales data for 1920-1973,* p. 45

Table 1.2 Total annual sales of tobacco products, 1974-2005

Year	Manufactured cigarettes		Large cigars		Small cigars		Pipe and hand-rolling tobacco	Chewing tobacco	Snuff	All tobacco products
	tonnes	millions	tonnes	millions	tonnes	millions	tonnes	tonnes	tonnes	tonnes
1974	518 340	599 000	46 120	6 356	3 460	3 066	27 220	35 420	11 100	641 660
1975	516 370	607 200	42 170	5 804	3 270	2 892	24 360	36 550	11 440	634 160
1976	499 840	613 500	38 990	5 373	2 440	2 162	24 360	38 070	11 680	615 380
1977	498 110	617 000	37 700	4 994	2 100	1 854	21 450	40 220	11 080	610 660
1978	485 290	616 000	35 320	4 702	1 760	1 558	20 050	41 890	11 000	595 310
1979	511 100	621 500	32 070	4 304	1 630	1 441	17 830	45 780	10 820	619 230
1980	504 570	631 500	29 830	4 001	1 590	1 411	16 920	48 020	10 830	611 760
1981	493 420	640 000	29 250	3 893	1 540	1 364	16 560	48 270	11 580	600 620
1982	496 090	634 000	27 230	3 667	1 430	1 265	15 290	39 920	19 910	599 870
1983	482 980	600 000	26 880	3 605	1 510	1 334	15 100	39 280	20 730	586 480
1984	465 480	600 400	25 930	3 471	1 390	1 234	12 470	39 600	21 640	566 510
1985	471 710	594 000	23 720	3 197	1 380	1 218	12 250	38 560	22 040	569 660
1986	462 640	583 800	22 840	3 055	1 090	966	11 070	35 700	21 180	554 520
1987	448 700	575 000	20 300	2 728	1 300	1 154	10 700	34 610	20 460	536 070
1988	443 370	562 500	18 540	2 531	1 310	1 160	10 210	33 880	21 680	528 990
1989	410 180	540 000	20 080	2 470	1 290	1 141	8 750	33 070	22 320	495 690
1990	412 900	525 000	16 120	2 345	1 290	1 140	8 120	32 070	23 270	493 770
1991	408 230	510 000	16 240	2 246	1 370	1 214	7 440	32 340	24 220	489 840
1992	395 020	500 000	16 430	2 219	1 460	1 292	7 210	30 710	25 170	476 000
1993	406 590	485 000	16 580	2 138	1 470	1 302	6 940	28 940	25 760	486 280
1994	366 830	486 000	16 450	2 294	1 440	1 271	6 670	28 030	26 580	446 000
1995	366 080	487 000	18 540	2 518	1 560	1 377	6 440	28 210	26 940	447 770
1996	370 420	487 000	22 580	3 054	1 580	1 397	7 030	27 220	27 850	456 680
1997	368 570	480 000	26 090	3 517	1 790	1 587	6 890	25 760	28 170	457 270
1998	333 760	465 000	27 260	3 655	1 850	1 638	6 760	23 810	29 030	422 470
1999	328 700	435 000	28 540	3 845	2 480	2 196	6 670	22 910	29 710	419 010
2000	323 640	430 000	28 490	3 850	2 530	2 243	6 580	22 000	31 120	414 360
2001	328 970	425 000	29 500	3 941	2 450	2 171	7 620	21 140	32 980	422 660
2002	322 910	415 000	31 040	4 206	2 540	2 248	7 850	19 500	32 520	416 360
2003	307 190	400 000	33 690	4 527	2 490	2 207	8 440	18 280	33 570	403 660
2004	300 760	388 000	36 920	4 935	3 050	2 701	7 620	17 190	35 060	400 600
2005	288 230	376 000	36 190	4 877	4 260	3 772	8 710	17 100	35 880	390 370

Source: see *Notes on sources of sales data: Sales data for 1974-2005,* p. 46

Table 1.3 Total annual sales of tobacco products, 2006-2010 (including alternative estimates for 2003-2005)

Year	Manufactured cigarettes		Large cigars		Small cigars		Pipe and hand-rolling tobacco	Chewing tobacco	Snuff	All tobacco products
	tonnes	millions	tonnes	millions	tonnes	millions	tonnes	tonnes	tonnes	tonnes
2003	307 015	399 768	33 730	4 533	2 789	2 468	8 167	20 601	33 503	405 805
2004	308 732	398 285	36 918	4 935	3 296	2 917	8 289	19 572	35 380	412 187
2005	292 140	381 107	37 756	5 088	4 484	3 968	10 191	17 780	36 396	398 747
2006	291 848	380 726	39 352	5 303	5 043	4 463	10 225	17 734	39 298	403 500
2007	277 237	361 665	41 200	5 552	5 742	5 081	10 868	16 014	40 083	391 144
2008	265 550	346 419	41 994	5 659	6 646	5 881	12 272	15 173	43 009	384 644
2009	243 787	318 029	72 686	9 795	2 648	2 343	11 374	13 815	43 116	387 426
2010	230 313	300 451	91 178	12 287	1 111	983	14 299	12 526	45 319	394 746

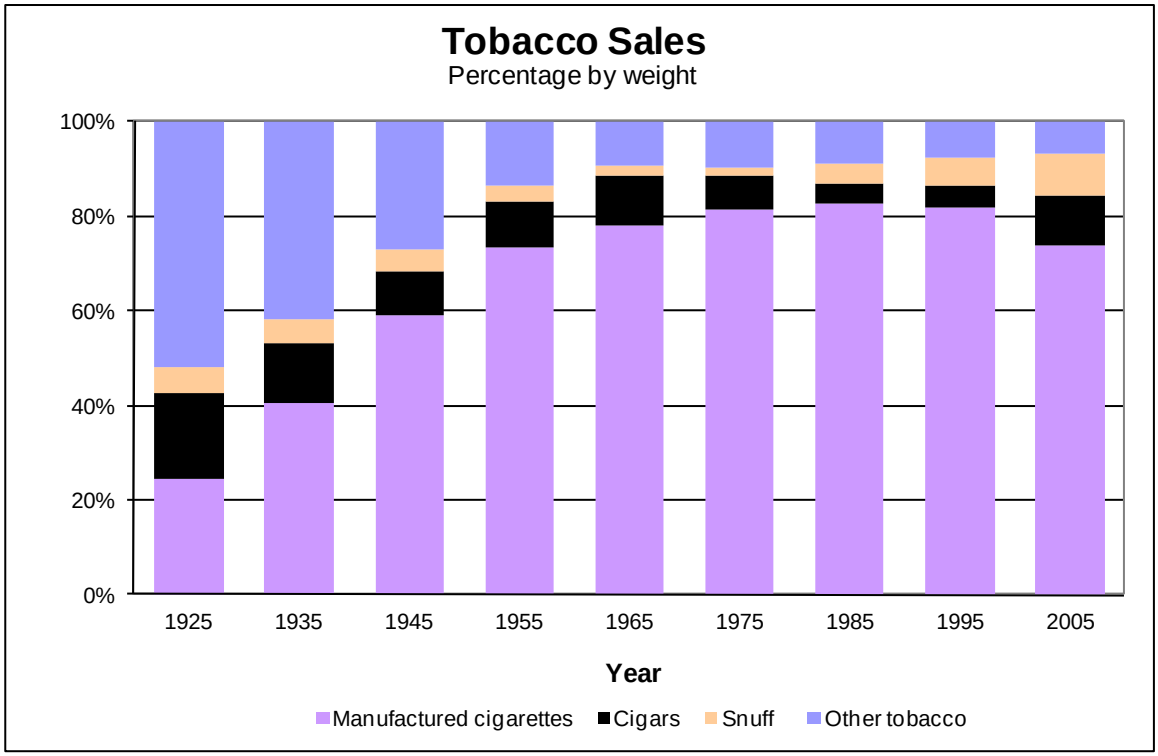
Source: see *Notes on sources of sales data: Sales data for 2006 onwards, p. 46*

Table 1.4 Percentage of sales of tobacco in different forms (by weight), selected years

Year	Manufactured cigarettes	Cigars	Snuff	Pipe and hand-rolling tobacco	Chewing tobacco
	%	%	%	%	%
1925	24.6	18.1	5.3	52.0	
1935	40.6	12.6	5.2	41.6	
1945	59.2	9.4	4.4	27.1	
1955	73.3	9.8	3.4	6.8	6.7
1965	78.2	10.4	2.1	4.9	4.4
1975	81.4	7.2	1.8	3.8	5.8
1985	82.8	4.4	3.9	2.2	6.8
1995	81.8	4.5	6.0	1.4	6.3
2005	73.8	10.4	9.2	2.2	4.4

Source: calculated from Tables1.1 & 1.2

Figure 1 Percentage of sales of tobacco in different forms (by weight), selected years



Source: Table 1.4

Table 1.5 Percentages of sales of smokeless tobacco, and of pipe & hand-rolling tobacco, in various forms

Year	Smokeless tobacco							Pipe & hand-rolling tobacco	
	Chewing tobacco					Snuff		Hand-rolling	Pipe
	Plug		Twist	Fine cut[1]	Loose leaf	Dry	Moist		
	Firm %	Moist %	%	%	%	%	%	%	%
1955	30.1		2.9	2.5	30.9	33.7		26	74
1956	29.3		2.9	2.6	31.8	33.4		27	73
1957	29.2		2.8	2.6	31.7	33.8		27	73
1958	28.3		2.8	2.8	32.2	33.8		30	70
1959	28.0		2.8	3.0	32.7	33.5		33	67
1960	26.4		2.9	3.1	32.4	35.2		32	68
1961	26.3		2.8	3.3	33.3	34.4		32	68
1962	26.1		2.7	3.4	33.7	34.1		31	69
1963	25.6		2.7	3.5	35.1	33.1		30	70
1964	26.2		2.7	3.7	35.1	32.3		26	74
1965	25.7		2.7	3.9	36.1	31.6		28	72
1966	25.7		2.7	4.2	35.9	31.5		26	74
1967	25.1		2.6	4.3	36.9	31.0		31	69
1968	24.7		2.6	4.6	38.4	29.7		34	66
1969	23.9		2.5	4.7	40.9	28.0		27	73
1970	23.1		2.5	4.9	41.3	28.1		32	68
1971	20.9		2.3	5.2	44.6	27.0		31	69
1972	20.1		2.3	5.3	46.1	26.2		23	77
1973	19.0		2.3	5.9	47.3	25.5		29	71
1974	17.9		2.2	5.9	50.2	23.9		25	75
1975	16.6		2.1	6.8	50.6	23.8		22	78
1976	15.4		2.1	7.9	51.1	23.5		22	78
1977	14.4		1.9	8.8	53.2	21.6		15	85
1978	13.4		1.8	10.0	54.0	20.8		18	82
1979	12.4		1.6	10.8	56.1	19.1		21	79
1980	13.0		1.5	11.4	55.8	18.4		22	78
1981	13.2		1.4	11.5	54.8	19.3		22	78
1982	7.7	3.9	1.4		53.8	8.5	24.8	24	76
1983	7.3	3.3	1.3		53.6	8.1	26.5	29	71
1984	6.4	3.0	1.2		54.1	7.6	27.8	30	70
1985	6.0	2.8	1.1		53.7	7.1	29.3	30	70
1986	5.5	2.6	1.1		53.5	7.0	30.2	29	71
1987	5.5	2.5	1.2		53.7	6.8	30.4	26	74
1988	4.8	2.1	1.1		53.1	6.3	32.7	23	77
1989	4.5	2.2	1.1		52.0	5.9	34.4	25	75
1990	4.1	1.8	1.0		51.1	5.6	36.5	22	78
1991	3.5	1.6	1.0		51.1	5.1	37.7	29	71
1992	3.2	1.4	1.0		49.4	5.0	40.1	34	66
1993	3.0	1.2	0.9		47.8	4.6	42.5	36	64
1994	2.6	1.0	0.9		46.8	4.5	44.2	38	62
1995	2.5	0.9	0.9		46.9	4.4	44.5	39	61
1996	2.3	0.8	0.9		45.4	3.8	46.8	44	56
1997	2.1	0.7	0.8		44.2	3.7	48.5	46	54
1998	2.0	0.6	0.9		41.7	3.5	51.4	53	47
1999	1.8	0.5	0.8		40.4	3.4	53.1	57	43
2000	1.7	0.4	0.8		38.5	3.2	55.3	63	37
2001	1.5	0.3	0.7		36.5	2.8	58.1	65	35
2002	1.5	0.3	0.7		35.0	2.7	59.8	69	31
2003	1.2	0.3	0.6		33.2	2.5	62.2	75	25
2004	1.1	0.2	0.6		31.0	2.3	64.8	73	27
2005	1.0	0.2	0.5		30.6	2.1	65.7	77	23
2006	0.9	0.2	0.5		30.5	1.9	65.9	78	22
2007	0.9	0.2	0.5		28.3	1.8	68.4	79	21
2008								80	20
2009								49	51
2010								20	80

1 Reclassified as moist snuff from 1982

Source: see *Notes on sources of sales data: Sales data by type of smokeless and smoking tobacco for 1955 onwards,* p. 47

Table 2 Sales of cigarettes (including estimated number of hand-rolled cigarettes) and of all tobacco products.
Annual total and average per adult (age 15 years and over) per day

Year	Manufactured cigarettes		Hand-rolled cigarettes		Total cigarettes		All tobacco products	
	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual tonnes	Grams/ adult/day
1920	44 656	1.7					298 640	11.1
1921	50 899	1.9					288 950	10.5
1922	53 582	1.9					307 740	11.0
1923	64 469	2.3					314 720	11.1
1924	71 024	2.5					332 630	11.5
1925	79 976	2.7					324 680	11.1
1926	89 460	3.0					334 620	11.1
1927	97 188	3.2	18 700	0.6	115 888	3.8	335 090	11.0
1928	105 927	3.4	17 200	0.6	123 127	4.0	338 210	10.9
1929	119 049	3.8	16 100	0.5	135 149	4.3	349 210	11.2
1930	119 632	3.8	16 600	0.5	136 232	4.3	339 900	10.8
1931	113 455	3.5	27 200	0.8	140 655	4.3	327 890	10.1
1932	103 589	3.2	38 200	1.2	141 789	4.4	301 630	9.3
1933	111 766	3.4	45 000	1.4	156 766	4.8	304 960	9.3
1934	125 700	3.8	51 600	1.5	177 300	5.3	322 540	9.7
1935	134 610	4.0	55 800	1.7	190 410	5.7	331 640	9.9
1936	153 169	4.4	55 500	1.6	208 669	6.0	355 240	10.3
1937	162 629	4.7	46 300	1.3	208 929	6.0	362 420	10.4
1938	163 761	4.7	47 700	1.4	211 461	6.0	364 120	10.4
1939	172 469	4.9	47 800	1.4	220 269	6.2	373 220	10.5
1940	180 664	5.1	50 600	1.4	231 264	6.5	382 240	10.7
1941	206 432	5.7	39 100	1.1	245 532	6.8	409 970	11.3
1942	235 841	6.5	34 000	0.9	269 841	7.4	435 280	11.9
1943	257 743	7.0	30 800	0.8	288 543	7.8	441 580	11.9
1944	239 287	6.4	22 700	0.6	261 987	7.0	413 750	11.0
1945	267 652	7.1	37 600	1.0	305 252	8.1	452 440	11.9
1946	321 475	8.5	13 800	0.4	335 275	8.9	485 310	12.8
1947	335 965	8.7	14 900	0.4	350 865	9.1	492 340	12.8
1948	348 731	8.9	17 500	0.4	366 231	9.3	507 450	12.9
1949	351 809	8.8	18 000	0.5	369 809	9.3	505 600	12.6
1950	360 199	9.0	12 700	0.3	372 899	9.3	511 990	12.7
1951	379 725	9.4	14 300	0.4	394 025	9.7	528 730	13.0
1952	394 109	9.7	13 700	0.3	407 809	10.0	542 400	13.3
1953	386 826	9.4	12 400	0.3	399 226	9.7	531 490	12.9
1954	368 725	8.9	11 900	0.3	380 625	9.1	509 920	12.2
1955	382 061	9.1	11 700	0.3	393 761	9.3	521 540	12.4
1956	393 154	9.2	10 300	0.2	403 454	9.4	526 630	12.3
1957	409 436	9.5	10 800	0.2	420 236	9.7	541 500	12.5
1958	436 354	9.9	13 000	0.3	449 354	10.2	570 180	13.0
1959	453 681	10.2	13 600	0.3	467 281	10.5	584 540	13.1
1960	470 136	10.4	13 700	0.3	483 836	10.7	588 190	13.0
1961	488 119	10.7	13 400	0.3	501 519	11.0	611 800	13.4
1962	494 463	10.6	12 000	0.3	506 463	10.9	608 520	13.1
1963	509 588	10.8	11 800	0.2	521 388	11.0	651 770	13.8
1964	497 447	10.3	12 200	0.3	509 647	10.6	648 920	13.5
1965	511 464	10.5	11 200	0.2	522 664	10.7	652 390	13.3
1966	522 533	10.5	10 300	0.2	532 833	10.7	641 120	12.9
1967	527 800	10.5	11 700	0.2	539 500	10.7	631 480	12.5
1968	523 008	10.2	9 200	0.2	532 208	10.4	628 190	12.3
1969	510 531	9.8	10 400	0.2	520 931	10.0	608 110	11.7
1970	532 769	10.0	13 200	0.2	545 969	10.3	612 290	11.5
1971	528 858	9.7	12 000	0.2	540 858	10.0	599 270	11.0
1972	551 017	10.0	8 700	0.2	559 717	10.1	626 720	11.3
1973	590 300	10.5	9 800	0.2	600 100	10.7	639 980	11.4
1974	599 000	10.5	8 500	0.1	607 500	10.6	641 660	11.2
1975	607 200	10.3	6 600	0.1	613 800	10.4	634 160	10.8
1976	613 500	10.2	6 800	0.1	620 300	10.4	615 380	10.3
1977	617 000	10.1	3 900	0.1	620 900	10.2	610 660	10.0
1978	616 000	9.9	4 500	0.1	620 500	10.0	595 310	9.6
1979	621 500	9.8	4 600	0.1	626 100	9.9	619 230	9.8

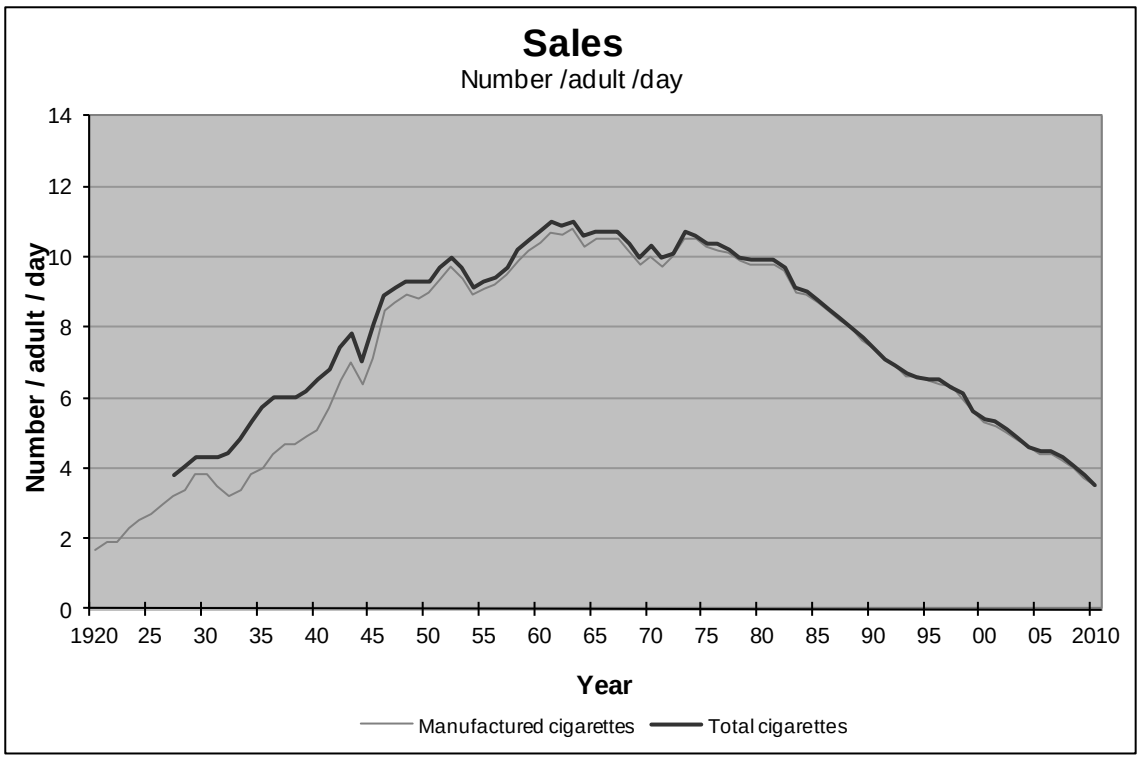
Table 2 *(continued)*

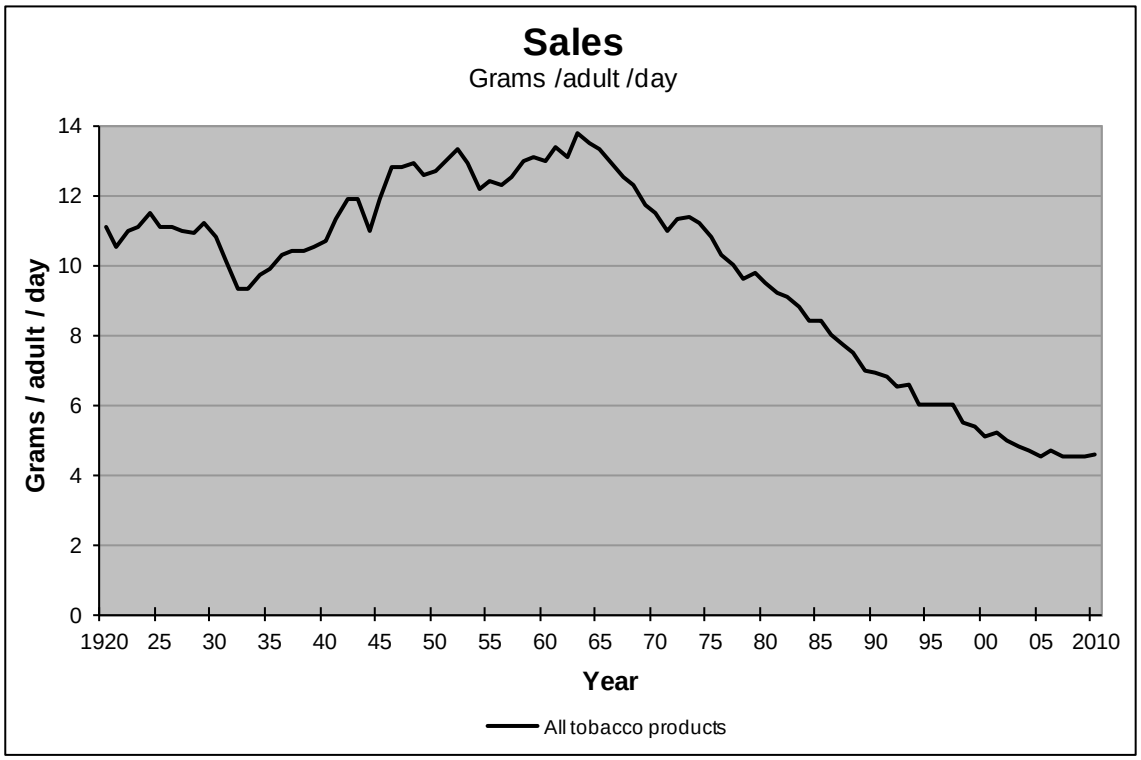
Year	Manufactured cigarettes		Hand-rolled cigarettes		Total cigarettes		All tobacco products	
	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual tonnes	Grams/ adult/day
1980	631 500	9.8	4 400	0.1	635 900	9.9	611 760	9.5
1981	640 000	9.8	4 600	0.1	644 600	9.9	600 620	9.2
1982	634 000	9.6	4 700	0.1	638 700	9.7	599 870	9.1
1983	600 000	9.0	5 500	0.1	605 500	9.1	586 480	8.8
1984	600 400	8.9	5 600	0.1	606 000	9.0	566 510	8.4
1985	594 000	8.7	4 800	0.1	598 800	8.8	569 660	8.4
1986	583 800	8.5	4 500	0.1	588 300	8.5	554 520	8.0
1987	575 000	8.2	4 100	0.1	579 100	8.3	536 070	7.7
1988	562 500	8.0	3 600	0.1	566 100	8.0	528 990	7.5
1989	540 000	7.6	3 300	0.0	543 300	7.7	495 690	7.0
1990	525 000	7.4	3 000	0.0	528 000	7.4	493 770	6.9
1991	510 000	7.1	3 100	0.0	513 100	7.1	489 840	6.8
1992	500 000	6.9	3 400	0.0	503 400	6.9	476 000	6.5
1993	485 000	6.6	3 400	0.0	488 400	6.7	486 280	6.6
1994	486 000	6.6	3 400	0.0	489 400	6.6	446 000	6.0
1995	487 000	6.5	3 000	0.0	490 000	6.5	447 770	6.0
1996	487 000	6.4	3 100	0.0	490 100	6.5	456 680	6.0
1997	480 000	6.3	3 000	0.0	483 000	6.3	457 270	6.0
1998	465 000	6.0	3 800	0.0	468 800	6.1	422 470	5.5
1999	435 000	5.6	4 600	0.1	439 600	5.6	419 010	5.4
2000	430 000	5.3	4 900	0.1	434 900	5.4	414 360	5.1
2001	425 000	5.2	5 900	0.1	430 900	5.3	422 660	5.2
2002	415 000	5.0	6 600	0.1	421 600	5.1	416 360	5.0
2003	400 000	4.8	7 400	0.1	407 400	4.9	403 660	4.8
2004	388 000	4.6	6 600	0.1	394 600	4.6	400 600	4.7
2005	376 000	4.4	7 900	0.1	383 900	4.5	390 370	4.5
2006/1	380 726	4.4	6 799	0.1	387 526	4.5	403 500	4.7
2007/1	361 665	4.2	7 308	0.1	368 974	4.3	391 144	4.5
2008/1	346 419	4.0	8 397	0.1	354 816	4.1	384 644	4.5
2009/1	318 029	3.7	4 703	0.1	322 733	3.8	387 426	4.5
2010/1	300 451	3.5	2 481	0.0	302 932	3.5	394 746	4.6

1 Per adult data based on 2005 population

Source: Manufactured cigarettes and all tobacco products, Tables 1.1, 1.2 and 1.3. Hand-rolled cigarettes, see *Notes on sources of sales data: Estimates of number of hand-rolled cigarettes,* p.47. Population, see *Population*, Methods p. 14

Figure 2 Sales of (i) manufactured and total[1] cigarettes, and (ii) all tobacco products. Average per adult (aged 15 years and over) per day





1 Includes estimated hand-rolled cigarette consumption
Source: Table 2

Table 3 Manufactured cigarettes: percentage of total sales as filter cigarettes, and as menthol cigarettes; sales-weighted average machine yield per cigarette of tar (SWAT) and nicotine (SWAN)

Year	Filter %	Menthol %	SWAT mg/cig	SWAN mg/cig
1946	0.1			
1947	0.2			
1948	0.3			
1949	0.3			
1950	0.6			
1951	0.7			
1952	1.3			
1953	2.9			
1954	9.2		37	2.6
1955	18.7		38	2.7
1956	27.6		34	2.7
1957	38.1		35	2.5
1958	45.3		31	2.0
1959	48.7		29	1.8
1960	50.9		27	1.6
1961	52.5		26	1.6
1962	54.6		26	1.5
1963	58.0	16	25	1.4
1964	60.9	16	23	1.3
1965	64.4	18	22	1.4
1966	68.3	19	23	1.5
1967	72.4	20	21	1.4
1968	74.9	21	21.6	1.35
1969	77.5	22	20.7	1.38
1970	80.1	23	20.0	1.31
1971	82.4	24	20.2	1.32
1972	83.7	24	19.9	1.39
1973	85.4	25	19.3	1.32
1974	86.7	27	18.4	1.24
1975	87.7	27	18.6	1.21
1976	88.5	28	18.1	1.16
1977	89.4	28	16.8	1.12
1978	90.9	28	16.1	1.11
1979	91.8	29	15.1	1.07
1980	92.5	28	14.1	1.04
1981	92.7	28	13.2	0.92
1982	93.2	29	13.5	0.89
1983	93.6	28	13.4	0.88
1984	94.2	28	13.0	0.89
1985	94.6	28	13.0	0.95
1986	95.0	28	13.4	0.93
1987	95.7	28	13.3	0.94
1988	96.0	28	13.3	0.94
1989	96.5	27	13.1	0.96
1990	96.8	26	12.5	0.93
1991	97.2	27	12.6	0.94
1992	97.5	26	12.4	0.92
1993	97.7	26	12.4	0.90
1994	97.9	25	12.1	0.90
1995	98.2	25	12.0	0.87
1996	98.0	25	12.0	0.88
1997	98.3	25	12.0	0.89
1998	98.3	26	12.0	0.88
1999	98.7	26		
2000	98.7	26		
2001	98.9	26		
2002	99.0	27		
2003	98.9	27		
2004	98.9			
2005	99.2			

Source: see *Notes on sources of sales data: Plain/Filter cigarette sales,* p. 48, *Menthol cigarette sales*, p. 48 and *Tar and nicotine machine yield of* cigarettes, p. 48

Table 4M Prevalence of smoking, males: selected surveys by age
(continues on p. 20)

Year	Source	Product	Frequency	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
35	11	UC	U									66				40									53
44	5	UC	U													48									
47	10	UC	A									75		74		66		59		30					64
47	10	A	A									78		79		81		76		59					76
49	5	UC	U													54									
55	4	UC	R									48		60		58		54		41		22			50
55	4	UC	A									53		64		62		58		46		26			54
58	13	UC	R			15	25	31	35																26
58	13	UC	A			18	30	36	40																30
59	9	UC	R											60	58	57	55	51	46	39	32	25	18	13	46
59	9*	UC	R											59		55		50		36		23		10	47
59	9*	A	R											67		65		61		52		41		33	59
59	9*	A	A											67		65		61		53		43		34	59
59	14	UC	A	7	15	20	38	46	46																27
64	3	UC	U									67		60		60		53		51		30			53
65	1	UC	U										54		61		58		56		47		33	21	52
65	9	UC	R													49	47	46	43	39	33	26	20	15	10	36
66	1	UC	U										54					*							53
66	3	UC	U									62		60		59		54		48		28			52
66	4	UC	R										48		59		57		53		46		24		49
66	4	UC	A										48		59		57		53		46		25		49
67	4	UC	U							44					56				50				26		48
68	4	UC	U							41					55				47				25		46
68	20	UC	*	0	1	4	11	17	20	31															12
68	20	UC	R	1	2	6	14	20	26	36															15
68	20	UC	A	2	3	8	15	23	30	39															17
70	1	UC	U							44					*										44
70	3	UC	U									50		47		49		43		37		23			42
70	20	UC	*	2	3	6	11	16	23	35															14
70	20	UC	R	2	4	11	17	22	32	43															19
70	20	UC	A	2	4	11	17	23	33	43															19
72	20	UC	*	0	4	6	12	14	23	30															13
72	20	UC	R	1	5	8	18	18	28	33															16
72	20	UC	A	1	5	10	20	19	29	34															17
74	1	UC	U							37		44		51				43				25			43
74	1	UC	U							42															
74	6	UC	A						48																
74	20	UC	*		4		16		29																14
74	20	UC	R		4		18		31																16
74	20	UC	A		4		18		33																16
75	3	UC	U									41		44		47		41		34		24			41
75	3	A*	A							54															
75	15	UC	R						27																
75	15	UC	A						37																
76	1	UC	U									46		49		48		41				23			42
76	6	UC	A							35															
76	15	UC	R						28																
76	15	UC	A						38																
77	1	UC	U									40		48				41				23			41
77	6	UC	A							39															
77	15	UC	R						27																
77	15	UC	A						37																

Table 4F Prevalence of smoking, females: selected surveys by age
(continues on p. 21)

Year	Source	Product	Frequency	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
35	11	UC	U									26				9								18
44	5	UC	U							36														
47	10	UC	A									41		43		27		16		8				29
47	10	A	A									41		43		27		16		8				29
49	5	UC	U							33														
55	4	UC	R							28			34		31		22		11		3			24
55	4	UC	A							33			39		35		26		13		5			27
58	13	UC	R			5	11	16	26															14
58	13	UC	A			6	13	20	31															17
59	9	UC	R											44	42	40	37	30	22	15	11	7	5	3	28
59	9*	UC	R											42		37		26		13		7		3	27
59	9*	A	R											42		37		26		13		7		3	27
59	9*	A	A											43		39		27		14		8		3	28
59	14	UC	A	1	5	11	28	42	55																21
64	3	UC	U									42		41		39		36		21		8			32
65	1	UC	U							38				44		44		37		25		12		5	34
65	9	UC	R												38		36		34		31		23		16		10		7		5		3	23
66	1	UC	U							37				*											34
66	3	UC	U									49		45		41		42		21		8			34
66	4	UC	R							34				43		41		37		23		8			32
66	4	UC	A							35				43		41		37		23		8			32
67	4	UC	U							31				41				31				9			31
68	4	UC	U							29				40				31				10			31
68	20	UC	*	0	1	1	6	8	12	17															6
68	20	UC	R	0	1	1	7	12	16	21															8
68	20	UC	A	1	1	3	10	14	19	23															10
70	1	UC	U							33				*											32
70	3	UC	U									32		40		39		36		24		10			31
70	20	UC	*	1	1	5	8	12	14	23															9
70	20	UC	R	1	2	6	12	16	18	28															12
70	20	UC	A	1	2	8	12	17	18	30															13
72	20	UC	*	0	3	3	12	14	23	22															11
72	20	UC	R	1	4	4	13	20	26	25															13
72	20	UC	A	1	4	4	13	20	26	25															13
74	1	UC	U							31		35		39				34				12			32
74	1	UC	U							34															
74	6	UC	A						39																
74	20	UC	*		4		19		24																14
74	20	UC	R		5		20		26																15
74	20	UC	A		5		22		26																16
75	3	UC	U									40		35		36		33		26		10			31
75	3	A*	A						33																
75	15	UC	R						26																
75	15	UC	A						36																
76	1	UC	U									34		38		38		35				13			33
76	6	UC	A						52																
76	15	UC	R						29																
76	15	UC	A						39																
77	1	UC	U									37		38				34				13			31
77	6	UC	A						47																
77	15	UC	R						30																
77	15	UC	A						40																

Table 4M *(continued from p.18, continues on p. 22)*
Prevalence of smoking, males

Year	Source	Product	Frequency	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
78	1	UC	U							31		39	42				41				23				38
78	1	UC	U							36															
78	15	UC	R						26																
78	15	UC	A						35																
79	1	UC	U							30		38	44				40				21				38
79	1	UC	U							35															
79	7	UC	R			11				42			43		49			26							35
79	7	UC	A			13				45			45		51			30							38
79	8	UC	R										34		44		35		26						36
79	8	A	A										34		47		36		26						38
79	15	UC	R						22																
79	15	UC	A						31																
79	20	UC	*		2		13		17																10
79	20	UC	R		3		14		19																11
79	20	UC	A		3		15		20																11
80	1	UC	U							25		40	43		43		41				18				38
80	1	UC	U							35															
80	15	UC	R						19																
80	15	UC	A						27																
81	15	UC	R						18																
81	15	UC	A						27																
82	7	UC	R			13				34			43		44			32							34
82	7	UC	A			17				39			47		50			35							39
82	9	UC	R											33	34	32	29	27	25	21	19	15	11	8	25
82	12	UC	U							34															
82	15	UC	R						18																
82	15	UC	A						27																
83	1	UC	U							23		37	40				36				22				35
83	1	UC	U							33															
83	15	UC	R						19																
83	15	UC	A						28																
84	15	UC	R						16																
84	15	UC	A						26																
85	1	UC	U							20		31	38		38		33				20				33
85	1	UC	U							28															
85	4	UC	A					16				33		37		38		35		27		16			31
85	4	A*	U									40													
85	7	UC	R			12				35			42		32										32
85	7	UC	A			16				38			46		35										35
85	8	UC	R										27		24		23		14						21
85	8*	UC	A										28		25		23		14						21
85	8	A	A										29		29		28		20						26
85	15	UC	R						18																
85	15	UC	A						28																
86	3	UC	U							24			34		37		31				17				30
86	3	A*	A							38															
86	15	UC	R						17																
86	15	UC	A						28																
87	1	UC	U							22		31	36				33				17				31
87	1	UC	U							28															
87	15	UC	R						16																
87	15	UC	A						27																

Table 4F *(continued from p. 19, continues on p. 23)*
Prevalence of smoking, females

Year	Source	Product	Frequency	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
78	1	UC	U							34		33	36				34				12				31
78	1	UC	U							33															
78	15	UC	R						28																
78	15	UC	A						38																
79	1	UC	U							34		34	35				31				13				30
79	1	UC	U							34															
79	7	UC	R				10			39			38		40				23						31
79	7	UC	A				12			40			39		42				24						32
79	8	UC	R										32		41		31		28						34
79	8	A	A										31		41		32		25						34
79	15	UC	R						28																
79	15	UC	A						37																
79	20	UC	*		4			11		24															12
79	20	UC	R		4			12		26															13
79	20	UC	A		4			12		27															13
80	1	UC	U							28		33	32		35		31				17				29
80	1	UC	U							31															
80	15	UC	R						24																
80	15	UC	A						33																
81	15	UC	R						22																
81	15	UC	A						32																
82	7	UC	R				10			37			38		35				18						27
82	7	UC	A				13			41			42		39				20						30
82	9	UC	R											26	27	25	25	23	22	19	16	12	8	4	21
82	12	UC	U							29															
82	15	UC	R						23																
82	15	UC	A						33																
83	1	UC	U							31		37	33				31				13				30
83	1	UC	U							36															
83	15	UC	R						22																
83	15	UC	A						32																
84	15	UC	R						21																
84	15	UC	A						32																
85	1	UC	U							25		32	32		32		30				14				28
85	1	UC	U							31															
85	4	UC	A					15				30		29		31		27		22		10			25
85	4	A*	U									27													
85	7	UC	R				11			31			34		24										26
85	7	UC	A				15			35			36		26										28
85	8	UC	R										21		22		24		18						22
85	8*	UC	A										23		23		25		18						22
85	8	A	A										23		23		25		18						22
85	15	UC	R						21																
85	15	UC	A						31																
86	3	UC	U							22			29		29		25				12				24
86	3	A*	A							24															
86	15	UC	R						20																
86	15	UC	A						31																
87	1	UC	U							21		28	31				29				14				27
87	1	UC	U							26															
87	15	UC	R						21																
87	15	UC	A						31																

Table 4M *(continued from p. 20, continues on p. 24)*
Prevalence of smoking, males

Year	Source	Product	Frequency	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
88	1	UC	U							26			36				31				21		11		31
88	1	UC	U							20															
88	7	UC	R			10				31			38				30								29
88	7	UC	A			12				36			41				32								32
88	15	UC	R						17																
88	15	UC	A						28																
89	8	UC	R										26		24		23		22						23
89	8*	UC	A										28		25		25		23						24
89	8	A	A										28		26		30		26						27
89	15	UC	R						18																
89	15	UC	A						28																
89	16	UC	R	1	2	6	12	13	18	29															12
89	16	UC	A	2	5	10	16	19	24	35															16
90	1	UC	U							27			33				29				18		8		28
90	1	UC	U							22															
90	7	UC	R			9				30			36				26								27
90	7	UC	A			12				36			40				27								29
90	15	UC	R						19																
90	15	UC	A						29																
90	17	UC	R			8																			
90	17	UC	A			18																			
90	18	UC	R			13																			
90	18	UC	A			33																			
90	18	A*	A			40																			
91	1	UC	U							24			33				29				18		9		28
91	1	UC	U							22															
91	7	UC	R			9				27			30				27								26
91	7	UC	A			12				32			35				29								29
91	15	UC	R		8		12		19																
91	15	UC	A		16		21		29																
91	18	UC	R			8	12	17	16																13
91	18	UC	A			22	27	33	29																28
92	1	UC	A							28			33				29				16				29
92	7	UC	R			7				28			32		32				19						25
92	7	UC	A			10				33			35		34				21						28
92	15	UC	R		7		12		17																
92	15	UC	A		15		21		29																
92	19	UC	A		11		26	31	35	40															
93	1	UC	A							29			31				29				14				28
93	4	UC	A									28		32		30		27		21		11			27
93	7	UC	R			6				26			28		31				18						23
93	7	UC	A			9				31			31		34				20						26
93	15	UC	R		9		14		19																
93	15	UC	A		17		25		31																
93	18	UC	R			10	12	15	19																14
93	18	UC	A			27	26	31	35																30
94	1	UC	A							30			32				28				13				28
94	7	UC	R			6				24			26		31				21						24
94	7	UC	A			10				28			30		34				21						26
94	7	UC	R			4				19			23		26				19						20
94	7	UC	A			20				37			35		37				26						32
94	15	UC	R		10		15		20																
94	15	UC	A		19		27		33																

Table 4F *(continued from p. 21, continues on p. 25)*
Prevalence of smoking, females

Year	Source	Product	Frequency	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
88	1	UC	U							26			30				28				17		7		26
88	1	UC	U							23															
88	7	UC	R			8				31			31			21									24
88	7	UC	A			11				35			34			23									26
88	15	UC	R						18																
88	15	UC	A						29																
89	8	UC	R										21		18		20		17						19
89	8*	UC	A										21		20		21		17						20
89	8	A	A										21		20		21		17						20
89	15	UC	R						19																
89	15	UC	A						29																
89	16	UC	R	1	4	9	11	14	18	21															11
89	16	UC	A	3	6	11	16	19	25	26															15
90	1	UC	U							23			27				25				16		6		23
90	1	UC	U							18															
90	7	UC	R			9				23			33			21									22
90	7	UC	A			11				27			35			22									24
90	15	UC	R						19																
90	15	UC	A						29																
90	17	UC	R			4																			
90	17	UC	A			17																			
90	18	UC	R			13																			
90	18	UC	A			31																			
90	18	A*	A			32																			
91	1	UC	U							22			28				25				15		8		24
91	1	UC	U							21															
91	7	UC	R			6				28			29			23									23
91	7	UC	A			10				32			31			25									26
91	15	UC	R		6		13		18																
91	15	UC	A		13		21		28																
91	18	UC	R			9	11	15	15																12
91	18	UC	A			25	24	30	31																27
92	1	UC	A							25			29				26				12				25
92	7	UC	R			6				27			29		26			18							22
92	7	UC	A			10				31			32		28			19							25
92	15	UC	R		7		12		17																
92	15	UC	A		16		22		26																
92	19	UC	A		12		22	25	32	34															
93	1	UC	A							23			27				23				11				23
93	4	UC	A									24		26		24		23		17		9			22
93	7	UC	R			7				23			26		26			15							20
93	7	UC	A			10				27			29		28			16							22
93	15	UC	R		8		14		18																
93	15	UC	A		16		25		29																
93	18	UC	R			8	13	16	17																14
93	18	UC	A			29	30	31	34																31
94	1	UC	A							25			28				23				11				23
94	7	UC	R			8				20			24		26			13							18
94	7	UC	A			10				25			27		27			15							21
94	7	UC	R			4				19			21		22			13							17
94	7	UC	A			18				32			29		30			21							26
94	15	UC	R		8		14		18																
94	15	UC	A		18		24		29																

Table 4M *(continued from p. 22, continues on p. 26)*
Prevalence of smoking, males

Year	Source	Product	Frequency	Age Groups																					All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
95	1	UC	A							28			31				27				14				27
95	7	UC	R			5				19			24		28			16							20
95	7	UC	A			21				38			37		37			22							31
95	15	UC	R		9		16		22																
95	15	UC	A		19		28		35																
95	18	UC	R			9	14	20	22																16
95	18	UC	A			32	31	36	42																35
96	7	UC	R			4				23			25		28			14							20
96	7	UC	A			18				43			39		36			21							31
96	15	UC	R		11		18		22																
96	15	UC	A		21		30		35																
96	21	UC	*		6		8																		
96	21	UC	R		12		15																		
96	21	UC	A		24		28																		
97	1	UC	A							32			31				28				13				28
97	2	UC	R							17	29	23	24	27	25	24	28	25	17	16	11	10	3		
97	2	UC	A							22	36	30	30	33	31	29	31	28	19	19	13	11	4		
97	7	UC	R			5				26			21		25			18							20
97	7	UC	A			19				47			35		33			25							31
97	15	UC	R		9		17		25																
97	15	UC	A		19		28		37																
97	18	UC	R			15	16	20	20																18
97	18	UC	A			34	36	41	40																38
97	18	A	A			46																			
97	18	A*	A			42	44	54	53																49
97	24	UC	R	6		12		18																	16
97	24	UC	A	32																					
98	1	UC	A							31			29				28				10				26
98	2	UC	R							20	26	22	21	25	25	28	23	22	19	14	9	7	3		
98	2	UC	A							26	34	30	28	30	30	32	28	26	22	16	10	9	3		
98	7	UC	R			5				25			22		22			14							18
98	7	UC	A			19				45			35		33			22							30
98	15	UC	R		8		15		23																
98	15	UC	A		18		26		36																
98	21	A	*	4	4	9	12	13	20																
98	21	A	R	6	9	14	19	20	32																
98	21	A	A	12	17	24	30	31	41																
99	1	UC	A							30			30				26				11				26
99	2	UC	R							18	23	23	22	24	25	24	25	21	17	13	9	8	4		
99	2	UC	A							26	31	30	28	30	30	28	28	25	19	15	10	10	5		
99	4	UC	R							20															
99	4	UC	A							24															
99	7	UC	R			5				21			22		23			15							18
99	7	UC	A			15				43			35		33			19							28
99	7	A	A			17				49			41		38			24							33
99	7	A*	A			19				52			48		41			26							37
99	15	UC	R		7		16		24																
99	15	UC	A		17		25		35																
99	18	UC	R			11	15	20	26																18
99	18	UC	A			26	34	36	45																35
99	18	A*	A			33	42	47	57																44
99	22	UC	A	10		29																			
99	22	A*	A	14		38																			

Table 4F *(continued from p. 23, continues on p. 27)*
Prevalence of smoking, females

Year	Source	Product	Frequency	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
95	1	UC	A								22			27				24				12			23
95	7	UC	R			5					18		23		22				13						17
95	7	UC	A			20					32		32		31				21						27
95	15	UC	R		9		16		21																
95	15	UC	A		19		28		32																
95	18	UC	R			10	13	19	20																16
95	18	UC	A			30	35	36	34																34
96	7	UC	R			6					19		21		22				14						17
96	7	UC	A			19					33		32		32				20						27
96	15	UC	R		10		19		22																
96	15	UC	A		21		31		32																
96	21	UC	*		4		9																		
96	21	UC	R		10		21																		
96	21	UC	A		24		29																		
97	1	UC	A								26			26				22				12			22
97	2	UC	R							18	21		21	19	23	22	20	19	16	16	16	10	7	4	
97	2	UC	A							23	27		26	24	28	26	23	23	19	19	18	12	9	5	
97	7	UC	R			6					19		20		25				16						19
97	7	UC	A			21					35		32		33				22						28
97	15	UC	R		9		19		24																
97	15	UC	A		20		31		35																
97	18	UC	R			12	14	18	19																16
97	18	UC	A			33	35	32	39																35
97	18	A	A			37																			
97	18	A*	A			34	37	34	42																37
97	24	UC	R	5		12		17																	11
97	24	UC	A	26																					
98	1	UC	A								25			26				23				11			22
98	2	UC	R							18	20		18	21	23	22	20	22	19	15	15	10	8	3	
98	2	UC	A							25	24		24	25	27	25	23	25	22	18	18	12	9	5	
98	7	UC	R			5					21		21		21				13						16
98	7	UC	A			18					38		30		29				19						26
98	15	UC	R		9		17		22																
98	15	UC	A		20		29		33																
98	21	A	*	2	4	6	12	13	14																
98	21	A	R	4	8	14	20	18	23																
98	21	A	A	10	16	25	29	27	30																
99	1	UC	A								26			25				21				11			22
99	2	UC	R							21	21		19	19	23	22	20	19	16	14	13	10	8	4	
99	2	UC	A							24	27		24	23	27	26	24	22	19	16	16	12	9	5	
99	4	UC	R							16															
99	4	UC	A							19															
99	7	UC	R			5					20		18		19				12						15
99	7	UC	A			15					36		28		27				16						23
99	7	A	A			16					37		29		28				16						24
99	7	A*	A			16					37		29		28				17						24
99	15	UC	R		8		16		22																
99	15	UC	A		18		26		34																
99	18	UC	R			11	15	17	20																16
99	18	UC	A			29	36	36	41																35
99	18	A*	A			30	38	37	43																37
99	22	UC	A	9		28																			
99	22	A*	A	11		31																			

Table 4M *(continued from p. 24, continues on p. 28)*
Prevalence of smoking, males

Year	Source	Product	Frequency	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
00	1	UC	A							29			30				26				10				26
00	2	UC	R							16	25	23	22	23	27	25	23	21	17	15	10	6	4		
00	2	UC	A							21	32	30	28	28	32	29	29	24	21	16	11	7	4		
00	7	UC	R	0		3		10		20		23	20		21			15							17
00	7	UC	A	3		11		25		41		42	33		30			20							27
00	7	A	A	4		12		29		47		47	37		36			24							31
00	7	A*	A	5		14		32		49		50	44		40			27							35
00	15	UC	R		7		14		21																
00	15	UC	A		14		24		33																
00	22	UC	A	12		29																			
00	22	A*	A	18		39																			
00	23	UC	A		18																				
01	1	UC	A							30			27				26				12				25
01	2	UC	R							22	24	21	21	22	23	24	23	23	18	13	12	7	5		
01	2	UC	A							28	31	29	26	26	28	29	26	26	21	15	14	9	6		
01	7	UC	R	1		3		9		21		23	21		21			13							17
01	7	UC	A	3		10		23		43		43	34		31			18							27
01	7	A	A	4		12		27		48		49	40		37			24							32
01	7	A*	A	4		14		29		50		52	45		41			27							36
01	15	UC	R		6		12		18																
01	15	UC	A		12		21		30																
01	18	UC	R			10	12	18	22																15
01	18	UC	A			24	25	32	38																29
01	18	A*	A			31	35	43	48																39
01	21	A	*		4		12																		
01	21	A	R		7		18																		
02	1	UC	A							32			29				25				10				25
02	2	UC	R							21	25	20	23	24	24	23	23	17	19	11	11	9	4		
02	2	UC	A							29	34	26	29	29	30	27	27	20	22	13	12	9	5		
02	4	UC	R							19															
02	4	UC	A							23															
02	7	UC	R	0		3		10		20		24	20		23			15							18
02	7	UC	A	3		10		25		42		47	37		33			20							29
02	7	A	A	3		12		29		47		51	41		39			24							33
02	7	A*	A	4		13		32		50		54	47		43			28							37
02	15	UC	R		5		9		17																
02	15	UC	A		11		17		27																
02	22	UC	A	10		24																			
02	22	A*	A	15		33																			
03	1	UC	A							26			28				24				10				24
03	4	UC	R							17															
03	4	UC	A							21															
03	7	UC	R	0		2		9		20		25	22		22			15							18
03	7	UC	A	3		10		25		42		46	37		32			20							28
03	7	A	A	3		12		29		48		51	42		38			24							33
03	7	A*	A	4		14		31		49		54	47		42			26							36
03	15	UC	R		4		9		17																
03	15	UC	A		10		16		26																
03	18	UC	R			6	10	11	15																10
03	18	UC	A			16	22	23	29																22
03	18	A*	A			22	29	34	40																30

Table 4F *(continued from p. 25, continues on p. 29)*
Prevalence of smoking, females

Year	Source	Product	Frequency	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
00	1	UC	A								25		25				22				9				21
00	2	UC	R							22		19	16	18	23	22	20	18	17	17	10	10	7	3	
00	2	UC	A							25		25	22	23	27	26	23	21	21	21	12	13	8	4	
00	7	UC	R	1		3		9		21		19	17		19			13							15
00	7	UC	A	4		13		25		38		34	27		27			17							23
00	7	A	A	4		14		26		39		34	27		27			17							24
00	7	A*	A	4		14		26		39		35	28		27			18							24
00	15	UC	R		8		14		20																
00	15	UC	A		15		24		30																
00	22	UC	A	10		27																			
00	22	A*	A	12		30																			
00	23	UC	A		18																				
01	1	UC	A								23		25				21				9				21
01	2	UC	R							16		19	18	18	22	22	18	21	19	16	11	9	6	3	
01	2	UC	A							21		25	24	22	26	25	22	23	22	17	14	12	7	4	
01	7	UC	R	0		4		10		19		20	18		20			11							15
01	7	UC	A	3		13		25		36		35	27		28			15							23
01	7	A	A	3		13		26		38		36	27		29			15							23
01	7	A*	A	3		14		26		38		36	28		29			16							24
01	15	UC	R		5		12		19																
01	15	UC	A		12		22		29																
01	18	UC	R			8	12	13	20																13
01	18	UC	A			24	28	27	33																28
01	18	A*	A			26	31	29	34																30
01	21	A	*		2		8																		
01	21	A	R		5		12																		
02	1	UC	A								25		23				21				9				20
02	2	UC	R							17		20	18	17	19	20	22	16	16	16	11	9	7	4	
02	2	UC	A							21		26	23	21	22	25	26	19	19	19	12	11	8	4	
02	4	UC	R								15														
02	4	UC	A								18														
02	7	UC	R	0		2		10		18		22	18		21			11							15
02	7	UC	A	4		13		25		35		38	29		28			15							23
02	7	A	A	4		13		26		36		39	29		29			15							24
02	7	A*	A	4		14		27		36		39	29		29			16							24
02	15	UC	R		5		11		16																
02	15	UC	A		10		19		26																
02	22	UC	A	10		21																			
02	22	A*	A	12		24																			
03	1	UC	A								22		23				20				8				19
03	4	UC	R								13														
03	4	UC	A								16														
03	7	UC	R	0		3		8		18		21	18		19			10							14
03	7	UC	A	3		14		21		35		37	29		28			14							23
03	7	A	A	3		14		23		37		38	30		28			15							23
03	7	A*	A	3		14		23		37		39	30		28			16							24
03	15	UC	R		5		9		14																
03	15	UC	A		11		17		22																
03	18	UC	R			7	9	12	11																10
03	18	UC	A			19	22	24	23																22
03	18	A*	A			22	24	27	26																25

Table 4M *(continued from p. 26)*
Prevalence of smoking, males

Year	Source	Product	Frequency	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
04	1	UC	A							26			26				25				10				23
04	7	UC	R	0		2		8		19		25	21		22		14								17
04	7	UC	A	3		10		22		42		46	38		31		19								28
04	7	A	A	3		12		27		48		52	43		38		24								33
04	7	A*	A	4		13		30		50		54	47		41		27								36
04	15	UC	R		4		8		15																
04	15	UC	A		8		16		25																
04	22	UC	A	8		22																			
04	22	A*	A	13		31																			
05	15	UC	R		4		7		15																
05	15	UC	A		9		15		25																
05	18	UC	R			7	7	11	14																9
05	18	UC	A			19	21	24	29																23
05	18	A*	A			27	28	35	39																32

Source: see *Notes on sources of survey data*, p. 49
Product: MC = manufactured cigarettes
TC = total cigarettes (including hand-rolled)
UC = cigarettes (type unspecified)
A = all products. A* additionally includes non-smokers who use smokeless tobacco

Frequency: A = all smokers (including occasional)
R = regular or daily smokers
U = unspecified
* = refer to *Notes on sources of survey data*, p. 49
All ages: relates to ages reported; as given in original source

Table 4F *(continued from p. 27)*
Prevalence of smoking, females

Year	Source	Product	Frequency	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
04	1	UC	A							22			21				20				8				19
04	7	UC	R	0		2		7		17		20	16		19			11							14
04	7	UC	A	3		12		22		34		37	27		27			15							22
04	7	A	A	3		13		24		36		38	28		28			15							23
04	7	A*	A	4		13		24		33		38	28		28			15							23
04	15	UC	R		4		8		15																
04	15	UC	A		10		16		24																
04	22	UC	A	9		22																			
04	22	A*	A	11		24																			
05	15	UC	R		4		8		12																
05	15	UC	A		10		15		21																
05	18	UC	R			7	8	10	13																9
05	18	UC	A			21	22	24	26																23
05	18	A*	A			22	25	25	29																25

Source: see *Notes on sources of survey data*, p. 49
Product: MC = manufactured cigarettes
TC = total cigarettes (including hand-rolled)
UC = cigarettes (type unspecified)
A = all products. A* additionally includes non-smokers who use smokeless tobacco

Frequency: A = all smokers (including occasional)
R = regular or daily smokers
U = unspecified
* = refer to *Notes on sources of survey data*, p. 49
All ages: relates to ages reported; as given in original source

Table 5M Number of cigarettes smoked per smoker per day, males: selected surveys by age
(continues on p. 32)

Year	Source	Product	Estimated	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
29	25	UC					7.2																		
47	10	UC	E*									23		24		24		23			22				24
55	4	UC	E							16			18		19		19		17			14			18
58	13	UC	E			6.7	7.9	9.4	11																8.9
59	9	UC	E*											22	23	23	24	23	22	20	18	16	15	13	
59	14	UC	E*	4.0	5.5	7.2	9.0	12	13																9.9
64	3	UC	E									22													
65	1	UC	E									18		20		21			21			16			20
65	9	UC	E												23	24	24	23	23	21	19	17	16	16	22
66	4	UC	E							17			19		20		20		19			15			19
67	4	UC	E						16					20			20					15			19
68	4	UC	E						16					20			20					16			19
68	20	UC	E	2.5	3.8	13	11	12	14	16															14
70	3	UC										21		21		23		24		22		17			22
70	20	UC	E	8.3	12	12	9.5	14	16	16															14
72	20	UC	E	14	9.0	10	14	14	17	18															16
74	1	UC	E*								20														
74	20	UC	E		12			16		18															17
75	3	UC										19		22		23		25		25		20			23
75	15	UC	E*						17																
76	1	UC	E									19		21		23			23			18			21
76	15	UC	E*						16																
77	15	UC	E*						17																
78	1	UC	E									19		21		24			24			19			24
78	15	UC	E*						17																
79	1	UC	E									19		21		24			23			18			22
79	7	UC	E				13				18				23			25					23		22
79	8	UC												18		26		28		21					26
79	15	UC	E*						16																
79	20	UC	E		13			14		17															15
80	1	UC										19		22		26		27		23		21			23
80	15	UC	E*						17																
81	15	UC	E*						16																
82	7	UC	E				15				17				23			24					23		22
82	9	UC													23	26	27	27	27	26	24	22	20	18	15	
82	15	UC	E*						16																
83	1	UC	E									18		21		24			24			18			22
83	15	UC	E*						16																
84	15	UC	E*						16																
85	1	UC								17			20		24		25		24			20			22
85	7	UC	E				13				16			21					23						21
85	8	UC											17		23		26		21						23
85	15	UC	E*						16																
86	3	UC	E						22																
86	15	UC	E*						15																
87	1	UC	E							17				22			24				21		17		22
87	15	UC	E*						15																
88	1	UC								19				23			25				21		16		23
88	7	UC	E				11				16			21					24						21
88	15	UC	E*						15																
89	8	UC												16		20		20		20					20
89	15	UC	E*						15																
90	1	UC	E*								20														
90	7	UC	E				14				18			21					25						23
90	15	UC	E*						15																

Table 5F Number of cigarettes smoked per smoker per day, females: selected surveys by age
(continues on p. 33)

Year	Source	Product	Estimated	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
29	25	UC					2.4																		
47	10	UC	E*									18		18		18		16			14				18
55	4	UC	E							12			13		13		13		12			9.4			13
58	13	UC	E			4.8	6.6	7.2	7.0																6.8
59	9	UC	E*											16	16	16	16	15	15	14	13	12	11	8.8	
59	14	UC	E*	4.6	5.4	5.2	5.3	6.5	8.4																6.8
64	3	UC	E									17													
65	1	UC	E									15		16		17		16			13				16
65	9	UC	E												19	19	18	18	17	17	16	15	14	13	18
66	4	UC	E							14			16		16		16		15			13			16
67	4	UC	E						14				16				16					13			15
68	4	UC	E						14				16				16					13			16
68	20	UC	E	0.0	10	4.6	12	12	11	12															12
70	3	UC										16		18		19		18		17		14			18
70	20	UC	E	2.5	18	9.2	12	13	13	13															12
72	20	UC	E	0.0	7.0	13	11	10	12	15															12
74	1	UC	E*																						
74	20	UC	E		7.2			12		14															13
75	3	UC										19		19		20		20		19		16			19
75	15	UC	E*						13																
76	1	UC	E									16		18		18		18			15				18
76	15	UC	E*						13																
77	15	UC	E*						13																
78	1	UC	E									17		18		18		18			16				18
78	15	UC	E*						13																
79	1	UC	E									17		19		19		19			16				18
79	7	UC	E			12				17			19		20				17						18
79	8	UC											19		18		18		20						18
79	15	UC	E*						13																
79	20	UC	E		8.6		12		13																13
80	1	UC										18		19		23		21		20		16			20
80	15	UC	E*						13																
81	15	UC	E*						13																
82	7	UC	E			10				16			19		21				20						19
82	9	UC												20	21	21	21	20	20	19	18	17	16	14	
82	15	UC	E*						13																
83	1	UC	E									16		18		19		18			16				18
83	15	UC	E*						13																
84	15	UC	E*						13																
85	1	UC								15			18		20		20		18			16			18
85	7	UC	E			11				18			18				20								19
85	8	UC											17		19		17		16						17
85	15	UC	E*						13																
86	3	UC	E														19								
86	15	UC	E*						13																
87	1	UC	E							15				18				19				17		15	18
87	15	UC	E*						13																
88	1	UC								17				20				21				18		15	20
88	7	UC	E			9.8				15			18				19								18
88	15	UC	E*						12																
89	8	UC											13		20		14		16						17
89	15	UC	E*						12																
90	1	UC	E*														16								
90	7	UC	E			9.6				15			18				18								18
90	15	UC	E*						12																

Table 5M *(continued from p. 30)*
Number of cigarettes smoked per smoker per day, males

Year	Source	Product	Estimated	Age Groups																					All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
91	1	UC														22									
91	7	UC	E				11				18		19				23								21
91	15	UC	E*		12		14		15																
92	1	UC	E*													20									
92	7	UC	E				13				16		20			23				20					20
92	15	UC	E*		12		13		15																
93	1	UC	E*													19									
93	7	UC	E				13				16		20			21				25					21
93	15	UC	E*		13		14		14																
94	1	UC	E*													19									
94	7	UC	E				10				16		17			20				27					20
94	7	UC	E				13				17		21			23				23					22
94	15	UC	E*		12		14		15																
95	1	UC	E*													19									
95	7	UC	E				15				18		21			23				25					22
95	15	UC	E*		11		13		15																
96	7	UC	E				16				18		20			24				24					22
96	15	UC	E*		12		14		15																
96	21	UC	E		15		13																		
97	2	UC								16	17	19	19	21	23	22	23	22	24	22	19	18	16		
97	7	UC	E				14				17		20			23				26					22
97	15	UC	E*		11		13		15																
98	2	UC								17	17	19	19	21	21	24	23	24	23	23	20	21	15		
98	7	UC	E				13				17		18			22				23					20
98	15	UC	E*		12		14		14																
98	21	UC		6	4	9	7	10	10																
99	2	UC								13	15	17	19	20	22	22	23	23	20	21	20	20	20		
99	7	UC	E				12				16		18			20				21					19
99	15	UC	E*		12		13		15																
00	2	UC								15	15	18	19	19	22	22	23	23	21	20	19	19	14		
00	7	UC	E	15		11		13		15	16		19			21				21					19
00	15	UC	E*		11		13		14																
01	2	UC								16	15	16	17	21	22	22	22	23	21	20	16	16	14		
01	7	UC	E	8.4		11		12		14	16		18			21				22					19
01	15	UC	E*		12		13		14																
02	2	UC								14	15	15	17	20	20	22	21	21	22	20	17	14	19		
02	7	UC		3.0		8.7		12		14	16		17			20				21					19
02	15	UC	E*		12		12		14																
03	7	UC		10		10		12		13	15		16			20				20					18
03	15	UC	E*		11		13		14																
04	7	UC		7.7		7.2		12		13	14		17			21				23					19
04	15	UC	E*		11		12		13																
05	15	UC	E*		13		11		14																

Source: see *Notes on sources of survey data*, p. 49
Product: MC = manufactured cigarettes
TC = total cigarettes (including hand-rolled)
UC = cigarettes (type unspecified)
A = all products
U = unspecified

Estimated: E = mean estimated from percentage distribution (see also *Consumption category estimation*, Methods p. 11, and Appendix III)
* = refer to *Notes on sources of survey data*, p. 49
All ages: relates to ages reported; as given in original source

Table 5F *(continued from p. 31)*
Number of cigarettes smoked per smoker per day, females:

Year	Source	Product	Estimated	Age Groups																				All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+	
91	1	UC													18										
91	7	UC	E				10					15		17			20								18
91	15	UC	E*		10		11		12																
92	1	UC	E*												16										
92	7	UC	E				10					16		17		20			18						18
92	15	UC	E*		9.8		10		12																
93	1	UC	E*												15										
93	7	UC	E				8.9					14		17		19			19						18
93	15	UC	E*		9.5		11		12																
94	1	UC	E*												15										
94	7	UC	E				11					16		15		19			17						17
94	7	UC	E				12					15		17		20			16						17
94	15	UC	E*		9.7		11		12																
95	1	UC	E*												15										
95	7	UC	E				11					16		17		18			17						17
95	15	UC	E*		9.5		11		12																
96	7	UC	E				12					15		18		19			19						18
96	15	UC	E*		9.7		11		12																
96	21	UC	E		11		10																		
97	2	UC								12		15		16		15		17		19		20		20	19	19	17	18	14	14	
97	7	UC	E				14					15		16		20			18						18
97	15	UC	E*		9.6		11		12																
98	2	UC								15		15		16		17		18		17		19		18	19	18	17	14	14	14	
98	7	UC	E				13					14		17		18			19						17
98	15	UC	E*		9.7		11		12																
98	21	UC		3	4	6	6	8	11																
99	2	UC								12		13		15		16		17		17		19		18	19	18	17	14	14	13	
99	7	UC	E				10					14		16		18			18						17
99	15	UC	E*		10		11		12																
00	2	UC								12		14		14		15		17		18		17		18	19	17	18	17	15	11	
00	7	UC	E		10		9.9		11			14		14		15			18						17
00	15	UC	E*		9.5		10		12																
01	2	UC								10		13		14		16		17		18		18		18	17	18	17	17	16	13	
01	7	UC	E		11		9.8		11			12		14		16			18						16
01	15	UC	E*		10		11		12																
02	2	UC								12		12		15		17		16		17		18		18	17	18	16	15	15	14	
02	7	UC			3.7		8.7		10			12		13		15			17						16
02	15	UC	E*		10		10		11																
03	7	UC			6.0		8.4		11			11		13		15			17						16
03	15	UC	E*		9.9		10		11																
04	7	UC			5.7		8.9		9.5			11		12		15			17						16
04	15	UC	E*		10		9.6		11																
05	15	UC	E*		9.2		10		11																

Source: see *Notes on sources of survey data*, p. 49
Product: MC = manufactured cigarettes
TC = total cigarettes (including hand-rolled)
UC = cigarettes (type unspecified)
A = all products
U = unspecified

Estimated: E = mean estimated from percentage distribution (see also *Consumption category estimation*, Methods p. 11, and Appendix III)
* = refer to *Notes on sources of survey data*, p. 49
All ages: relates to ages reported; as given in original source

Table 6M Number of cigarettes smoked per person per day, males: selected surveys by age; with percentage total sales
(continues on p. 36)

Year	Source	Product	Age Groups																							All ages	% Total sales
			12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+		
47	10	UC*									17		18		16		14		6.6					15	101%T
55	4	UC							7.5		11		11		10		7.1		3.1					8.9	60%T
58	13	UC			0.7	1.5	2.4	3.1																1.8	**
59	9	UC										13	14	13	13	12	10	7.7	5.8	4.1	2.6	1.7			**
59	14	UC*	0.3	0.8	1.5	3.4	5.3	5.9																2.6	**
64	3	UC									12														73%T
65	1	UC									10		12		12		11			4.7				10	69%T
65	9	UC												11	11	11	10	8.9	6.9	5.0	3.5	2.4	1.6	7.9	**
66	4	UC							8.0			11		11		11		8.7		3.6				9.3	61%T
67	4	UC						7.0				11				9.8				3.9				9.0	61%T
68	4	UC						6.6				11				9.4				4.0				8.7	61%T
68	20	UC	0.0	0.0	0.6	1.2	2.1	2.8	4.9															1.6	**
70	3	UC									10		9.8		11		10		8.2		3.9			9.3	65%T
70	20	UC	0.1	0.3	0.7	1.0	2.2	3.7	5.7															2.0	**
72	20	UC	0.0	0.3	0.6	1.6	2.0	4.0	5.2															1.9	**
74	1	UC*							8.8																62%T
74	20	UC		0.4		2.5		5.1																2.4	**
75	3	UC									7.8		9.7		11		10		8.4		4.9			9.0	64%T
75	15	UC*						4.5																	**
76	1	UC									8.5		10		11		9.4			4.1				8.9	65%T
76	15	UC*						4.6																	**
77	15	UC*						4.5																	**
78	1	UC									7.4		9.1		10		9.5			4.3				9.1	65%T
78	15	UC*						4.3																	**
79	1	UC									7.0		9.3		9.9		9.1			3.6				8.2	64%T
79	7	UC			1.5				7.4			9.6		12				5.9						7.6	68%T
79	8	UC										6.1		11		10		5.5						9.4	**
79	15	UC*						3.6																	**
79	20	UC		0.3		1.7		3.0																1.5	**
80	1	UC									7.5		9.1		10		9.6			3.6				8.3	63%T
80	15	UC*						3.1																	**
81	15	UC*						2.9																	**
82	7	UC			2.0				5.7			10		11				7.3						7.5	69%T
82	9	UC											7.6	8.7	8.5	7.8	7.3	6.5	5.2	4.1	3.0	2.0	1.2		**
82	15	UC*						3.0																	**
83	1	UC									6.7		8.1		9.7		8.6			4.1				7.7	66%T
83	15	UC*						3.0																	**
84	15	UC*						2.5																	**
85	1	UC							5.3			7.8		9.1		8.2		8.0		4.0				7.1	66%T
85	7	UC			1.6				5.8			9.0						7.5						6.8	70%T
85	8	UC										4.5		5.4		5.9		2.8						4.9	**
85	15	UC*						2.8																	**
86	3	UC							6.5																62%T
86	15	UC*						2.5																	**
87	1	UC							4.7			7.9				8.1				4.2		1.9		6.8	66%T
87	15	UC*						2.4																	**
88	1	UC							4.7			8.5				7.9				4.4		1.9		7.1	72%T
88	7	UC			1.1				5.0			8.0						7.2						6.3	68%T
88	15	UC*						2.6																	**
89	8	UC										4.1		4.8		4.7		4.4						4.7	**
89	15	UC*						2.7																	**
90	1	UC*							5.7																60%T
90	7	UC			1.2				5.3			7.4						6.6						6.0	69%T
90	15	UC*						2.8																	**

Table 6F Number of cigarettes smoked per person per day, females: selected surveys by age; with percentage total sales
(continues on p. 37)

Year	Source	Product	Age Groups																					All ages	% Total sales
			12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+		
47	10	UC*									7.3		7.6		4.9		2.6		1.2					5.1	101%T
55	4	UC							3.3			4.6		4.0		2.8		1.2		0.3				3.0	60%T
58	13	UC			0.2	0.5	0.8	1.4																0.7	**
59	9	UC											6.9	6.7	6.3	5.7	4.5	3.1	2.0	1.4	0.9	0.6	0.2		**
59	14	UC*	0.1	0.3	0.6	1.5	2.7	4.6																1.4	**
64	3	UC									5.4														73%T
65	1	UC									6.2		7.2		7.4		5.1			1.3				5.4	69%T
65	9	UC												7.0	6.8	6.3	5.5	4.0	2.6	1.6	1.0	0.6	0.4	4.0	**
66	4	UC							4.9			6.8		6.6		5.9		3.3		1.0				4.9	61%T
67	4	UC						4.4				6.6				4.9				1.1				4.8	61%T
68	4	UC						4.1				6.6				4.8				1.3				4.7	61%T
68	20	UC	0.0	0.1	0.0	0.7	0.9	1.3	2.1															0.7	**
70	3	UC									5.2	7.3		7.2		6.6		4.1		1.4				5.5	65%T
70	20	UC	0.0	0.1	0.4	1.0	1.6	1.7	2.9															1.1	**
72	20	UC	0.0	0.2	0.3	1.3	1.4	2.8	3.2															1.4	**
74	1	UC*									5.3														62%T
74	20	UC		0.3		2.3		3.4																1.8	**
75	3	UC									7.4	6.5		7.3		6.7		4.9		1.6				5.5	64%T
75	15	UC*						3.4																	**
76	1	UC									5.4	6.8		6.9		6.3				2.0				5.8	65%T
76	15	UC*						3.8																	**
77	15	UC*						3.9																	**
78	1	UC									5.6	6.4		6.8		6.1				1.9				5.6	65%T
78	15	UC*						3.7																	**
79	1	UC									5.7	6.3		7.0		5.7				2.1				5.4	64%T
79	7	UC		1.2					6.7			7.1		7.8			3.8							5.5	68%T
79	8	UC										5.8		7.1		5.7		5.5						6.2	**
79	15	UC*						3.6																	**
79	20	UC		0.3		1.4		3.3																1.5	**
80	1	UC									5.4	5.9		5.1		5.8				2.6				5.5	63%T
80	15	UC*						3.1																	**
81	15	UC*						2.9																	**
82	7	UC		1.0					6.0			7.3		7.3			3.7							5.1	69%T
82	9	UC											5.2	5.7	5.2	5.1	4.7	4.3	3.5	2.8	1.9	1.3	0.6		**
82	15	UC*						3.1																	**
83	1	UC									5.9	5.8		6.5		5.7				2.1				5.3	66%T
83	15	UC*						2.9																	**
84	15	UC*						2.7																	**
85	1	UC							4.9			5.8		6.3		6.0		5.4		2.2				5.1	66%T
85	7	UC		1.1					5.7			6.0				4.9								4.8	70%T
85	8	UC										3.4		4.0		4.2		2.9						3.8	**
85	15	UC*						2.6																	**
86	3	UC									4.4														62%T
86	15	UC*						2.5																	**
87	1	UC							3.9			5.7				5.5				3.0		1.1		4.8	66%T
87	15	UC*						2.6																	**
88	1	UC							4.4			5.9				5.8				3.1		1.1		5.0	72%T
88	7	UC		0.8					4.7			5.8				4.1								4.2	68%T
88	15	UC*						2.2																	**
89	8	UC										2.7		3.7		2.8		2.8						3.1	**
89	15	UC*						2.4																	**
90	1	UC*							3.6																60%T
90	7	UC		0.9					3.6			5.9				3.8								3.9	69%T
90	15	UC*						2.4																	**

Table 6M *(continued from p. 34)*
Number of cigarettes smoked per person per day, males

Year	Source	Product	Age Groups																						All ages	% Total sales
			12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+		
91	7	UC	1.0						4.8			5.8		6.3											5.4	70%T
91	15	UC*		1.0		1.7		2.8																		**
92	1	UC*							5.6																	66%T
92	7	UC	0.9						4.5			6.5		7.3			3.9								5.1	68%T
92	15	UC*		0.8		1.6		2.5																		**
93	1	UC*							5.3																	63%T
93	7	UC	0.8						4.2			5.6		6.6			4.5								4.8	66%T
93	15	UC*		1.1		1.9		2.8																		**
94	1	UC*							5.2																	64%T
94	7	UC	0.6						3.8			4.4		6.4			5.7								4.8	63%T
94	7	UC	0.5						3.3			4.7		6.2			4.3								4.4	58%T
94	15	UC*		1.1		2.1		3.0																		**
95	1	UC*							5.2																	64%T
95	7	UC	0.8						3.4			5.1		6.6			4.0								4.5	59%T
95	15	UC*		1.0		2.2		3.2																		**
96	7	UC	0.6						4.0			4.9		6.8			3.3								4.4	61%T
96	15	UC*		1.3		2.5		3.3																		**
96	21	UC		1		1																				**
97	2	UC							2.7	4.8	4.2	4.5	5.9	5.9	5.5	6.4	5.4	3.9	3.6	2.1	1.8	0.5				59%T
97	7	UC	0.7						4.4			4.1		5.8			4.8								4.5	65%T
97	15	UC*		1.0		2.3		3.7																		**
98	2	UC							3.4	4.3	4.2	4.0	5.3	5.3	6.7	5.3	5.1	4.3	3.1	1.8	1.6	0.5				60%T
98	7	UC	0.7						4.3			4.1		5.0			3.1								3.7	57%T
98	15	UC*		1.0		2.0		3.3																		**
98	21	UC*	0	0	1	1	1	2																		**
99	2	UC							2.3	3.5	4.0	4.2	4.8	5.4	5.3	5.6	4.9	3.4	2.7	1.7	1.6	0.9				60%T
99	7	UC	0.6						3.5			3.9		4.8			3.2								3.5	56%T
99	15	UC*		0.9		2.0		3.5																		**
00	2	UC							2.4	3.7	4.0	4.3	4.4	6.1	5.5	5.4	5.0	3.7	3.0	1.8	1.2	0.5				63%T
00	7	UC	0.1		0.3		1.3		3.1	3.7		3.7		4.4			3.2								3.3	57%T
00	15	UC*		0.8		1.7		2.8																		**
01	2	UC							3.5	3.6	3.4	3.6	4.6	4.9	5.1	5.0	5.4	3.8	2.7	1.8	1.1	0.7				61%T
01	7	UC	0.0		0.3		1.1		3.0	3.7		3.7		4.4			2.8								3.2	55%T
01	15	UC*		0.7		1.6		2.5																		**
02	2	UC							2.9	3.7	3.0	4.0	4.7	4.9	5.2	4.7	3.6	4.2	2.3	1.8	1.2	0.7				60%T
02	7	UC	0.0		0.2		1.2		2.7	3.8		3.5		4.5			3.1								3.3	58%T
02	15	UC*		0.6		1.1		2.4																		**
03	7	UC	0.0		0.2		1.0		2.7	3.7		3.5		4.2			3.0								3.2	57%T
03	15	UC*		0.5		1.1		2.4																		**
04	7	UC	0.0		0.1		0.9		2.4	3.6		3.6		4.6			3.2								3.3	61%T
04	15	UC*		0.5		1.0		2.0																		**
05	15	UC*		0.5		0.8		2.0																		**

Source: see *Notes on sources of survey data*, p. 49
Product: MC = manufactured cigarettes
TC = total cigarettes (including hand-rolled)
UC = cigarettes (type unspecified)
A = all products
U = unspecified

* = refer to *Notes on sources of survey data*, p. 49
All ages: relates to ages reported; as given in original source
% Total sales: estimated % of total sales of M = manufactured or T = total cigarette consumption implied by survey, sexes combined
** = cannot be calculated
-- = adjusted by original author

Table 6F *(continued from p. 35)*
Number of cigarettes smoked per person per day, females

Year	Source	Product	Age Groups																						All ages	% Total sales
			12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+		
91	7	UC	0.6						4.1			5.0		4.5											4.2	70%T
91	15	UC*		0.6		1.4		2.1																		**
92	1	UC*														3.9										66%T
92	7	UC	0.6						4.2			4.9		5.2			3.3								4.0	68%T
92	15	UC*		0.7		1.3		2.0																		**
93	1	UC*														3.5										63%T
93	7	UC	0.6						3.3			4.6		5.0			2.9								3.6	66%T
93	15	UC*		0.7		1.5		2.2																		**
94	1	UC*														3.5										64%T
94	7	UC	0.9						3.2			3.7		5.0			2.2								3.2	63%T
94	7	UC	0.5						2.9			3.6		4.4			2.1								2.9	58%T
94	15	UC*		0.8		1.5		2.1																		**
95	1	UC*														3.5										64%T
95	7	UC	0.5						3.0			3.9		4.0			2.2								2.9	59%T
95	15	UC*		0.9		1.8		2.5																		**
96	7	UC	0.7						2.8			3.8		4.2			2.6								3.1	61%T
96	15	UC*		1.0		2.1		2.6																		**
96	21	UC		0		1																				**
97	2	UC							2.1	3.2	3.2	2.9	3.9	4.2	3.9	3.8	3.2	3.2	2.6	1.8	1.0	0.6				59%T
97	7	UC	0.8						2.8			3.4		5.0			2.9								3.4	65%T
97	15	UC*		0.8		2.0		2.8																		**
98	2	UC							2.8	3.0	2.8	3.4	4.2	3.7	3.8	4.0	3.5	2.8	2.6	1.4	1.2	0.5				60%T
98	7	UC	0.6						3.0			3.5		3.8			2.4								2.8	57%T
98	15	UC*		0.9		1.8		2.5																		**
98	21	UC*	0	0	0	1	1	1																		**
99	2	UC							2.6	2.8	2.9	3.1	3.9	3.7	3.9	3.5	2.9	2.5	2.3	1.4	1.2	0.6				60%T
99	7	UC	0.5						2.8			3.0		3.4			2.2								2.6	56%T
99	15	UC*		0.8		1.7		2.6																		**
00	2	UC							2.6	2.6	2.3	2.8	3.9	3.9	3.4	3.3	3.3	3.0	1.7	1.6	1.1	0.3				63%T
00	7	UC	0.1		0.3		1.0		2.9	2.6		2.6		3.5			2.3								2.5	57%T
00	15	UC*		0.7		1.4		2.4																		**
01	2	UC							1.7	2.5	2.6	2.8	3.7	3.9	3.1	3.7	3.2	2.8	1.9	1.5	0.9	0.3				61%T
01	7	UC	0.1		0.4		1.2		2.3	2.6		2.8		3.5			1.8								2.4	55%T
01	15	UC*		0.5		1.3		2.3																		**
02	2	UC							2.0	2.3	2.7	2.8	3.1	3.5	3.9	2.9	2.7	2.8	1.7	1.3	1.0	0.5				60%T
02	7	UC	0.0		0.2		1.0		2.2	2.8		2.7		3.6			2.0								2.5	58%T
02	15	UC*		0.5		1.1		1.8																		**
03	7	UC	0.0		0.2		0.8		2.0	2.7		2.8		3.3			1.9								2.3	57%T
03	15	UC*		0.4		0.9		1.6																		**
04	7	UC	0.0		0.2		0.7		2.0	2.4		2.4		3.4			2.1								2.3	61%T
04	15	UC*		0.4		0.8		1.7																		**
05	15	UC*		0.4		0.8		1.3																		**

Source: see *Notes on sources of survey data*, p. 49
Product: MC = manufactured cigarettes
TC = total cigarettes (including hand-rolled)
UC = cigarettes (type unspecified)
A = all products
U = unspecified

* = refer to *Notes on sources of survey data*, p. 49
All ages: relates to ages reported; as given in original source
% Total sales: estimated % of total sales of M = manufactured or T = total cigarette consumption implied by survey, sexes combined
** = cannot be calculated
-- = adjusted by original author

Table 7M Number of cigarettes smoked per person per day, sales-adjusted, males: selected surveys[1] by age; with percentage total sales

Year	Source	Product	Age Groups																				All ages	% Total sales
			12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+		
47	10	UC*									17		18		16		14		6.5					15	101%T
55	4	UC							13			18		19		17		12		5.2				15	60%T
64	3	UC									16														73%T
65	1	UC									15		18		18		16			6.8				15	69%T
66	4	UC							13			18		19		17		14		5.9				15	61%T
67	4	UC						12				18				16				6.4				15	61%T
68	4	UC						11				18				15				6.5				14	61%T
70	3	UC									16		15		17		16		13		6.0			14	65%T
74	1	UC*							14																62%T
75	3	UC									12		15		17		16		13		7.7			14	64%T
76	1	UC									13		16		17		14			6.3				14	65%T
78	1	UC									11		14		16		15			6.6				14	65%T
79	1	UC									11		15		16		14			5.7				13	64%T
79	7	UC			2.2				11			14			18					8.7				11	68%T
80	1	UC									12		15		16		15			5.8				13	63%T
82	7	UC			2.9				8.3			15			16					11				11	69%T
83	1	UC									10		12		15		13			6.2				12	66%T
85	1	UC							8.0			12			14		12		12		6.0			11	66%T
85	7	UC			2.3				8.4			13							11					9.8	70%T
86	3	UC														11									62%T
87	1	UC							7.1				12				12			6.4		2.8		10	66%T
88	1	UC							6.6				12				11			6.2		2.7		9.9	72%T
88	7	UC			1.6				7.3			12							11					9.3	68%T
90	1	UC*														9.4									60%T
90	7	UC			1.7				7.7			11							9.5					8.6	69%T
91	7	UC			1.4				6.9			8.3							8.9					7.7	70%T
92	1	UC*														8.5									66%T
92	7	UC			1.3				6.6			9.5			11					5.7				7.4	68%T
93	1	UC*														8.3									63%T
93	7	UC			1.2				6.3			8.4			9.9					6.8				7.3	66%T
94	1	UC*														8.2									64%T
94	7	UC			1.0				6.1			6.9			10					8.9				7.6	63%T
94	7	UC			0.9				5.6			8.2			11					7.5				7.5	58%T
95	1	UC*														8.1									64%T
95	7	UC			1.3				5.8			8.6			11					6.7				7.6	59%T
96	7	UC			1.0				6.7			8.2			11					5.4				7.2	61%T
97	2	UC							4.6		8.1		7.1	7.5	9.9	10	9.3	11	9.1	6.6	6.0	3.6	3.0	0.8		59%T
97	7	UC			1.1				6.7			6.4			8.9					7.3				6.9	65%T
98	2	UC							5.6		7.2		6.9	6.6	8.8	8.7	11	8.8	8.5	7.2	5.2	3.0	2.6	0.8		60%T
98	7	UC			1.2				7.5			7.2			8.8					5.5				6.5	57%T
99	2	UC							3.8		5.8		6.5	7.0	7.9	8.9	8.8	9.2	8.1	5.6	4.5	2.8	2.6	1.5		60%T
99	7	UC			1.1				6.1			6.8			8.5					5.6				6.2	56%T
00	2	UC							3.9		5.9		6.3	6.8	7.0	9.7	8.7	8.6	7.9	5.9	4.8	2.9	1.9	0.8		63%T
00	7	UC	0.1		0.5		2.3		5.5		6.5		6.5			7.7				5.5				5.8	57%T
01	2	UC							5.7		5.9		5.6	5.9	7.6	8.0	8.4	8.2	8.9	6.2	4.4	3.0	1.8	1.1		61%T
01	7	UC	0.1		0.6		2.0		5.4		6.7		6.6			7.9				5.1				5.8	55%T
02	2	UC							4.8		6.2		5.1	6.7	7.9	8.2	8.6	7.9	6.0	7.0	3.8	3.0	2.0	1.2		60%T
02	7	UC	0.0		0.4		2.0		4.7		6.6		6.0			7.8				5.3				5.7	58%T
03	7	UC	0.0		0.4		1.8		4.6		6.4		6.1			7.4				5.2				5.5	57%T
04	7	UC	0.0		0.2		1.5		4.0		5.9		5.9			7.5				5.3				5.4	61%T

1 Based on those surveys in Table 6 with data for both sexes and age range at least 21-64 (see *Cigarette consumption per person*, Methods p. 11)

Source: see *Notes on sources of survey data*, p. 49
Product: MC = manufactured cigarettes
TC = total cigarettes (including hand-rolled)
UC = cigarettes (type unspecified)
A = all products
U = unspecified

* = refer to *Notes on sources of survey data*, p. 49
All ages: relates to ages reported; as given in original source
% Total sales: Adjustment factor used, estimated % of total sales of M = manufactured or T = total cigarette consumption implied by survey, sexes combined,
-- = adjusted by original author

Table 7F Number of cigarettes smoked per person per day, sales-adjusted, females: selected surveys[1] by age; with percentage total sales

Year	Source	Product	Age Groups																				All ages	% Total sales
			12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+		
47	10	UC*									7.2		7.5		4.8		2.5		1.2					5.0	101%T
55	4	UC							5.5			7.7		6.7		4.7		2.0		0.5				5.0	60%T
64	3	UC													7.4										73%T
65	1	UC									9.0		10		11		7.4			1.9				7.8	69%T
66	4	UC							8.0			11		11		9.6		5.4		1.6				8.0	61%T
67	4	UC						7.2					11			8.1				1.8				7.9	61%T
68	4	UC						6.7					11			7.8				2.1				7.7	61%T
70	3	UC									8.0		11		11		10		6.3		2.2			8.5	65%T
74	1	UC*							8.5																62%T
75	3	UC									12		10		11		10		7.7		2.5			8.6	64%T
76	1	UC									8.3		10		11		9.7			3.1				8.9	65%T
78	1	UC									8.6		9.9		10		9.4			3.0				8.6	65%T
79	1	UC									8.9		9.9		11		9.0			3.3				8.5	64%T
79	7	UC			1.8				9.8			10		11				5.5						8.0	68%T
80	1	UC									8.6		9.4		8.2		9.3			4.2				8.8	63%T
82	7	UC			1.5				8.7			11		11				5.3						7.4	69%T
83	1	UC									9.0		8.8		9.9		8.7			3.2				8.0	66%T
85	1	UC							7.4			8.7		9.5		9.0		8.1		3.3				7.7	66%T
85	7	UC			1.6				8.1			8.6			7.0									6.9	70%T
86	3	UC									7.1														62%T
87	1	UC							5.9				8.5			8.3				4.5		1.7		7.2	66%T
88	1	UC							6.2				8.3			8.1				4.3		1.5		7.0	72%T
88	7	UC			1.2				6.9			8.5					6.0							6.1	68%T
90	1	UC*							6.0																60%T
90	7	UC			1.2				5.2			8.5					5.5							5.6	69%T
91	7	UC			0.9				5.8			7.1					6.4							5.9	70%T
92	1	UC*							5.9																66%T
92	7	UC			0.9				6.2			7.1		7.7				4.8						5.8	68%T
93	1	UC*							5.5																63%T
93	7	UC			0.9				5.0			6.9		7.6				4.4						5.4	66%T
94	1	UC*							5.5																64%T
94	7	UC			1.4				5.0			5.8		7.8				3.4						5.0	63%T
94	7	UC			0.9				5.0			6.2		7.6				3.7						5.1	58%T
95	1	UC*							5.5																64%T
95	7	UC			0.9				5.0			6.6		6.8				3.7						4.9	59%T
96	7	UC			1.2				4.6			6.2		6.9				4.3						5.1	61%T
97	2	UC							3.5		5.4	5.5	4.9	6.6	7.1	6.5	6.4	5.3	5.3	4.4	3.0	1.7	1.0		59%T
97	7	UC			1.3				4.3			5.2		7.7				4.5						5.2	65%T
98	2	UC							4.6		4.9	4.7	5.7	6.9	6.2	6.3	6.6	5.8	4.6	4.3	2.4	1.9	0.8		60%T
98	7	UC			1.1				5.3			6.1		6.7				4.2						5.0	57%T
99	2	UC							4.3		4.6	4.8	5.1	6.5	6.2	6.4	5.7	4.8	4.2	3.8	2.3	1.9	0.9		60%T
99	7	UC			0.9				4.9			5.2		6.0				3.9						4.5	56%T
00	2	UC							4.2		4.1	3.7	4.4	6.1	6.2	5.4	5.3	5.3	4.8	2.7	2.6	1.7	0.5		63%T
00	7	UC	0.1		0.6		1.8		5.0		4.5		4.5		6.1					4.0				4.4	57%T
01	2	UC							2.8		4.0	4.3	4.6	6.0	6.5	5.1	6.1	5.3	4.6	3.1	2.5	1.5	0.6		61%T
01	7	UC	0.1		0.6		2.1		4.2		4.8		5.1		6.4					3.3				4.3	55%T
02	2	UC							3.4		3.9	4.5	4.7	5.1	5.9	6.5	4.9	4.5	4.6	2.8	2.2	1.7	0.9		60%T
02	7	UC	0.0		0.4		1.8		3.8		4.8		4.6		6.1					3.5				4.2	58%T
03	7	UC	0.0		0.4		1.4		3.5		4.7		4.9		5.7					3.3				4.0	57%T
04	7	UC	0.0		0.3		1.2		3.3		4.0		3.9		5.5					3.5				3.8	61%T

1 Based on those surveys in Table 6 with data for both sexes and age range at least 21-64 (see *Cigarette consumption per person*, Methods p. 11)

Source: see *Notes on sources of survey data*, p. 49
Product: MC = manufactured cigarettes
TC = total cigarettes (including hand-rolled)
UC = cigarettes (type unspecified)
A = all products
U = unspecified

* = refer to *Notes on sources of survey data*, p. 49
All ages: relates to ages reported; as given in original source
% Total sales: Adjustment factor used, estimated % of total sales of M = manufactured or T = total cigarette consumption implied by survey, sexes combined,
-- = adjusted by original author

Table 8 Estimated[1] prevalence of smoking and estimated[1] number of cigarettes per person per day (unadjusted and sales-adjusted): summary of Tables 4, 6 and 7. Males and females aged 15 years and over

Year	Source[2]	Product[3]	Prevalence[4]						Number of cigarettes						
			Manufactured cigarettes		Total cigarettes[5]		All products[6]		Unadjusted[7]			Sales-adjusted[8]			
									number/ person/day		Total sales %	Manufactured cigarettes number/ person/day		Total cigarettes[9] number/ person/day	
			M	F	M	F	M	F	M	F		M	F	M	F
1935	11	*UC*			50	17								(8.9	2.4)
1944	5	*UC*			46	34								(8.8	5.2)
1947	10	**UC**+**A**			59	28	70	28	13.8	4.8	101			13.6	4.7
1949	5	*UC*			52	32								(12.5	6.1)
1955	4	UC			48	23			8.5	2.8	60			14.2	4.8
	4	**UC**			52	26									
1964	3	*UC*			50	30			10.6	5.1	73			14.5	6.9
1965	1	*UC*			50	32			9.8	5.1	69			14.2	7.5
1966	1	*UC*			53	34								(14.3	7.4)
	3	*UC*			49	32								(14.3	7.5)
	4	UC			47	30			8.7	4.7	61			14.2	7.6
	4	**UC**			47	31									
1967	4	*UC*			46	30			8.6	4.6	61			14.1	7.6
1968	4	*UC*			44	29			8.3	4.6	61			13.6	7.5
1970	1	*UC*			44	32								(13.3	7.6)
	3	*UC*			40	29			8.5	5.0	65			13.1	7.8
1974	1	*UC*			41	31			8.3	5.0	62			13.4	8.1
1975	3	*UC* +**A***			37	29	52	32	8.3	5.2	64			12.9	8.2
1976	1	*UC*			40	31			8.3	5.3	65			12.8	8.1
1977	1	*UC*			39	31								(12.5	8.0)
1978	1	*UC*			37	30			7.9	5.2	65			12.2	8.0
1979	1	*UC*			36	29			7.6	5.1	64			12.0	8.0
	7	UC			35	30			8.0	5.6	68			11.7	8.3
	7	**UC**			37	31									
1980	1	*UC*			36	28			7.7	4.8	63			12.4	7.6
1982	7	UC			35	27			8.0	5.4	69			11.7	7.9
	7	**UC**			39	31									
	12	*UC*			33	28								(11.6	8.0)
1983	1	*UC*			34	28			7.2	4.9	66			10.9	7.5
1985	1	*UC*			31	27			6.9	4.9	66			10.3	7.3
	4	**UC**+*A**			31	24	38	26						(10.8	6.9)
	7	UC			33	26			7.2	5.1	70			10.4	7.3
	7	**UC**			35	28									

Table 8 *(continued)*

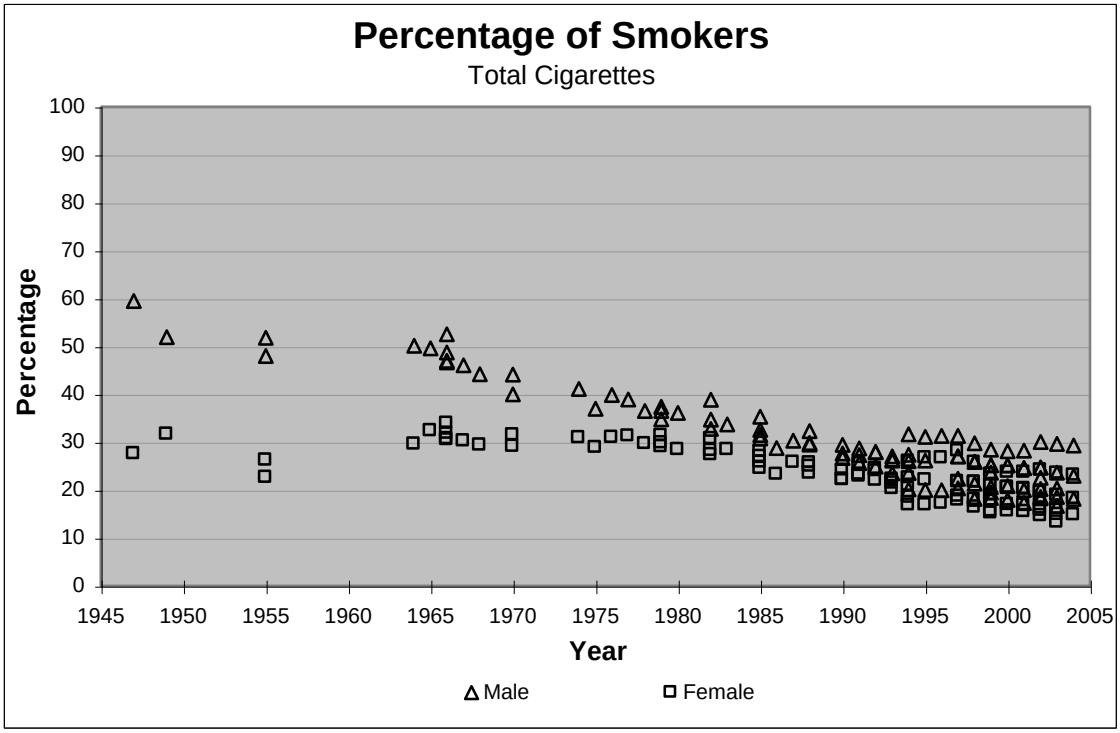
Year	Source[2]	Product[3]	Prevalence[4]						Number of cigarettes						
			Manufactured cigarettes		Total cigarettes[5]		All products[6]		Unadjusted[7]			Sales-adjusted[8]			
									number/ person/day		Total sales %	Manufactured cigarettes number/ person/day		Total cigarettes[9] number/ person/day	
			M	F	M	F	M	F	M	F		M	F	M	F
1986	3	*UC*+**A***			29	23	37	24	6.3	4.3	62			10.2	7.0
1987	1	*UC*			30	26			6.5	4.6	66			9.9	6.9
1988	1	*UC*			30	25			6.8	4.8	72			9.5	6.7
	7	UC			29	23			6.7	4.4	68			9.8	6.4
	7	**UC**			32	26									
1990	1	*UC*			28	22			5.5	3.6	60			9.1	5.9
	7	UC			27	22			6.3	4.1	69			9.1	5.9
	7	**UC**			29	24									
1991	1	*UC*			27	23								(8.6	5.8)
	7	UC			26	23			5.7	4.4	70			8.1	6.2
	7	**UC**			29	25									
1992	1	**UC**			28	24			5.4	3.8	66			8.2	5.7
	7	UC			25	22			5.4	4.1	68			7.9	6.1
	7	**UC**			28	25									
1993	1	**UC**			27	22			5.1	3.4	63			8.1	5.4
	4	**UC**			26	21								(8.1	5.3)
	7	UC			23	20			5.1	3.8	66			7.7	5.7
	7	**UC**			26	22									
1994	1	**UC**			27	22			5.1	3.4	64			7.9	5.4
	7	UC			24	18			5.1	3.3	63			8.1	5.3
	7	**UC**			26	21									
	7	UC			20	17			4.6	3.1	58			8.0	5.3
	7	**UC**			32	26									
1995	1	**UC**			26	22			5.0	3.4	64			7.8	5.3
	7	UC			20	17			4.7	3.0	59			8.0	5.2
	7	**UC**			31	27									
1996	7	UC			20	17			4.7	3.2	61			7.7	5.3
	7	**UC**			31	27									
1997	1	**UC**			27	22									
	2	UC			22	18			4.5	3.0	59			7.6	5.1
	2	**UC**			27	22									
	7	UC			20	19			4.7	3.5	65			7.2	5.4
	7	**UC**			31	28									
1998	1	**UC**			26	22									
	2	UC			21	18			4.3	3.0	60			7.2	5.0
	2	**UC**			26	22									
	7	UC			18	16			3.9	3.0	57			6.9	5.3
	7	**UC**			30	26									
1999	1	**UC**			25	21									
	2	UC			21	18			4.0	2.9	60			6.6	4.7
	2	**UC**			25	21									
	4	UC			20	16								(6.9	4.4)
	4	**UC**			24	19									
	7	UC			18	15			3.7	2.7	56			6.6	4.7
	7	**UC**+**A**			28	23	33	24							
	7	**A***					37	24							

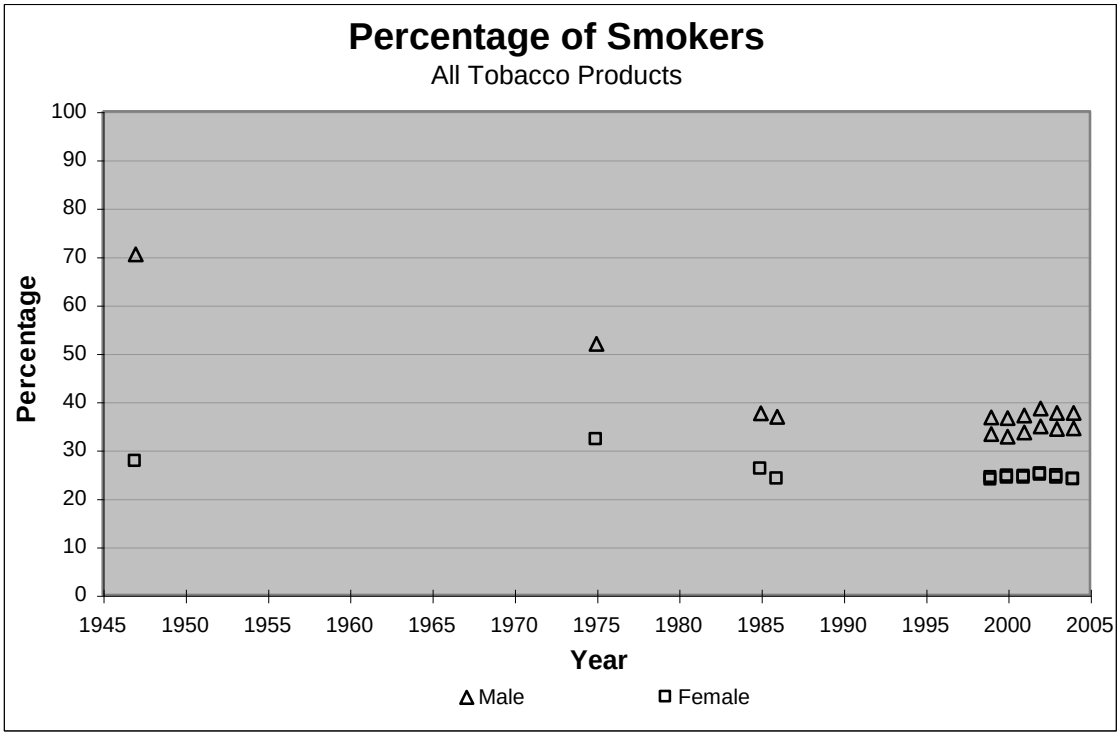
Table 8 *(continued/2)*

Year	Source[2]	Product[3]	Prevalence[4]						Number of cigarettes						
			Manufactured cigarettes		Total cigarettes[5]		All products[6]		Unadjusted[7]			Sales-adjusted[8]			
									number/ person/day		Total sales %	Manufactured cigarettes number/ person/day		Total cigarettes[9] number/ person/day	
			M	F	M	F	M	F	M	F		M	F	M	F
2000	1	**UC**			25	21									
	2	UC			21	17			4.1	2.7	63			6.5	4.4
	2	**UC**			25	20									
	7	UC			18	16			3.5	2.7	57			6.2	4.6
	7	**UC+A**			28	24	33	24							
	7	***A****					37	25							
2001/10	1	**UC**			25	20									
	2	UC			20	17			3.8	2.7	61			6.3	4.4
	2	**UC**			25	20									
	7	UC			17	15			3.4	2.5	55			6.2	4.6
	7	**UC+A**			28	24	34	24							
	7	***A****					37	24							
2002/10	1	**UC**			25	20									
	2	UC			20	16			3.7	2.6	60			6.2	4.3
	2	**UC**			25	20									
	4	UC			18	15								(6.4	4.1)
	4	**UC**			23	18									
	7	UC			19	16			3.5	2.6	58			6.0	4.5
	7	**UC+A**			30	24	35	25							
	7	***A****					39	25							
2003/10	1	**UC**			24	19								(6.2	4.0)
	4	UC			17	13								(6.2	4.0)
	4	**UC**			20	16									
	7	UC			19	15			3.4	2.5	57			5.9	4.3
	7	**UC+A**			30	23	34	24							
	7	***A****					38	25							
2004/10	1	**UC**			23	18								(6.0	3.8)
	7	UC			18	15			3.5	2.5	61			5.8	4.0
	7	**UC+A**			29	23	34	24							
	7	***A****					38	24							

1 Surveys covering an age range of at least 21-64 are included. Any gaps in the data for ages 15-20 and 65 years and over are filled in by assumed extensions to the age distribution, given in *Notes on sources of survey data*, p. 49. Method: see *Summary of adult smoking*, Methods p. 13
2 See *Notes on sources of survey data*, p. 49
3 Product: MC = manufactured cigarettes, TC = total cigarettes (including hand-rolled), UC = cigarettes (type unspecified), A = all smoking products, A* = all smoking or smokeless products, U = unspecified. Frequency of smoking is indicated by: regular or daily smokers in normal type, all smokers (including occasional) in bold, unspecified in italics
4 From Table 4
5 This column includes prevalence of smoking classified as UC = cigarettes (type unspecified)
6 This column includes prevalence of smoking classified as U = unspecified product
7 From Table 6
8 From Table 7, except data in parentheses, which are derived from the prevalence of smoking from Table 4 as described in *Summary of adult smoking*, Methods p. 13
9 Number of cigarettes classified as UC = cigarettes (type unspecified) has been adjusted to total cigarette sales and included in this column.
10 Calculations based on 2000 population.

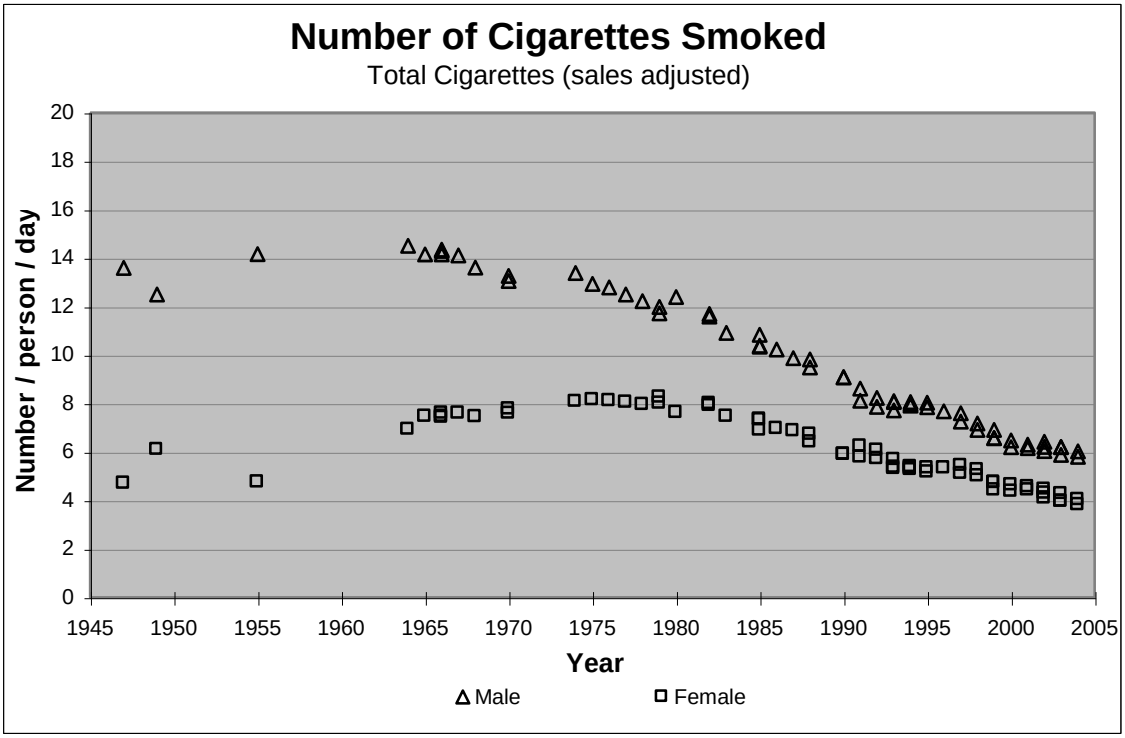
Figure 3 Estimated prevalence of smoking of (i) cigarettes and (ii) all tobacco products[1]; by year of survey.
Males and females aged 15 years and over





Source: Table 8
Table 8 also includes some estimates for earlier years (not shown in this figure).
1 Includes estimates shown in Table 8 as product A* which include non-smokers who use smokeless tobacco
See also customisable version of Figure 3 in the Excel workbook

Figure 4 Estimated number of cigarettes smoked per person per day, sales-adjusted; by year of survey.
Males and females aged 15 years and over



Source: Table 8
Table 8 also includes some estimates for earlier years (not shown in this figure).

Notes

Notes on sources of sales data

The data presented in the tables and figures were obtained from several sources, details of which are given below, together with estimations and related assumptions. Full citations of the sources are given on p. 59 under *References*.

Sales data before 1920

Giovino *et al* (1994)
Cigarette consumption, given as total and per adult per year, quoting the Economic Research Service (ERS) of the US Department of Agriculture (USDA). Selected years shown:

Year	Total cigarettes (millions)	Cigarettes per adult[1]	
		per year	per day
1900	2 500	54	0.15
1905	3 600	70	0.19
1910	8 600	151	0.41
1915	17 900	285	0.78
1920	44 600	665	1.82

[1] Age 18+

Milmore and Conover (1956)
Consumption of tobacco products (unstemmed-processing weight) per adult (15+ years old), quoting the US Internal Revenue Service and the Agricultural Marketing Service of the USDA. The weight of tobacco in finished products is approximately 25% less than the unstemmed-processing weight. The original data are given in pounds per adult per year. From these we derived grams per adult per day:

Year	Consumption per adult per day, unstemmed-processing weight, grams					
	Cigarettes	Cigars	Smoking tobacco	Chewing tobacco	Snuff	Total
1880	0.06	1.69	0.91	3.92	0.15	6.72
1885	0.12	2.00	1.17	4.75	0.21	8.25
1890	0.22	2.21	1.39	4.96	0.27	9.06
1895	0.31	1.94	1.49	4.69	0.26	8.69
1900	0.20	2.47	1.77	4.42	0.37	9.23
1905	0.24	2.87	2.71	4.42	0.46	10.70
1910	0.51	2.72	2.70	4.16	0.58	10.68
1915	1.02	2.70	2.65	3.53	0.55	10.44
1920	2.35	3.05	1.86	2.93	0.58	10.77
1925	3.68	2.47	2.00	2.45	0.56	11.16

Rigdon and Kirchoff (1952) also give figures for per capita consumption of tax-paid tobacco products (1900-1950).

Sales data for 1920-1973

See Table 1.1.

RP6 (Lee (1975))
Data by weight, originally given to nearest 100 000 pounds, have been converted to tonnes and given to the nearest 10 tonnes (100 000 lbs = 45.359 tonnes). Where weight conversion factors have been quoted in RP6, the weights have been re-calculated without rounding and then converted to tonnes.

Notes as given in RP6:

(a) Details of the number of cigarettes and cigars and of the weight of tobacco consumed were obtained from the following sources:
1920-35 *1st Annual Report on Tobacco Statistics*, May 1937.
1936-73 *Annual Report on Tobacco Statistics*.
These are published by the United States Department of Agriculture.

(b) Cigarettes were converted from number to weight using a factor of 2.205 lbs per 1 000 up to 1951. Since that date allowance has been made for the increasing consumption of 'king' size, 'long' size, and filter-tipped cigarettes. Cigars were converted at a rate of 18.6 lbs per 1 000 up to 1957 and at 18 lbs per 1 000 from 1958-1963. From 1964 onwards the conversion factors used for large and little cigars were 17.5 lbs per 1 000 and 2.5 lbs per 1 000 respectively.

Giovino *et al* (1994) give data on numbers of cigarettes which are similar to the RP6 data except for 1940-1949 when they are higher, possible due to inclusion of US military forces overseas.

Brooks (1952) reports that 14 states had passed prohibitory legislation against cigarettes by 1921, but all had been repealed by 1927.

See also *Sales data by type of smokeless and smoking tobacco before 1955*, below, and *Sales data by type of smokeless and smoking tobacco for 1955 onwards*, p. 47.

Sales data for 1974-2005

See Table 1.2.

USDA

Cigarettes and large cigars: Capehart (2005), USDA (2007)
Total US consumption, calculated (by USDA) for cigarettes as taxable removals, overseas forces and shipments to Puerto Rico and other US possessions, ships stores and small tax-exempt categories and estimated inventory change, and for cigars as total removals (or sales) from US factories plus those from Puerto Rico and imports, minus exports. Cigars includes large cigars and cigarillos weighing more than 3 pounds per thousand, i.e. more than 1.36 g per cigar. Data were given by number; we derived the data by weight by estimating the average weight per cigarette and per cigar from tables giving the number and weight smoked per capita (data not shown: Creek *et al* (1994), USDA (1998, 2006, 2007)). The estimated average weight varied around 0.8 g per cigarette and 7 g per cigar.

During 1998-1999, price differentials led to some cigarettes being exported then re-imported. These grey market imports were estimated at less than 1% of total consumption in 1999, and then declined following legislative changes (USDA (2000)).

Small cigars: Capehart (2005), USDA (2007)
US taxable removals. Small cigars are described as "cigarette size", and are defined as less than 3 pounds per 1 000, i.e. less than 1.36 g per cigar. Data were given by number; we derived the data by weight by estimating the average weight per cigar as 1.13 g, based on the conversion factor used in RP6 for 1964-1973. (This differs from the conversion factor used in earlier editions of this report.)

Smoking tobacco: Capehart (2005), USDA (2007)
Total US consumption, calculated (by USDA) as total removals (or sales) plus imports, minus exports. Data for 1991-1999 are adjusted to reflect estimated re-exports to Canada. Originally given to nearest 100 000 pounds, converted to tonnes and given to the nearest 10 tonnes. See also *Sales data by type of smokeless and smoking tobacco for 1955 onwards*, p. 47.

Smokeless tobacco: Creek *et al* (1994), USDA (2000, 2006, 2007)
Invoiced to domestic customers. Originally given to nearest 10 000 or 100 000 pounds, converted to tonnes and given to the nearest 10 tonnes. See also *Sales data by type of smokeless and smoking tobacco for 1955 onwards*, p. 47.

Sales data for 2006 onwards

See Table 1.3.

Alcohol and Tobacco Tax and Trade Bureau (2005, 2006, 2007, 2008, 2009, 2010, 2011)
Data for 2003-2005 from these sources are also shown for comparison with the data in Table 1.2 Estimates of sales have been calculated as the sum of "Removed taxable including from Puerto Rico" and "Imported from foreign countries". Data for 2010 are preliminary estimates.

Data given as weight in pounds have been converted to tonnes.

The distinction between small cigars and large cigars is not described, but USDA (2007), quoting the same source reports, defines small cigars as "Weight not more than 3 pounds per thousand" (i.e. not more than 1.36 g per cigar).

Data for cigarettes, large cigars and small cigars are given as numbers. These have been converted to weight assuming the same average weights for cigarettes and large cigars as were calculated for the USDA data (for 2003-2005), and continuing to use the 2005 USDA estimates for subsequent years (approximately 0.77 g per cigarettes and 7.4 g per cigar); and continuing to assume 1.13 g per small cigar.

Sales data by type of smokeless and smoking tobacco before 1955

Smokeless tobacco: Creek *et al* (1994)

Smokeless tobacco has two main forms: chewing tobacco and snuff. Chewing tobacco is available in loose leaf form (formerly called scrap), in a pressed rectangle called a plug, or in a twist or roll. These are actively chewed. Snuff may be dry snuff (also called scotch snuff) which is dry, powdered tobacco, or moist snuff which is moist tobacco in fine particles or strips. Snuff is used by placing a pinch of tobacco between the cheek and the gum.

According to Christen *et al* (1982), during the 19th century, moist snuff, loose-leaf chewing, and block or plug tobacco were popular, with "dental snuff" later being promoted as a dental panacea. However by the end of the century, use declined as the practice of tobacco spitting became socially unacceptable and unlawful, especially in certain public places. However, smokeless tobacco remained popular until approximately 1913, when cheap mass-production and advertising boosted cigarette sales.

Prior to 1955, data are available for US output (Creek *et al* (1994)), from which we calculate the following percentages (5-year averages):

	Plug	Twist	Fine cut	Loose leaf	Snuff
1935-39	38.2	4.0	3.2	29.5	25.1
1940-44	35.6	3.9	3.0	31.1	26.4
1945-49	34.4	4.0	2.5	30.5	28.6
1950-55	31.5	4.0	2.3	30.8	31.6

Smoking tobacco 1933-1954: Milmore and Conover (1956)

The percentage of smoking tobacco used in roll-your-own (RYO) cigarettes was estimated as 46% for 1933-1940, and as 30% for 1950-54.

Sales data by type of smokeless and smoking tobacco for 1955 onwards

Smokeless tobacco: Creek *et al* (1994), USDA (2000, 2006, 2007)

Percentages in Table 1.5 are based on quantities invoiced to domestic customers. The classification of smokeless products changed at the start of 1982, removing fine-cut from the chewing tobacco category and reclassifying it as moist snuff. This change in classification therefore accounts for most, but not all, of the redistribution between chewing and snuff between 1981 and 1982. During the 1980s moist snuff began to be marketed packaged in small pouches resembling tea bags (Shelton (1982), Gritz *et al* (1985), Tilashalski *et al* (1994)).

Smoking tobacco: Capehart (2006), Alcohol and Tobacco Tax and Trade Bureau (2008-2011)

Percentages in Table 1.5 are based on consumption (as defined in *Sales data for 1974-2005*, p. 46). Smoking tobacco comprises pipe tobacco and cut tobacco predominantly used in roll-your-own (RYO) cigarettes. Data for 2010 are preliminary estimates. From the late 1990s, higher cigarette taxes boosted cut tobacco consumption because of a resurgence in the RYO market.

Estimates of number of hand-rolled cigarettes

1927-1949: Jackson (1950)

Described as "rough" estimates. Based on revenue from tax-paid packages of cigarette papers, converted to numbers of cigarette papers using the tax rate of 1 cent for 100 papers, and on numbers of tax-free cigarette booklets, assuming each booklet to contain 20 papers with a wastage rate of 20%.

These estimates fit in with comment by Milmore and Conover (1956), that in the years 1933-40, consumption of RYO cigarettes was considerably higher than during later years and was probably above the pre-1933-40 period. Hammond (1958) noted that the decline in the use of hand-rolled cigarettes probably contributed to the apparent rise in manufactured cigarette consumption between 1935 and 1955.

1950: US Surgeon General (1989) quoting USDA (no details of reference)
The estimated consumption was given as 3.4% of total cigarette consumption, from which we derived the total consumption and the adult daily rate. (The original report also gave consumption as 126 per capita per year, although our calculation more closely matches this as a per adult estimate.)

1951-1954: We have taken as our estimate of hand-rolled cigarette consumption 26% of pipe and hand-rolling tobacco sales, at 0.80 g per cigarette.
This method of estimation was based on estimates for 1955 (see next paragraph and Table 1.5)

1955-2005: Capehart (2006)
For 1955-1994, estimates are based on shipments of cigarette papers and tubes, and for 1995 onwards are derived from domestic invoices and imports of RYO tobacco. Data for 1994 onwards are preliminary estimates. From these data, the weight of tobacco per hand-rolled cigarette can be derived, and was generally between 0.6 g and 0.9 g per cigarette.

2006-2010: Alcohol and Tobacco Tax and Trade Bureau (2005-2011)
Data for roll-your-own tobacco given by weight has been converted to numbers assuming 0.85 g per hand-rolled cigarette. This value was chosen based on the estimates for the years 2000-2005 given by Capehart (2006).

Plain/Filter cigarette sales

Creek *et al* (1994), USDA ERS (1996), USDA (1998-2002)
Represents the proportion of production rather than of consumption of filtered cigarettes. Data for 2005 are preliminary estimates.

Menthol cigarette sales

Federal Trade Commission (2005)
Domestic market share of menthol cigarettes.

Data for earlier years are given by Garten and Falkner (2001) quoting Maxwell Associates (1977) (no details of reference), e.g.

1925-1932	1935	1940	1945	1950	1955	1960
0%	2%	1%	2%	3%	3%	13%

Tar and nicotine machine yield of cigarettes

1954-1967: US Surgeon General (1981) quoting Wakeham (1976)
Data read from graph. No standard test method had been agreed at this time (Peeler (1996), Baker (2002)), and the method used is not stated. Alternative data given by Owen (1976) for 1955 are: 43 mg tar and 2.8 mg nicotine per cigarette.

1968-1998: Federal Trade Commission (FTC) (2000)
Yields are measured according to the standard FTC smoking regime of one 35 ml puff of 2 seconds duration, taken once per minute to a butt length of 23 mm for a plain cigarette, or the longer of 23 mm or the filter tipping overwrap + 3 mm for a filtered cigarette (Baker (2002)).

Sales-weighted data are not available after 1998. The following table shows the distribution of market share (%) by tar category (FTC (2005)), from which we tentatively estimate the sales-weighted average tar:

Year	More than 15 mg	12-15 mg	9-12 mg	6-9 mg	3-6 mg	3 mg or less	SWAT*
1999	13.4	29.2	32.1	11.7	12.0	1.6	11.5
2000	12.9	36.7	26.7	10.1	12.3	1.3	11.7
2001	14.8	27.1	35.5	9.4	12.2	1.0	11.6
2002	15.1	26.7	35.7	9.6	12.0	0.9	11.6
2003	15.1	25.4	37.0	9.9	11.6	1.0	11.6

* Estimated by assuming means for the categories of 17, 14, 11, 8, 5, 2 mg. Similarly calculated estimates for the years 1991-1998 would be within +/- 0.3 mg of the data shown in Table 3.

Tar and nicotine yield of other tobacco products

No sales-weighted data are available for products other than cigarettes. Some authors have

published results from tests on a variety of other products, e.g. smokeless tobacco by Gritz *et al* (1981), Tilashalski *et al* (1994), Djordjevic *et al* (1995), cigars by Henningfield *et al* (1999) and bidis (a type of cigarette rolled in tendu leaf imported from India) by Rickert (1999), Malson *et al* (2001), Watson *et al* (2003).

Notes on sources of survey data

Each source of survey data—either an individual survey or a series of surveys repeated over a number of years—is cited by a source number. This number is shown in the tables and corresponds to the source numbers given below, where details of the source publication and of the survey methodology are given. Full citations of the sources are given on p. 59 under *References*.

We have not attempted to include information specifically related to the use of smokeless tobacco. However, because many sources provide information on cigarettes only, and on all smoking and smokeless products combined (but not on all smoking products only), we have on occasion included data on the prevalence of "smoking or smokeless tobacco use". This is shown in Table 4 using the product code A*.

Source number

1, 2 National Center for Health Statistics (1980a, 1980b, 1985), Harris (1983), US Surgeon General (1983, 1988, 1994), Anonymous (1987, 1991a, 1992, 1993, 1994a, 1994b, 1996, 1997, 1999, 2000a, 2001, 2002, 2003a, 2004, 2005a, 2005b), Fiore *et al* (1989), Novotny *et al* (1990), US Department of Health and Human Services (USDHHS) (Accessed June 2004)

a. National Health Interview Surveys (NHIS). Nationally representative sample of the US non-institutionalized civilian population aged 18+. Before 1974, face-to-face interviews with one adult per household, giving proxy reports for other household members. Since 1974, smoking information taken from self-reports only, using telephone follow-up for household members not interviewed personally. Response rate before 1974 around 96%, but decreased to 90% when limited to self-reports. Data were adjusted for non-response and weighted (by the original authors) to provide national estimates.

Year	Sample size	Response rate (%)
1974	22 052	—
1976	20 978	—
1977	—	—
1978	10 571	—
1979	21 832	—
1980	9 553	—
1983	20 963	—
1985	31 082	—
1987	44 000	—
1988	44 000	—
1990	41 000	83
1991	43 732	88
1992	24 040	87
1993	20 860	81
1994	19 738	80
1995	17 213	81
1997	36 116	80
1998	32 440	74
1999	30 801	70
2000	32 374	72
2001	33 326	74
2002	31 044	74
2003	30 852	74
2004	31 326	73

b. Results shown as source **1** are taken from published reports. Results shown as source **2** are derived from the public-access data files, and use 5-year age groups, so sample sizes may be small for the oldest age groups.

c. For some years, data for a particular product and frequency are available in several different breakdowns by age. These are presented in Table 4 if this aids comparisons between years. This may result in several different estimates for adult (age 15+) prevalence appearing in Table 8.

d. For 1966 and 1970, the *All ages* values in Table 4 refer to ages 18+; age-specific data are not available for the age groups marked *.

e. Current smokers: had smoked 100 cigarettes and (before 1992) answered affirmatively to question 'Do you smoke cigarettes now?' or (1992 onwards, shown as frequency A) reported now smoke every day or some days. According to Anonymous (1994a), the inclusion of some-day smoking increases the prevalence estimate by about 1.0%. Regular smokers (source 2): had smoked 100 cigarettes and now smoke every day.

f. Prevalence of use of other tobacco products was estimated by Giovino *et al* (1994) as:

Year	Cigar smoking		Pipe smoking		Smokeless tobacco	
	Males	Females	Males	Females	Males	Females
1970	16.3	0.2	13.1	0.1	5.2	1.8
1987	5.3	0.1	3.4	0.1	6.1	0.6
1991	3.5	0.1	2.0	0.0	5.6	0.6

g. Consumption category estimation based on: (1965, 1976, 1978, 1979 and 1983) <15, 15-24, and 25+ cigarettes/smoker/day; (1987) <15, 15-24, 25-34, and 35+. For 1974, 1990, and 1992-1995, consumption category estimation based on two categories, 1-24 and 25+ cigarettes/smoker/day, and resulting figures should be regarded with caution; for years where comparisons are possible, the estimates based on two categories are always lower than the directly calculated means (e.g. 1980 (males) 21.0 vs 23.4, (females) 17.3 vs 19.7; and 1991 (males) 19.5 vs 21.6, (females) 15.9 vs 18.3). Prior to 1992, cigarettes per smoker not restricted to regular smokers.

f. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

3 Waingrow *et al* (1968), US Department of Health Education and Welfare (USDHEW) (1973), USDHEW - Public Health Service (1976), US Surgeon General (1983), Pierce and Hatziandreu (1986), Anonymous (1987)

a. Adult Use of Tobacco Surveys.
In 1964 and 1966: primarily in-person household interviews. Sample size (1964) 5 794, (1966) 5 768; response rate 76% and 72% respectively.
In 1970: 91% telephone and 9% personal interviews. Sample size 5 200.
In 1975: 7% personal interviews. Sample size 12 000; response rate 60% for telephone interviews and 44% for non-telephone segment.
In 1986, 100% telephone interviews, results adjusted to compensate for (inter alia) exclusion of non-telephone households. Representative of non-institutionalized civilian population. Sample size 13 031, response rate 74%.

b. Product code A* (1975, 1986) includes non-smokers who use smokeless tobacco.

c. In 1986, only 0.4% of smokers aged 17 or older used RYO cigarettes (US Surgeon General (1988)).

d. Consumption category estimation based on (1964) 0-4, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, and 65+ cigarettes/smoker/day; (1986) 15 or less, 16-24, and 25+.

e. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

4 USDHEW - Public Health Service (1969), Ahmed and Gleeson (1970), Marcus *et al* (1989), Shopland *et al* (1992, 1996), National Cancer Institute (NCI) (2006)

a. Tobacco Use Supplements to Current Population Survey. Representative of civilian non-institutionalized population. 1955 data originally in Haenszel *et al* (1956), later version with minor changes used. Since 2001-2002 the survey has been co-sponsored by NCI and Centers for Disease Control and Prevention (CDC), and has used about 75% telephone interviews and 25% personal home visits.

	Households	Response rate (%)	Individuals	Proxy interviews (%)	
				Males	Females
1955	21 000	96	45 000	42	17
1966	35 000	96	69 000	65	25
1985	62 500	96	114 000		
1993		95/88[1]	266 988	18	18
1998-1999			224 902		
2001-2002			234 227	(2)	
2003			234 247	(2)	

[1] Represents response rates for core questions and tobacco use supplement respectively
[2] About 20% proxy reports for a few measures, but not stated whether this refers to smoking

b. Regular smokers: (1955, 1966) smoked regularly, (1999 on) had smoked at least 100 cigarettes in their lifetime and now smoke every day. All smokers: (1955, 1966) smoked regularly or occasionally, (1985) had smoked at least 100 cigarettes in their lifetime and smoked at the time of the survey, (1993 on) had smoked at least 100 cigarettes in their lifetime and smoked every day or some days.

c. Product code A* (1985 only) includes non-smokers who use smokeless tobacco. For males, the percentages using each product (including users of more than one product) are snuff 1.8%, chewing tobacco 4.0%, cigars 2.1%, and pipes 2.4%.

d. Consumption category estimation based on: (1955, 1966) 1-9, 10-20, 21-40, and 41+ cigarettes/smoker/day; (1967 and 1968) <11, 11-20, 21-40, and 41+ cigarettes/smoker/day.

e. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

5 Anonymous (1987), quoting Gallup Poll

a. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

6, 7 Substance Abuse and Mental Health Services Administration (SAMHSA) (Accessed February, October 2006)

a. National Survey on Drug Use and Health (NSDUH), formerly National Household Surveys on Drug Abuse (NHSDA). Conducted by the National Institute on Drug Abuse and SAMHSA. Multistage area probability sampling of civilian non-institutionalized population of US. For 1979-1990 this was restricted to persons living in households and excluded Hawaii and Alaska; from 1991 these states were added, as were residents of group quarters (such as college dormitories, group homes, shelters and rooming houses), civilians dwelling on military installations and persons with no permanent residence (i.e. excluding those with no fixed address, residents of institutional quarters and active military personnel). In most years, ethnic minorities and youths were oversampled, as were certain metropolitan or rural areas. In 1993-1995, cigarette smokers were oversampled.

b. Results shown as source 6 are taken from published reports. Results shown as source **7** are derived from online analysis of the public-access data files, which may differ from the full data sets due to different handling of missing data, or subsampling used in disclosure protection procedures (see Table below, 1999-2004). Estimates are weighted to take account of probability of selection, non-response and intercensual population estimates. The age categories used in Tables 4-7 are the narrowest of the categories provided in the online analysis.

c. Two questionnaires were used in 1994, and results presented separately, with 1994A comparable to earlier years and 1994B comparable to later years. At the same time, cigarette use questions changed from interviewer administered to self-completion (Kopstein (2001)). In 1999, computer-assisted personal interviewing (CAPI) and audio computer-assisted self-interviewing (ACASI) were introduced (Gfroerer *et al* (2002)).

Year	Interview response rate (%)	Sample size	
		Overall	Available in public-use file
1979	83	7 224	
1982	81	5 624	
1985	84	8 021	
1988	77	8 814	
1990	n.a.	9 259	
1991	84	32 594	
1992	83	28 832	
1993	79	26 489	
1994	A: 77	A: 4 372	
	B: 78	B: 17 809	
1995	81	17 747	
1996	79	18 269	
1997	78	24 505	
1998	77	25 500	
1999	69	66 706	53 560
2000	74	71 764	58 680
2001	73	68 929	55 561
2002	79	68 126	54 079
2003	77	67 784	55 230
2004	77	67 760	55 602

d. Regular cigarette smokers: (1979-1994A) smoked an average of at least 1 cigarette per day in last 30 days, (1994B-1998) smoked a cigarette every day in last 30 days, (1999-2004) smoked part or all of a cigarette every day in last 30 days. Cigarette smokers (marked as frequency A): (1979) smoked a cigarette in last 30 days and had smoked 5 packs in lifetime, (1982-1998) smoked a cigarette in last 30 days, (1999-2003) smoked part or all of a cigarette in last 30 days. Smokers of any product: smoked part or all of a cigarette or cigar, or a pipe in last 30 days. Users of any product (shown as product A* in Table 4 as includes non-smokers who use smokeless tobacco): smoked cigarettes, cigars or pipe tobacco or used chewing tobacco or snuff in last 30 days.

e. In 1999-2004, the survey has included information on the type of cigarette smoked, and the following results are included as an example:

Percentage of cigarette smokers by type of cigarette (brand smoked most often in last 30 days), 2003

	Males						Females					
Age	12-17	18-25	26-34	35-49	50+	Total	12-17	18-25	26-34	35-49	50+	Total
Lights	39	52	55	41	38	45	51	57	51	47	45	50
Ultra lights	3	4	7	11	16	10	6	10	15	20	27	18
Full Flavour	57	44	38	48	46	45	43	34	33	33	28	33
Menthol	36	28	19	23	27	25	37	31	25	36	31	32
Regular	64	72	81	77	73	75	63	69	75	64	69	68

Percentage of cigarette smokers who have smoked a hand-rolled cigarette in last 30 days, 2003

	18	15	15	13	7	13	13	8	9	9	6	8

f. Consumption category estimation based on (1979-1998) 1-5, 6-15, 16-25, 26-35, and >35, (1999-2001) 1, 2-5, 6-15, 16-25, 26-35, and >35. For all years the calculation excluded those who smoked less than 1 cigarette/day and for 1994B-2001 also excluded those who did not smoke every day in last 30 days.

8 Kuulasmaa *et al* (1998), Wolf *et al* (1998), Molarius *et al* (1999), Tolonen *et al* (2000)

a. Regional surveys using both personal interviews and self-completion questionnaires, carried out in three phases, forming part of WHO MONICA Project:

Region	Phase	Participation rate (%)		Sample used		Date
		Males	Females	Males	Females	
Stanford	1	64	70	698	802	May 1979-Apr 1980
	2	57	63	716	853	May 1985-Jun 1986
	3	57	64	725	856	Jun 1989-Jun 1990

Participation rates for phase 1 refer to age 35-64 only, all other figures are for age 25-64

b. *All ages* column relates only to age 35-64 and is standardized to world population.

c. The US centre did not use the standard MONICA smoking questionnaire; the same questionnaire was used in all three phases. Regular cigarette smokers: smoked cigarettes daily. All smokers: smoked cigarettes, pipe, cigars or cigarillos regularly. Occasional cigarette smoking was not enquired about. However in phases 2 and 3, subjects who had smoked in last week but reported smoking 0 cigarettes per day were coded as occasional smokers and are included in UC A category in Table 4.

9 Hammond and Garfinkel (1961, 1964), Hammond and Garfinkel (1968), Thun *et al* (1997)

a. American Cancer Society Cancer Prevention Studies (Million Person Studies) conducted in 25 states, 1959-1960 and 1982-1986. Families with at least one member aged over 45 enrolled by volunteers. Not representative, as samples over-represented whites (97% and 93% respectively), married and better educated persons.
b. Entries for 1959 marked * in Table 4 represent analyses of a sub-set of the study (43 068 subjects) drawn proportionally from all study areas. The category A A includes a few subjects who smoked, but with smoking pattern uncertain, and a few women who smoked pipes or cigars only.
c. Data for 1965 refer to a follow-up of the 1959 sample, restricted to selected sampling units in 24 states. Sample size 502 631, 92% of eligible subjects.
d. Data for 1982 derived by combining prevalence data presented separately for white people and black people. The results are not adjusted for 'unclassifiable' subjects—these accounted for between 1.9% (white men aged 30-34) and 23.4% (black women aged 80-84).
e. Cigarettes per smoker and per person are based on regular cigarette smokers.
f. Consumption category estimation for 1959 by Thun *et al* (1997), based on mean value of categories published by Hammond *et al* (1977). However categories given by Hammond *et al* (1977), with means in parentheses, are 1-9 (4.8), 10-19 (12), 20 (20), 21-39 (29.2), 40 (40), and 41+ (58.6), and appear to refer to men only. Consumption category estimation for 1965 based on 1-9, 10-19, 20-39 and 40+ cigarettes/smoker/day.

10 Mills and Porter (1953)

a. Survey conducted in Columbus, Ohio. Sample size 4 387. House-to-house visits at random in all census tracts in the city, with blacks over-sampled. Information obtained directly or from a responsible household member.
b. Results were originally presented by race. Results presented here are standardized to the race- and age-specific population of the city as given. (This differs from earlier editions of this report, where results for whites only were given.)
c. Consumption category estimation based on two categories, <1 pack (assume 1-19) and 1+ packs (assume 20+) cigarettes/smoker/day, and resulting figures should be regarded with caution.
d. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

11 Rigdon and Kirchoff (1952), US Surgeon General (1980), quoting Fortune magazine (1935)

a. Nationally representative survey conducted by *Fortune Magazine*. Age range and product uncertain.
b. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

12 Remington *et al* (1985)

a. Behavioral Risk Factor Surveys, carried out during 1981-1983, in 28 states and District of Columbia, and supplemental survey conducted by University of Carolina in 1983 in all remaining states except Hawaii. In most states and in the supplemental survey, multistage cluster sampling using random-digit-dialling, otherwise simple random sampling. Telephone interviews with one adult per household. Sample size 22 236, median response rate 80%. Results weighted to be representative of civilian population.
b. Results reported against 1982.
c. Smokers: had smoked 100 cigarettes in lifetime and currently smoke.
d. State-specific rather than national estimates are generally presented from this series. For instance, prevalence among men (in 49 states and District of Columbia) in 2004 ranged from 11.7% in Utah to 29.3% in Kentucky, and among women from 9.4% in Utah to 26.4% in West Virginia (Anonymous (2005c)).
e. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

13 Horn *et al* (1959)

a. Survey by American Cancer Society of schools in and around Portland, Oregon. Sample size (boys) 11 060, (girls) 10 920.

b. Smokers: had smoked more than a few times and smoked currently. Regular smokers: smoked at least once a week.

c. Consumption category estimation based on 1-4, 5-9, 10-19 and 20+ cigarettes/smoker/day.

14 Salber *et al* (1961)

a. A survey of students in public high schools in Newton, Massachusetts. Approximate ages corresponding to school grades. Sample size: (boys) 3 449, (girls) 3 361, response rate 92%.

b. Smokers: had smoked at least 10 cigarettes and considered themselves to be smokers.

c. Consumption category estimation based on <1 pack/week, 1-4 packs/week and 5+ packs/week (1-2, 3-10 and 11+ cigarettes/smoker/day assumed). This includes occasional smokers in the 1-2 cigarettes/smoker/day category and uses a low starting point for the heaviest smoking group and so the resulting figures should be treated with caution.

15 Johnston *et al* (2006)

a. Monitoring the Future surveys, sponsored by the National Institute on Drug Abuse. Conducted in the spring of each year, nationally representative sample of public and private school students in grade 12 since 1975 and additionally in grades 8 and 10 since 1991. Tables 4-6 show approximate ages corresponding to school grades. High school drop-outs (about 15-20% of each graduating cohort) are excluded. Self-completion questionnaires administered in class by research staff, with teachers present but not participating.

Year	Sample size	Response rates (%)				
		Schools		Students		
		Initial	Total	8th	10th	12th
1975	15 791			—	—	78
1976	16 678			—	—	77
1977	18 436	59	98	—	—	79
1978	18 924	63	99	—	—	83
1979	16 662	62	97	—	—	82
1980	16 524	63	95	—	—	82
1981	18 267	71	96	—	—	81
1982	18 348	71	97	—	—	83
1983	16 947	66	99	—	—	84
1984	16 499	72	98	—	—	83
1985	16 502	67	96	—	—	84
1986	15 713	66	99	—	—	83
1987	16 843	72	99	—	—	84
1988	16 795	71	98	—	—	83
1989	17 142	68	99	—	—	86
1990	15 676	70	99	—	—	86
1991	48 323	59	98	90	87	83
1992	50 263	55	98	90	88	84
1993	51 099	60	99	90	86	84
1994	49 717	53	97	89	88	84
1995	51 090	52	96	89	87	84
1996	49 065	53	96	91	87	83
1997	50 807	51	98	89	86	83
1998	49 866	51	99	88	87	82
1999	45 228	57	99	87	85	83
2000	45 173	62	97	89	86	83
2001	44 346	56	98	90	88	82
2002	43 716	49	97	91	85	83
2003	48 467	53	98	89	88	83
2004	49 474	62	99	89	88	82
2005	49 347	63	97	90	88	82

b. Questionnaires include a tear-off sheet for personal information, except for half the 1998 sample and all following years for 8th and 10th graders which were anonymous. Comparison of the 1998 subsamples showed no effect of the change on daily or half-pack per day usage, but for any smoking (in past 30 days) showed a greater decline (0.6%) in the group with unchanged methodology than in the overall sample (0.3% decline).

c. Regular smokers: smoked daily. All smokers: smoked any cigarette in last 30 days. Cigarettes per smoker (Table 5) refers to daily cigarette smokers.
d. Consumption category estimation based on 1-9, 10+ cigarettes/smoker/day and resulting figures should be regarded with caution.

16 Anonymous (1991b)

a. Teenage Attitudes and Practices Survey (TAPS), which in 1989 focussed on tobacco use. Adolescents were sampled from households that had participated in the 1988 and 1989 NHIS. Computer assisted telephone interviewing (CATI) or mail questionnaires (for homes without telephones and for initial non-respondents). Sample size 9 965, response rate 82%. Data weighted to provide national estimates.
b. Among 17-18-year-olds, the prevalence of smoking during the previous week was substantially higher among those who had dropped out of school (43.3%) than among non-dropouts (17.1%).
c. Smokers: smoked cigarettes in the 30 days preceding the survey. Regular smokers: smoked cigarettes in the 7 days preceding the survey.

17 Hearn *et al* (1991)

a. Survey conducted in 10 Minneapolis schools using a standardized questionnaire. Sample size (males) 237, (females) 202. Response rate 88%. Age range not stated, but average age 15.0 years. Year not stated. Included for comparison with data for USSR from the same source (see Chapter 29 of second edition, source 41).
b. Smokers: smoked at least a few cigarettes per month. Regular smokers: smoked at least a partial pack of cigarettes a week.

18 Anonymous (1991c), Everett *et al* (2000), Brener *et al* (2005), CDC (2006), Eaton *et al* (2006)

a. Youth Risk Behavior Surveillance System (YRBSS). Nationally representative surveys of high school students in public and private schools. Self-completion questionnaires completed in class, with measures taken to ensure privacy of responses. Approximate ages corresponding to school grades 9-12.

Year	Sample size	Response rate (%)		
		School	Student	Overall
1990	11 631			
1991	12 272	75	90	70
1993	16 296	78	90	70
1995	10 904	70	86	60
1997	16 262	79	87	69
1999	15 028	77	86	66
2001	13 627	75	83	63
2003	15 240	81	83	67
2005	13 953	78	86	67

b. Regular cigarette smokers: (1990) smoked on more than 25 of past 30 days, (1991-2005) smoked cigarettes on 20 or more of the past 30 days. Cigarette smokers: smoked cigarettes in the past 30 days. All tobacco smokers: (1997) smoked cigarettes or cigars. All tobacco users (shown as product A* in Table 4 as includes non-smokers who used smokeless tobacco): (1990) smoked cigarettes or used chewing tobacco or snuff in past 30 days, (1997-2005) smoked cigarettes or cigars, or used chewing tobacco, snuff or dip in past 30 days.
c. Prevalence of use of smokeless tobacco (irrespective of smoking) was, for example, 19.1% in boys and 1.4% in girls in 1990, and 13.6% in boys and 2.2% in girls in 2005.
d. See also source 19.

19 Escobedo *et al* (1997)

a. Youth Risk Behavior Supplement to the 1992 NHIS. Within each sample household, one youth who attended school and up to two who were not in school or whose student status was unknown were eligible. Questionnaire same as the national YRBSS surveys (see source 18). Face-to-face interviews using audiocassette technology to enhance privacy. Sample size 10 645, response rate 74%.
b. Smokers: smoked cigarettes in past 30 days.
c. A comparison of 12-19 year olds who attended school and those who did not gave prevalence of current cigarette smoking as: (school attenders) 20.4%, (not attending school) 33.7% (Anonymous (1994c)).

20 USDHEW - Health Services and Mental Health Administration (1972, 1974), Green *et al* (1979)

a. National Teenage Tobacco Surveys. Telephone surveys. Sample size (1968) 4 414, (1970) 2 640, (1972) 2 790, (1974) 2 553, and (1979) 2 639. The 1968 survey included an additional 10% personal interviews in non-telephone households; results were found to be similar and they are not included in the results shown here.

b. Smokers marked frequency *: smoked cigarettes daily. Regular smokers: smoked one or more cigarettes a week. Smokers: smoked regularly but less than one cigarette a week.

c. For 18 year olds, the prevalence of regular smoking according to school status was as follows (USDHEW - Public Health Service (1972)):

		High school	College	Not in school
Boys	**1968**	28.0	31.6	55.7
	1970	38.9	35.4	59.1
Girls	**1968**	16.8	18.2	27.2
	1970	21.4	17.6	41.0

d . Consumption category estimation based on 1-4, 5-9, and 10+ cigarettes/smoker/day.

21 WHO (2001, 2003), Currie *et al* (2004)

a. Part of the Health Behaviour in School-Aged Children (HBSC) Study, a collaborative cross-national research study sponsored by the WHO. School classes or schools were randomly selected, targeting age groups 11 (not presented here), 13 and 15. Results presented here are from online analysis of the public-access data files.

b. In 1996, children in grades 6, 8 and 10 were sampled. Sample size 9 938 of whom 294 were omitted due to missing data for smoking.

c. The US part of the 1997-1998 survey was carried out in April 1998. Multistage cluster sampling. Sample achieved was 386 schools (response rate 58%) and 17 000 students (83%); some students were excluded from the data file due to missing data, giving a sample size of 15 686, and a further 494 had missing data for the key smoking question. Unlike other surveys in this series, results are available by age rather than school grade. Results for 11 year olds not presented here. See Currie *et al* (2000) for results by school grade.

d. The US part of the 2001-2002 survey was carried out in November-December 2001. Recommended minimum sample size was 1 536 for each age group.

Target age	Mean age	Sample size
13	13.5	1 921
15	15.5	1 625

e. Smokers marked as frequency *: smoked daily. Regular smokers: (1996) smoked on at least 6 days in last month, (1998, 2001) smoked once a week or more. All smokers: (1996) smoked in last month, (1998) smoke now (including smoking less than once a week). Cigarettes per smoker (Table 5) and cigarettes per person (Table 6) refer to daily smokers.

f. Consumption category estimation (1996) based on 1, 2-5, 6-10, 11-20, and 21+ cigarettes/smoker/day.

g. Calculation of cigarettes per person (1997-1998) based on percentage smokers (all products), and number of cigarettes per cigarette smoker, so may overestimate.

22 Anonymous (2000b, 2003b, 2005d), CDC (2001)

23 Global Youth Tobacco Survey Collaborating Group (2003)

a. Results shown as source 22 refer to the National Youth Tobacco Survey (NYTS), conducted by the American Legacy Foundation in collaboration with the CDC Foundation. Three-stage cluster sample giving a nationally representative sample of students at public and private schools, grades 6-12. Anonymous self-completed questionnaire, in English. Approximate ages corresponding to grades 6-8 (middle school, includes 11 year olds), and 9-12 (high school).

Year	Sample size	Response rate (%)		
		School	Student	Overall
1999	15 061	90	93	84
2000	35 828	90	93	84
2002	26 119	83	91	75
2004	27 933			88

b. Results shown as source 23 are reported as part of the GYTS (Global Youth Tobacco Survey) surveillance system supported by WHO and CDC. They refer to a subset of the 2000 NYTS survey, ages 13-15 only, sample size 16 416.

c. Cigarette smokers: smoked cigarettes in last 30 days. All tobacco users (shown as product A* in Table 4 because includes non-smokers who used smokeless tobacco): used bidis, cigarettes, cigars, kreteks, pipes or smokeless tobacco in last 30 days. The authors comment that this does not include smoking of "roll-your-own" tobacco.

24 Simantov *et al* (2000)

a. Commonwealth Fund Survey of the Health of Adolescent Girls and Boys. Nationally representative stratified sample of students at public, private and parochial schools. Anonymous self-completion questionnaire completed in class and handed to teacher in sealed envelope. Sample size 5 513, response rate not determined due to method of sampling. Grades 5-12 were included, but no results available for grades 5-6. Approximate ages corresponding to school grades 7-8, 9-10 and 11-12.

b. Regular smokers: smoked several cigarettes per week or more. All smokers: smoked cigarettes at least sometimes.

25 Chollat-Traquet (1992)

a. No original source.

Additional information (not presented in tables)

Jackson (1950) quoting Borden (date unknown) reported that in 1910 cigarette smoking was "limited to a very small percentage of men and to a negligible fraction of women."

Brooks (1952) reported that smoking by women was frowned upon in the early 20th century. An ordinance of 1908 made it illegal for them to use tobacco publicly in New York City. The first advertisement featuring an oriental female smoker appeared in 1919. There were frequent cases, in the 1920s, of women dismissed from employment, expelled from institutions of learning or otherwise penalized for daring to smoke. Heimann (1960) reported that "the nation's ladies took to smoking in large numbers…" while "opposition to tobacco during the 20's continued to be based on social objections with the short-skirted cigarette-brandishing flapper as the symbolic target." However Howe (1984) reported that the first cigarette advertisements aimed at women did not appear until the mid 1920s, with the first woman smoking featured in 1933, and that "it was only during World War II that large numbers of women first adopted the smoking habit." Kellogg (2002, reprinted from 1922) reported that "It is claimed that 90% of all men smoke, while comparatively few women do so. …. There can be no doubt that the practice is no longer confined to street women and actresses and women of the 'smart set' as a few years ago, but is rapidly expanding to the more conservative classes." US Surgeon General (1980) concluded that "smoking rates among women did not exceed one-quarter until the onset of World War II."

Howe (1984) and US Surgeon General (1980) quoting the Milwaukee Journal presented data from an annual survey in the Greater Milwaukee area, of adult (age 18+) men from 1923 and also of women from 1934. In 1923, 87% of men smoked some form of tobacco, and 60% of male cigarette smokers also smoked pipe or cigars. The prevalence of cigarette smoking was as follows (selected years, mostly read from graph):

	Males	**Females**
1923	51.8	
1930	57	
1934	61	16.7
1935	62.5	20
1940	64	27
1945	66	32
1948	67.1	38
1950	65	38
1953	69	42.9
1955	69	43
1958	73	45.4
1960	63	50
1965	54	45
1970	38	36

Male cigarette smokers smoked 3.7 packs per week in 1923, and 4.8 packs in 1935 (equivalent to 10.6 and 13.7 cigarettes/smoker/day respectively). Women smokers smoked about half as many as male smokers in 1934.

In addition to the Milwaukee and Columbus surveys (reported above and as source 10), US Surgeon General (1980) gave estimates of the prevalence of adult smoking from other local consumer surveys of urban areas in 1948:

	Males	Females
Omaha	69.1	34.3
Birmingham	67.4	35.6
Philadelphia	69.4	46.7
Seattle	63.9	38.3
San Jose	63.4	34.0

Pirie *et al* (1988) reported a follow-up study in 1985 of students originally interviewed in 1979 and 1980 when in the 7th grade in the Twin Cities metropolitan area. Original sample size 7 124. 78% were still enrolled in their original school district and were surveyed using confidential self-completion questionnaires in class. 20% were located by other means and interviewed by telephone. The 2% (155) not re-interviewed include 7 deaths and 47 runaways. The prevalence of smoking (at least one cigarette per day in past 30 days) differed according to school status as follows:

	School status*				
	In school	Absentee	Transfer	Drop-out	Total
Males	16.6	18.2	25.7	77.7	21.2
Females	22.5	32.8	32.1	77.7	27.0

* In school = still enrolled in the original school district and present on the date of the school survey; Absentee = student still enrolled in the original school district, absent on the first day but surveyed in school 10 days later; Transfer = enrolled in school elsewhere (includes students enrolled in schools outside the public school system and a few who had fallen behind their classes); Drop-out = not enrolled in any school.

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