
International Smoking Statistics

Web Edition

A collection of worldwide historical data

Australia

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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. It is planned to update the chapter for each country separately, and make them 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.

Also available from the same source are:

Supplement 1 to the second edition: *Estimation of sex-specific smoking statistics by standardized age groups and time periods.* [This supplement is

an extended version of Appendix IV to the second edition. Updates of this supplement are planned];

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 about 1945 the consumption of manufactured cigarettes per adult remained fairly stable, varying between 1 and 2 per day. Thereafter consumption rose steadily until the late 1970s when it peaked at 9 cigarettes per day. During the same period, there was a rapid switch to filter cigarettes, from 2% in 1950 to 90% in the mid-1960s. Consumption decreased to below 5 cigarettes per adult per day by 2000. Although consumption per adult of loose tobacco remained fairly stable, estimates suggest that consumption of hand-rolled cigarettes per adult rose from 1 cigarette per day in 1925 to nearly 4 in the 1950s. There was then a large reduction in consumption to about 0.2 cigarettes per day by 2000. Between 1930 and 1950 more hand-rolled cigarettes were consumed than manufactured cigarettes. After 1955 this was reversed. According to Walker (1984), during a post-war period of shortages roll-your-own cigarettes enjoyed their last period of dominance, but post-war migrants did not take up this Australian habit and the post-war affluent society was less willing to go to the trouble.

The consumption of all tobacco products combined per adult varied between 5 and 6 g per day from 1900 to 1945, when it started to rise, at first rapidly and then more slowly, peaking at nearly 10 g in 1961. It fell to around 3.5 g around 2000. By 1903, 10% of all tobacco was consumed in manufactured cigarettes. This proportion remained about 30% from 1925 to 1945, increased after the Second World War and has exceeded 80% since 1965. During much of the 19th century, plug tobacco smoked in pipes was the main tobacco product. This was replaced by cut tobacco, particularly from the start of the 20th century when it was increasingly used to make cigarettes, and it exceeded plug tobacco by 1920. During the 19th century, cigars were the second product, although rarely exceeding 8% of all tobacco according to the limited data available (Walker (1984)). In recent decades, only about 1% of consumption has been in cigars. Consumption of smokeless tobacco has always been negligible. Chewing tobacco and oral snuff were banned in 1991.

There have been notable trends in the weight and packaging of cigarettes. On average a cigarette contained approximately a gram of tobacco in the mid 1960s, and this had reduced to 0.7 g by the early 1990s. During the same period, the average number of cigarettes in a pack increased. In 1980-81, virtually all cigarettes were sold in packs of 20 or 25; by 1992-1993, although 25s remained the most popular size (38%), only 3% were sold in packs of 20, with packs of 40 or 50 taking 33% of the market (Quit Victoria (1995)).

Survey data

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

In 1945, the prevalence of tobacco smoking among those aged 15 years and over was about 70% in men and 25% in women. This difference has decreased since 1945. By the early 2000s, the prevalence among men had fallen to about 25%. The prevalence among women remained around 30% from the 1960s to the 1980s but has since reduced to about 20%.

No data on adult smoking by age are available until the 1970s. In general, more men smoked than women at every age but in the 1980s and 1990s some surveys show that more young women smoked than young men. A lower prevalence of smoking in older age groups was more marked in women than in men.

Around 2-5% of men and 1% of women smoked other products but not cigarettes, with the prevalence somewhat higher for older men. There are few data on prevalence by type of cigarette, but smoking of hand-rolled cigarettes appears to be negligible among women and concentrated among older men.

The prevalence of teenage smoking among girls was much lower than among boys when first surveyed in 1968, but subsequently increased more rapidly. From the 1980s most surveys indicated that the prevalence among girls was similar to that among boys for regular smoking, but higher than among boys when occasional smoking was included. 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 20-40%; one survey conducted in a medical screening setting under-reported by over 50%. Since first estimated in 1972, the estimated number of cigarettes smoked per person per day (sales-adjusted) decreased steadily for men from about 12 to 5, while for women it remained fairly stable around 6-7 until the early 1990s since when it has fallen to about 4.

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

Year	Manufactured cigarettes		Cigars		Pipe & HR ¹ tobacco tonnes	All tobacco products tonnes
	tonnes	millions	tonnes	millions		
1920	2 220	2 204	320	64	5 260	7 800
1921	2 360	2 376	270	58	4 810	7 440
1922	2 270	2 267	270	53	5 720	8 260
1923	2 130	2 124	270	54	5 670	8 070
1924	2 270	2 286	230	50	5 900	8 390
1925	2 360	2 372	270	54	6 030	8 660
1926	2 540	2 542	230	50	6 210	8 980
1927	2 720	2 706	230	51	6 260	9 210
1928	2 860	2 851	230	48	6 260	9 340
1929	2 900	2 890	180	44	6 400	9 480
1930	2 770	2 783	180	44	6 530	9 480
1931	2 090	2 079	140	39	6 120	8 350
1932	1 860	1 858	90	23	6 170	8 120
1933	2 040	2 040	90	25	6 260	8 390
1934	2 090	2 072	140	29	6 300	8 530
1935	2 180	2 189	140	30	6 400	8 710
1936	2 400	2 417	90	26	6 670	9 160
1937	2 630	2 630	140	31	6 800	9 570
1938	2 860	2 869	140	33	7 080	10 070
1939	3 180	3 180	90	33	7 170	10 430
1940	3 400	3 384	90	27	7 300	10 800
1941	3 130	3 154	90	31	7 030	10 250
1942	3 580	3 585	140	35	7 620	11 340
1943	3 630	3 619	90	22	7 940	11 660
1944	3 630	3 627	50	17	7 570	11 250
1945	3 360	3 370	50	15	6 890	10 300
1946	3 580	3 618	50	15	7 530	11 160
1947	4 350	4 424	90	16	8 800	13 240
1948	5 580	5 575	90	20	8 940	14 610
1949	6 670	6 555	90	22	8 710	15 470
1950	7 850	7 665	90	25	9 210	17 150
1951	9 480	9 219	90	28	9 660	19 230
1952	9 710	9 420	90	29	9 660	19 460
1953	9 070	8 976	90	21	10 250	19 410
1954	10 480	10 487	90	25	10 250	20 820
1955	11 570	11 515	90	25	9 620	21 270
1956	12 560	12 616	90	27	8 750	21 410
1957	13 830	13 878	90	26	8 620	22 540
1958	14 740	14 699	90	32	8 300	23 130
1959	16 010	15 677	90	34	7 620	23 720
1960	17 830	17 101	90	38	7 300	25 220
1961	18 910	18 044	140	45	6 890	25 950
1962	19 640	18 824	140	60	6 210	25 990
1963	20 500	19 649	140	68	5 670	26 310
1964	21 410	20 572	180	84	5 220	26 810
1965	22 040	21 400	180	87	4 720	26 940
1966	22 630	22 644	180	83	4 490	27 310
1967	22 140	22 247	180	84	4 220	26 540
1968	23 500	23 667	230	93	4 220	27 940
1969	24 630	24 883	230	105	4 170	29 030
1970	25 170	25 938	230	118	4 130	29 530
1971	25 810	26 331	230	117	4 040	30 070
1972	26 400	27 321	270	133	4 260	30 930
1973	27 580	28 998	270	163	4 040	31 890

1 Tobacco for hand-rolled cigarettes

Source: see *Notes on sources of sales data: Sales data 1920-1973*, p. 30

Table 1.2 Total annual sales of tobacco products, 1974-2004

Year	Manufactured cigarettes		Cigars tonnes	Loose tobacco tonnes	All tobacco products tonnes
	tonnes	millions			
1974	28 349	31 716	340	3 850	32 539
1975	29 042	32 178	330	3 713	33 085
1976	28 359	30 395	313	3 888	32 560
1977	28 486	33 672	299	3 791	32 576
1978	28 480	33 800	259	3 462	32 201
1979	27 276	33 850	244	3 268	30 788
1980	28 046	35 820	237	3 173	31 456
1981	28 363	35 587	232	2 931	31 526
1982	28 980	35 210	229	2 693	31 902
1983	27 519	33 640	203	2 650	30 372
1984	26 927	33 330	174	2 721	29 822
1985	26 861	33 870	173	2 286	29 320
1986	27 084	34 410	157	1 930	29 171
1987	26 230	33 670	144	1 739	28 113
1988	26 222	34 320	64	1 565	27 851
1989	25 901	35 000	115	1 416	27 432
1990	26 489	36 040	107	1 416	28 012
1991	24 793	34 670	89	1 558	26 440
1992	25 212	35 410	86	1 459	26 757
1993	22 570	32 240	72	1 371	24 013
1994	21 862	31 230	81	1 756	23 699
1995	21 885	31 260	69	1 528	23 482
1996	19 482	27 830	68	1 630	21 180
1997	19 776	28 250	70	1 664	21 510
1998	19 369	27 670	84	1 624	21 077
1999	18 874	26 960	97	1 458	20 429
2000	18 430	26 290	95	1 210	19 735
2001	16 760	23 940	97	1 438	18 295
2002	16 410	23 430	97	1 488	17 995
2003	17 170	24 520	102	2 247	19 519
2004	16 930	24 190	101	1 601	18 632

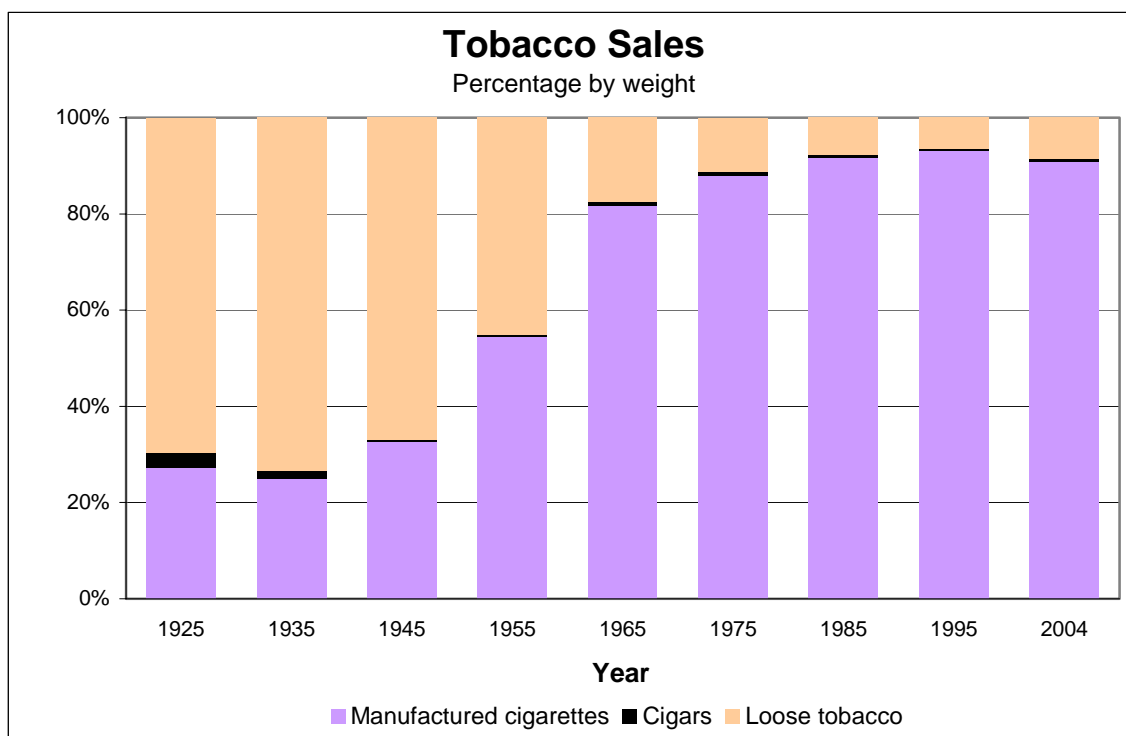
Source: see *Notes on sources of sales data: Sales data for 1974 onwards*, p. 30

Table 1.3 Percentage of sales of tobacco in different forms (by weight), selected years, 1925-2004

Year	Manufactured cigarettes %	Cigars %	Loose tobacco %
1925	27.3	3.1	69.6
1935	25.0	1.6	73.4
1945	32.6	0.5	66.9
1955	54.4	0.4	45.2
1965	81.8	0.7	17.5
1975	87.8	1.0	11.2
1985	91.6	0.6	7.8
1995	93.2	0.3	6.5
2004	90.9	0.5	8.6

Source: calculated from Tables 1.1 & 1.2

Figure 1 Percentage of sales of tobacco in different forms (by weight), selected years, 1925-2004



Source: Table 1.3

Table 2 Sales of cigarettes (including estimated number of hand-rolled cigarettes) and of all tobacco products; 1920-2004
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	2 204	1.6					7 800	5.8
1921	2 376	1.8					7 440	5.5
1922	2 267	1.6					8 260	5.9
1923	2 124	1.5					8 070	5.6
1924	2 286	1.6					8 390	5.8
1925	2 372	1.6	1 726	1.2	4 098	2.8	8 660	5.8
1926	2 542	1.6					8 980	5.8
1927	2 706	1.7					9 210	5.9
1928	2 851	1.8					9 340	5.9
1929	2 890	1.8					9 480	5.8
1930	2 783	1.7	3 312	2.0	6 095	3.6	9 480	5.7
1931	2 079	1.2					8 350	4.9
1932	1 858	1.1					8 120	4.7
1933	2 040	1.2					8 390	4.8
1934	2 072	1.2					8 530	4.8
1935	2 189	1.2	4 224	2.4	6 413	3.6	8 710	4.9
1936	2 417	1.3					9 160	5.0
1937	2 630	1.4					9 570	5.2
1938	2 869	1.5					10 070	5.4
1939	3 180	1.7					10 430	5.5
1940	3 384	1.8	5 857	3.1	9 241	4.9	10 800	5.7
1941	3 154	1.6					10 250	5.3
1942	3 585	1.8					11 340	5.8
1943	3 619	1.8					11 660	5.9
1944	3 627	1.8					11 250	5.6
1945	3 370	1.7	5 858	2.9	9 228	4.6	10 300	5.1
1946	3 618	1.8					11 160	5.5
1947	4 424	2.2					13 240	6.5
1948	5 575	2.7					14 610	7.0
1949	6 555	3.1					15 470	7.3
1950	7 665	3.5	8 304	3.8	15 969	7.3	17 150	7.8
1951	9 219	4.1					19 230	8.6
1952	9 420	4.1					19 460	8.5
1953	8 976	3.9					19 410	8.4
1954	10 487	4.5					20 820	8.9
1955	11 515	4.8	9 120	3.8	20 635	8.7	21 270	8.9
1956	12 616	5.2					21 410	8.8
1957	13 878	5.6	8 208	3.3	22 086	8.9	22 540	9.1
1958	14 699	5.8					23 130	9.2
1959	15 677	6.1					23 720	9.2
1960	17 101	6.5	6 818	2.6	23 919	9.1	25 220	9.6
1961	18 044	6.8	5 857	2.2	23 901	8.9	25 950	9.7
1962	18 824	6.9	5 279	1.9	24 103	8.8	25 990	9.5
1963	19 649	7.0	4 820	1.7	24 469	8.8	26 310	9.4
1964	20 572	7.2	4 437	1.6	25 009	8.8	26 810	9.4
1965	21 400	7.3	4 012	1.4	25 412	8.7	26 940	9.2
1966	22 644	7.6	3 817	1.3	26 461	8.9	27 310	9.2
1967	22 247	7.3	3 587	1.2	25 834	8.5	26 540	8.7
1968	23 667	7.6	3 587	1.2	27 254	8.8	27 940	9.0
1969	24 883	7.8	3 545	1.1	28 428	8.9	29 030	9.1
1970	25 938	8.0	3 511	1.1	29 449	9.1	29 530	9.1
1971	26 331	7.9	3 434	1.0	29 765	9.0	30 070	9.1
1972	27 321	8.1	3 621	1.1	30 942	9.2	30 930	9.2
1973	28 998	8.4	3 434	1.0	32 432	9.5	31 890	9.3
1974	31 716	9.1	3 273	0.9	34 989	10.0	32 539	9.3
1975	32 178	8.8	3 156	0.9	35 334	9.7	33 085	9.1
1976	30 395	8.2	3 305	0.9	33 700	9.1	32 560	8.8
1977	33 672	8.9	3 222	0.9	36 894	9.8	32 576	8.6
1978	33 800	8.8	2 943	0.8	36 743	9.6	32 201	8.4
1979	33 850	8.7	2 778	0.7	36 628	9.4	30 788	7.9

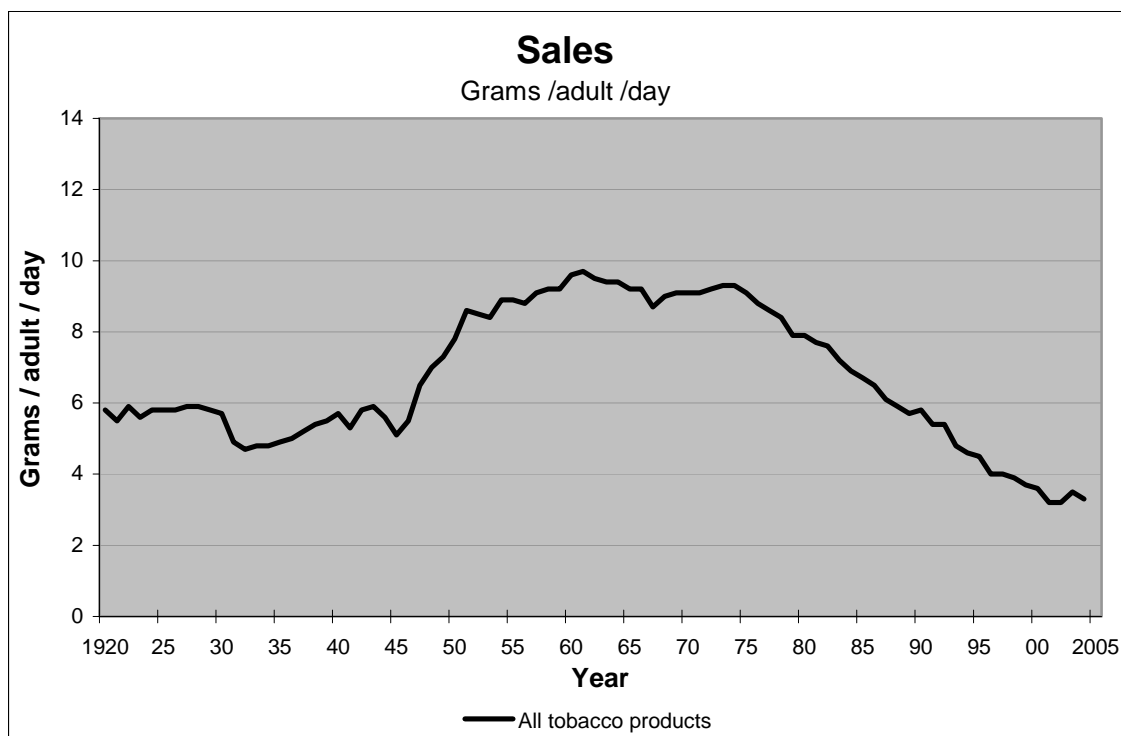
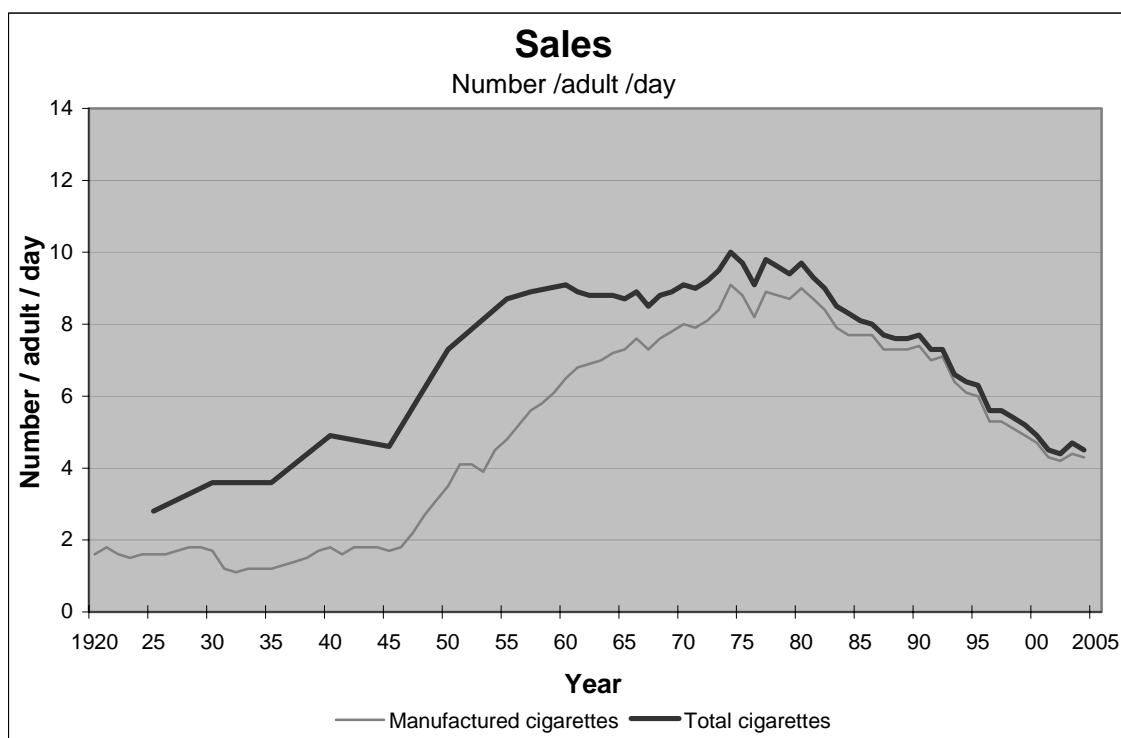
Table 2 (continued)

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	35 820	9.0	2 697	0.7	38 517	9.7	31 456	7.9
1981	35 587	8.7	2 491	0.6	38 078	9.3	31 526	7.7
1982	35 210	8.4	2 289	0.5	37 499	9.0	31 902	7.6
1983	33 640	7.9	2 253	0.5	35 893	8.5	30 372	7.2
1984	33 330	7.7	2 313	0.5	35 643	8.3	29 822	6.9
1985	33 870	7.7	1 943	0.4	35 813	8.1	29 320	6.7
1986	34 410	7.7	1 641	0.4	36 051	8.0	29 171	6.5
1987	33 670	7.3	1 478	0.3	35 148	7.7	28 113	6.1
1988	34 320	7.3	1 330	0.3	35 650	7.6	27 851	5.9
1989	35 000	7.3	1 204	0.3	36 204	7.6	27 432	5.7
1990	36 040	7.4	1 204	0.2	37 244	7.7	28 012	5.8
1991	34 670	7.0	1 324	0.3	35 994	7.3	26 440	5.4
1992	35 410	7.1	1 240	0.2	36 650	7.3	26 757	5.4
1993	32 240	6.4	1 165	0.2	33 405	6.6	24 013	4.8
1994	31 230	6.1	1 493	0.3	32 723	6.4	23 699	4.6
1995	31 260	6.0	1 299	0.3	32 559	6.3	23 482	4.5
1996	27 830	5.3	1 386	0.3	29 216	5.6	21 180	4.0
1997	28 250	5.3	1 414	0.3	29 664	5.6	21 510	4.0
1998	27 670	5.1	1 380	0.3	29 050	5.4	21 077	3.9
1999	26 960	4.9	1 239	0.2	28 199	5.2	20 429	3.7
2000	26 290	4.7	1 029	0.2	27 319	4.9	19 735	3.6
2001	23 940	4.3	1 222	0.2	25 162	4.5	18 295	3.2
2002 ¹	23 430	4.2	1 265	0.2	24 695	4.4	17 995	3.2
2003 ¹	24 520	4.4	1 910	0.3	26 430	4.7	19 519	3.5
2004 ¹	24 190	4.3	1 361	0.2	25 551	4.5	18 632	3.3

1 Per adult data based on 2001 population

Source: Manufactured cigarettes and all tobacco products, Tables 1.1 and 1.2. Hand-rolled cigarettes, see *Notes on sources of sales data: Estimates of numbers of hand-rolled cigarettes for 1925-1960*, p. 31 and *Estimates of numbers of hand-rolled cigarettes for 1961 onwards*, p. 31. Population, see *Population*, Methods p. 14.

Figure 2 Sales of (i) manufactured and total¹ cigarettes and (ii) all tobacco products; 1920-2004
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, 1951-1994; sales-weighted average machine yield per cigarette of tar (SWAT), 1969-1994, and nicotine (SWAN), 1994

Year	Filter %	SWAT mg/cig	SWAN mg/cig
1951	2		
1960	59		
1961	71.0		
1962	78.0		
1963	82.5		
1964	83.0		
1965	87.7		
1966	90.0		
1967	89.4		
1968	90.5		
1969	91.7	19.6	
1970	92.4		
1971	92.7		
1972	93.4		
1973	94.7		
1974	94.8	16.1	
1975	95.2		
1976	95.4		
1977	96.0		
1978	96.4		
1979	96.9		
1980	97.3		
1981	98.7	12.7	
1984		12.3	
1987		10.8	
1988		10.3	
1989		9.3	
1994	99.8	6.8	0.70

Source: see *Notes on sources of sales data: Plain/Filter cigarette sales*, p. 32 and *Tar and nicotine machine yields of cigarettes*, p. 32

Table 4M Prevalence of smoking, males: selected surveys by age, 1945-2004
(continues on p. 18)

Year	Source	Product	Frequency	Age Groups																	All ages				
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65	70	75	80+
45	1	U	U																		72				
50	1	U	U																		70				
62	1	U	U																		57				
64	1	U	U																		58				
67	1	U	U																		54				
68	11	UC	R	21	26	30	37	41																	
68	11	UC	A	23	28	31	38	43																	
69	1	U	U																		45				
69	15	UC	R														10								
69	15	UC	U														37								
72	5	TC	R					20				50				52				50				38	44
73	5	TC	R					19				48				47				46				37	41
73	11	U	R	26	32	38	45	56																	
73	11	U	A	27	33	38	45	56																	
74	2	UC	U					36			49	44	46	44	39	43	43	35	32				28	41	
74	2	A	U					38			52	49	52	48	46	47	47	41	36				31	45	
74	5	TC	R					25				46				46				45				32	40
75	5	TC	R					23				47				46				46				31	40
76	2	UC	U					36			46	45	40	42	40	37	48	37	32				27	40	
76	2	A	U					37			48	47	46	47	43	41	54	40	36				35	43	
76	5	TC	R					23				48				44				42				32	39
77	3	MC	U					38				41				34				18				36	
77	3	TC	U					42				46				44				29				43	
77	5	TC	R					21				47				41				42				30	37
78	5	TC	R					21				47				45				42				28	38
80	2	UC	U					35			56	48	39	41	41	46	46	39	25				18	40	
80	2	A	U					36			57	49	40	42	43	47	47	40	27				19	41	
80	6	TC	U					43			30	36	40	41	32	32	25				35				
80	6	A	U					44			36	39	45	45	35	36	30				39				
83	2	UC	U					31			43	47	40	40	41	40	33	35	28				23	37	
83	2	A	U					32			45	49	44	42	43	43	38	38	34				27	40	
83	6	TC	U					39			32	32	29	31	33	31	25				32				
83	6	A	U					41			33	36	30	33	35	34	30				35				
83	7	UC	R					36			35				33				30				33		
83	7	A	R					38			37				37				35				36		
83	8	UC	R					32			36				36				33				34		
83	8	A	R					33			39				37				37				36		
83	9	U	U																		39				
84	9	U	U																		36				
84	10	UC	R	2	4	7	13	13	12																
84	10	UC	A	10	17	24	29	29	27																
85	4	A	U																		34				
85	12	UC	*	6	12	17	27																		
85	12	UC	R	12	17	19	30																		
85	14	U	R					23				41				31				33					
85	14	U	A					32				45				31				36					
85	16	UC	A	5	12	17	26																		
86	2	UC	U																		32				
86	2	A	U					31			41	39	35	35	37	29	36	35	29				16	33	
87	10	UC	R	1	2	6	12	13	11																
87	10	UC	A	5	10	19	25	27	25																
88	14	A	A																						
89	2	A	U					20			41	39	37	35	32	26	22	26	21				21	30	
89	6	TC	U					25			34	25	23	22	25	23	21	17	17				24		
89	6	A	U					25			34	26	26	23	26	25	23	19	20				26		

Table 4F Prevalence of smoking, females: selected surveys by age, 1945-2004
(continues on p. 19)

Year	Source	Product	Frequency	Age Groups																	All ages			
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65	70	75
45	1	U	U																		26			
50	1	U	U																		30			
62	1	U	U																		29			
64	1	U	U																		28			
67	1	U	U																		30			
68	11	UC	R	4	7	12	15	23																
68	11	UC	A	6	9	13	16	23																
69	1	U	U																		28			
69	15	UC	R																		2			
69	15	UC	U																		15			
72	5	TC	R	14				37			36			35			20				29			
73	5	TC	R	15				35			34			33			21				29			
73	11	U	R	13	24	31	31	32																
73	11	U	A	13	25	32	32	32																
74	2	UC	U	29				38	37	30	29	27	33	37	25	16	10			29				
74	2	A	U	30				38	37	30	29	28	33	37	25	16	10			30				
74	5	TC	R	17				39			36			34			18				30			
75	5	TC	R	20				36			35			31			18				29			
76	2	UC	U	32				43	42	36	26	34	35	37	17	18	11			31				
76	2	A	U	32				44	44	38	28	34	36	38	18	19	11			33				
76	5	TC	R	21				40			35			29			18				29			
77	3	MC	U	37				33			27			12				29						
77	3	TC	U	37				33			27			12				29						
77	5	TC	R	19				41			35			33			18				29			
78	5	TC	R	20				42			33			29			21				29			
80	2	UC	U	37				40	39	35	33	28	19	31	26	23	10			31				
80	2	A	U	37				40	41	36	33	30	20	31	26	23	10			31				
80	6	TC	U	26				30	28	26	26	25	23	23					26					
80	6	A	U	26				30	28	26	26	25	23	23					26					
83	2	UC	U	43				43	34	31	28	28	37	25	28	22	8			30				
83	2	A	U	45				45	35	32	29	28	39	26	29	22	8			31				
83	6	TC	U	36				21	27	25	23	25	21	19					25					
83	6	A	U	36				21	27	25	23	25	21	19					25					
83	7	UC	R	23				20			26			19				22						
83	7	A	R	25				21			26			20				23						
83	8	UC	R	28				23			19							24						
83	8	A	R	28				23			19							24						
83	9	U	U																		29			
84	9	U	U																		29			
84	10	UC	R	1	3	8	12	14	13															
84	10	UC	A	8	18	29	34	34	30															
85	4	A	U																		27			
85	12	UC	*	7	17	24	32																	
85	12	UC	R	10	20	27	35																	
85	14	U	R	27				35			21							26						
85	14	U	A	40				38			22							30						
85	16	UC	A	8	16	24	32																	
86	2	UC	U																		29			
86	2	A	U	28				41	39	31	29	30	25	28	24	21	12			29				
87	10	UC	R	1	2	6	10	12	11															
87	10	UC	A	5	13	22	28	30	29															
88	14	A	A	41				30			26			15				28						
89	2	A	U	31				38	37	30	26	24	29	28	18	20	11			27				
89	6	TC	U	32				25	22	21	18	23	19	16	15	11				21				
89	6	A	U	32				25	22	21	18	23	19	16	15	11				21				

Table 5M Number of cigarettes smoked per smoker per day, males:
selected surveys by age, 1963-2004

Year	Source	Product	Estimated	Age Groups																	All ages																															
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65	70	75	80+																											
63	19	UC	E	22																																																
68	11	UC	E	0.9	1.1	1.5	1.7	2.0																																												
72	5	TC		12				19				21				22				20				19																												
73	5	TC		10				20				21				21				19																																
73	11	UC	E	1.3	1.9	2.3	2.6	2.4																																												
74	2	UC	E					18				20				21				21				18				19																								
74	5	TC		13				20				21				22				19																																
75	5	TC		14				19				21				22				20																																
76	2	UC	E					14				18				22				21				17				20																								
76	5	TC		14				19				21				22				20																																
77	3	MC	E					16				21				21				14				20																												
77	5	TC		14				18				21				22				20																																
78	5	TC		14				19				21				22				21				20																												
80	2	UC						16				17				20				22				25				24				24				23				19				16				21				22
80	6	MC										18				18				21				28				21				21				21				23				21								
83	2	UC		18																																																
83	6	MC										18				22				21				20				25				23				23				21				21								
83	7	UC						19								22				23				23				18				21																				
83	8	UC														23				22				22								22																				
83	9	UC		20																																																
84	9	UC		21																																																
84	10	UC		2.0	2.6	3.3	4.9	5.0	6.0																																											
85	12	UC	E	1.0	1.7	2.3	3.2																																													
85	14	UC	E					16				22				21								21																												
85	16	UC		0.9	3.6	2.9	5.1																																													
86	2	UC		22																																																
87	10	UC		1.6	2.1	3.9	5.1	5.3	5.4																																											
89	2	MC		22																																																
89	6	MC						15				14				17				19				21				23				22				15				15				18								
89	7	UC										17				22				21				19								21																				
89	8	UC														22				24				21								22																				
90	10	UC		1.3	2.7	3.1	4.7	5.4	6.1																																											
90	13	MC	E					17				20				23				24				22				19				15				21																
91	14	UC	E					15				21				24												21																								
92	2	UC		22																																																
93	10	UC		1.2	1.8	2.8	4.1	5.3	6.3																																											
94	7	UC										14				18				20				22								20																				
94	8	UC														21				23				21								22																				
95	2	MC		20																																																
96	10	UC		1.6	2.1	3.6	4.7	4.8	5.3																																											
98	14	UC	E					15				17				21				22				20				19				19																				
99	10	UC		1.6	2.3	3.4	4.0	4.3	5.3																																											
01	14	TC						10				12				17				19				20				16				16																				
02	10	UC		1.9	1.7	3.1	3.4	5.0	4.9																																											
04	14	TC						9.7				12				15				16				18				16				15																				

Source: see *Notes on sources of survey data*, p. 32
 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. 32
 All ages: relates to ages reported; as given in original source

Table 5F Number of cigarettes smoked per smoker per day, females:
selected surveys by age, 1963-2004

Year	Source	Product	Estimated	Age Groups																	All ages							
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65	70	75	80+			
63	19	UC	E	14																								
68	11	UC	E	0.6	0.7	0.9	1.1	1.4																				
72	5	TC		10				15				16				18				16				16				
73	5	TC		10				15				18				18				16								
73	11	UC	E	0.9	1.3	1.7	2.0	2.4																				
74	2	UC	E	15				15				17				17				14				16				
74	5	TC		13				15				16				18				16								
75	5	TC		11				16				17				18				17								
76	2	UC	E	13				16				17				17				17				16				
76	5	TC		12				17				17				17				17								
77	3	MCE		13				15				15				11					15							
77	5	TC		13				15				17				18				17								
78	5	TC		11				16				18				19				17				17				
80	2	UC		14				16				18	20	20	21	20	19	17	19	13				18				
80	6	MC		13				19				13	18	16	15	15	13					15						
83	2	UC		17																								
83	6	MC		13				15				19	18	15	16	19	16					16						
83	7	UC		16				16				17				13					15							
83	8	UC		18				18				14									17							
83	9	UC		18																								
84	9	UC		17																								
84	10	UC		1.0	1.7	2.4	3.7	4.9	4.9																			
85	12	UC	E	1.4	1.7	2.6	3.0																					
85	14	UC	E	15				19				19								18								
85	16	UC		2.6	3.3	4.6	5.0																					
86	2	UC		20																								
87	10	UC		1.4	1.7	2.9	3.7	4.3	4.3																			
89	2	MC		19																								
89	6	MC		11				16				14	17	16	17	19	22	15	16					15				
89	7	UC		16				17				18				17					18							
89	8	UC		19				19				20									19							
90	10	UC		1.1	1.9	3.1	3.9	4.0	4.3																			
90	13	MCE		15				17				19				18				19				16	12	17		
91	14	UC	E	13				21				20									20							
92	2	UC		19																								
93	10	UC		1.0	1.8	2.7	3.4	4.5	4.6																			
94	7	UC		12				18				18				19					18							
94	8	UC		18				20				19									19							
95	2	MC		18																								
96	10	UC		0.9	1.8	2.8	3.3	4.4	4.9																			
98	14	UC	E	15				16				18				20				19				21				18
99	10	UC		1.0	1.7	2.7	3.6	4.0	4.7																			
01	14	TC		10				12				15				18				20				17				15
02	10	UC		1.4	1.7	2.6	3.1	4.7	5.6																			
04	14	TC		10				11				13				15				15				14				13

Source: see *Notes on sources of survey data*, p. 32
 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. 32
 All ages: relates to ages reported; as given in original source

Table 7M Number of cigarettes smoked per person per day, sales-adjusted, males: selected surveys¹ by age, 1972-2004; 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
72	5	TC			3.1			12			14			14					9.5			11	78%T
73	5	TC			2.6			13			14			13					9.8			11	72%T
74	2	UC					9.8		14	13	15	15	14	15	15	12		9.5		8.3		13	60%T
74	5	TC			4.9			13			14			14					9.1			12	67%T
75	5	TC			4.4			13			14			14					8.7			12	70%T
76	2	UC					7.5		12	12	13	13	13	12	15	11		8.1		6.9		12	68%T
76	5	TC			4.4			13			13			13					8.7			11	73%T
77	3	MC						10			14			12					4.2			12	60%M
77	5	TC			4.5			11			13			14					9.1			11	66%T
78	5	TC			4.2			13			14			13					8.2			11	69%T
80	2	UC					8.3		14	14	12	15	14	16	15	11		5.7		5.5		13	69%T
83	2	UC																	9.7				70%T
83	9	UC																	9.3				86%T
84	9	UC																	9.1				81%T
85	14	UC			4.6						12								8.6			9.1	77%T
86	2	UC																	9.1				78%T
89	2	MC																	8.5				79%M
89	6	TC*						8.4	10	9.3	9.8	10	12	11	7.1	5.6	5.8					9.8	45%T
90	13	MC						9.1		11		11		10		7.4		4.0		1.5		9.1	64%M
91	14	UC			4.6						8.8								7.3			7.5	90%T
92	2	UC																	8.0				72%T
95	2	MC*																	6.9				78%M
98	14	UC			3.0			6.9		7.6		8.0		5.5					3.5			6.0	79%T
01	14	TC			2.5			5.6		6.8		6.1		5.7					2.3			5.0	82%T
04	14	TC			1.9			5.6		6.5		6.6		6.0					2.9			5.0	66%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. 32
 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. 32
 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 surveys¹ by age, 1972-2004; 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
72	5	TC			1.8			6.9			7.5			8.0					4.0			6.0	78%T	
73	5	TC			2.2			7.3			8.6			8.4					4.6			6.6	72%T	
74	2	UC					6.8		9.8	9.6	7.6	7.3	7.5	9.1	10	7.0		3.6		2.3		7.5	60%T	
74	5	TC			3.3			8.6			9.1			8.6					4.5			7.2	67%T	
75	5	TC			3.3			8.3			8.6			8.1					4.4			6.9	70%T	
76	2	UC					6.2		10	9.7	9.1	6.6	8.5	8.8	9.0	4.1		4.3		2.6		7.5	68%T	
76	5	TC			3.4			9.1			8.1			7.0					4.1			6.5	73%T	
77	3	MC						8.2			8.2			6.7					2.2			7.2	60%M	
77	5	TC			3.8			9.5			9.2			9.1					4.7			7.4	66%T	
78	5	TC			3.2			9.7			8.4			7.8					5.2			7.1	69%T	
80	2	UC					7.3		9.5	10	10	9.8	8.3	5.5	8.6	6.4		6.3		1.9		8.2	69%T	
83	2	UC												7.4									70%T	
83	9	UC												7.2										86%T
84	9	UC												7.0										81%T
85	14	UC			5.1			8.5										5.1				6.0	77%T	
86	2	UC												7.3										78%T
89	2	MC												6.5										79%M
89	6	TC*						7.8	8.9	6.9	8.0	6.2	8.7	7.8	8.0	4.9	4.0					7.1	45%T	
90	13	MC					8.1		8.1		7.1		6.6		5.5		3.2		1.1			6.4	64%M	
91	14	UC			4.2			8.4										6.0				6.7	90%T	
92	2	UC												6.9										72%T
95	2	MC*												5.4										78%M
98	14	UC			3.0			6.3		5.7		5.8		3.6				2.6				4.7	79%T	
01	14	TC			2.6			4.2		5.1		5.2		4.2				1.7				3.9	82%T	
04	14	TC			2.2			4.7		5.3		5.3		3.7				1.7				3.8	66%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. 32
 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. 32
 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 Estimated¹ prevalence of smoking and estimated¹ number of cigarettes per person per day (unadjusted and sales-adjusted): summary of Tables 4, 6 and 7; 1945-2004
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					
			M	F	M	F	M	F	number/ person/day	Total sales %	Manufactured cigarettes number/ person/day	Total cigarettes ⁹ number/ person/day	M	F			
1945	1	U					68	25									
1950	1	U					67	29									
1962	1	U					55	28									
1964	1	U					55	27									
1967	1	U					51	29									
1969	1	U					43	27									
1972	5	TC			44	29			9.4	4.9	78				12.1	6.3	
1973	5	TC			41	29			8.7	5.0	72				12.0	7.0	
1974	2	UC+A			40	28	44	28	7.7	4.4	60				12.7	7.2	
	5	TC			40	29			8.4	5.0	67				12.5	7.5	
1975	5	TC			40	29			8.6	5.0	70				12.3	7.1	
1976	2	UC+A			39	30	43	31	7.5	4.9	68				11.1	7.1	
	5	TC			39	29			8.3	5.0	73				11.4	6.8	
1977	3	MC+TC	35	28	41	29			6.7	4.0	60	11.2	6.7	(12.6	7.0)		
	5	TC			37	29			7.8	5.2	66				11.8	7.8	
1978	5	TC			38	29			8.2	5.1	69				11.8	7.4	
1980	2	UC+A			40	30	41	30	8.1	5.2	69				11.8	7.6	
1983	2	UC+A			37	29	40	30	6.7	5.1	70				9.6	7.4	
	9	UC+U					39	29	8.2	6.4	86				9.5	7.4	
1984	9	UC+U					36	29	7.5	5.8	81				9.4	7.2	
1985	4	A					34	27									
	14	UC+U					34	27	7.5	5.1	77				9.7	6.6	
	14	U					37	31									
1986	2	UC+A			32	29	33	28	7.0	5.6	78				8.9	7.2	
1988	14	A						27									
1989	2	MC+A					30	26	6.5	5.0	79	8.3	6.4				
	6	TC+A			24	20	25	20	3.8	3.0	45				8.5	6.7	
1990	13	MC+TC+A	28	24	31	24	31	24	5.6	4.0	64	8.7	6.2	(9.4	6.0)		
1991	14	UC			32	30			6.9	6.2	90				7.7	6.9	
	14	UC			39	37											
1992	2	UC+A			26	23	28	24	5.7	4.9	72				7.9	6.8	

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			
			M	F	M	F	M	F	number/person/day		Total sales %	Manufactured cigarettes number/person/day		Total cigarettes ⁹ number/person/day		
						M	F	M	F		M	F	M	F		
1993	14	UC			29	22									(8.3 5.0)	
	14	UC			33	26										
1995	2	<i>MC+A</i>					28	24	5.3	4.1	78	6.8	5.3			
	13	<i>A</i>					27	21								
	13	A					29	22								
	14	UC			28	24								(7.5 5.1)		
1997	17	UC			27	22								(6.7 4.5)		
	17	UC			24	20								(6.8 4.4)		
1998	2	<i>A</i>					26	25								
	14	UC			24	20			4.8	3.7	79			6.1	4.7	
	14	UC			29	23										
	17	UC			23	22								(6.2 4.6)		
1999	17	UC			24	19							(6.3 4.1)			
2000	17	UC			24	19							(6.0 3.9)			
2001	13	<i>A</i>					25	19								
	13	A					27	21								
	14	MC+TC+A	23	20			21	18	4.2	3.2	82	(5.0 3.5)	5.1	3.9		
	14	A					26	21								
2004/10	14	TC+A					19	16	3.4	2.6	66			5.2	3.9	
	14	A					23	19								

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. 32. Method: see *Summary of adult smoking*, Methods p. 13

2 See *Notes on sources of survey data*, p. 32

3 Product: MC = manufactured cigarettes, TC = total cigarettes (including hand-rolled), UC = cigarettes (type unspecified), A = all 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

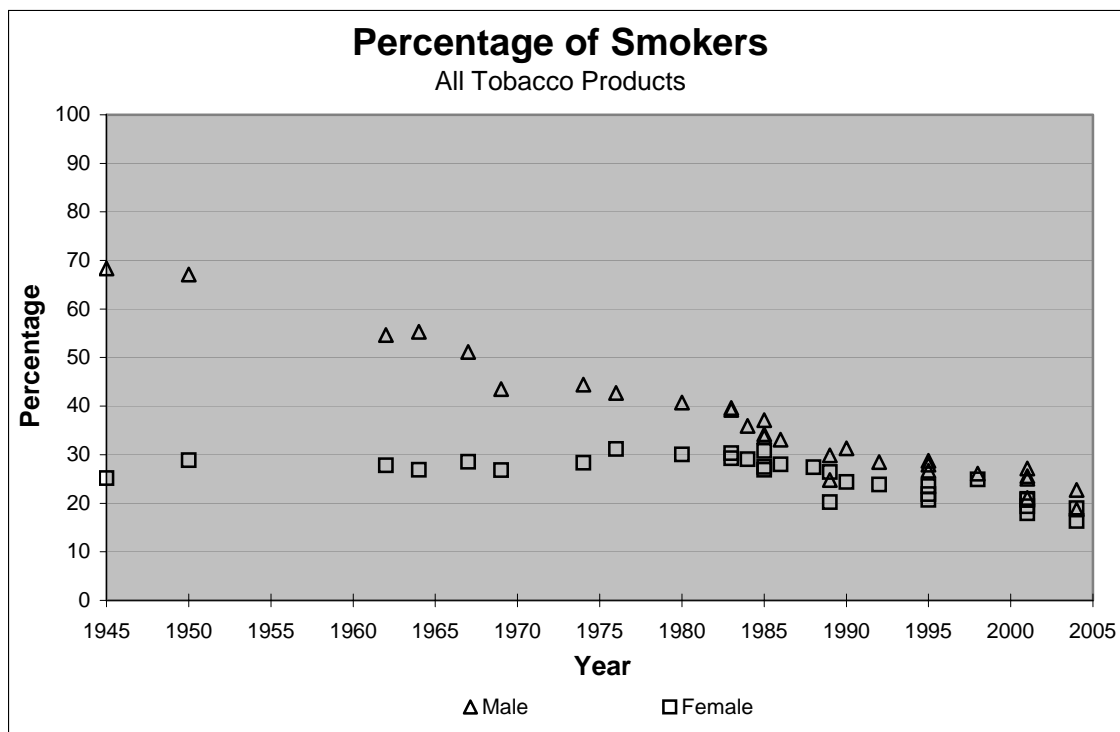
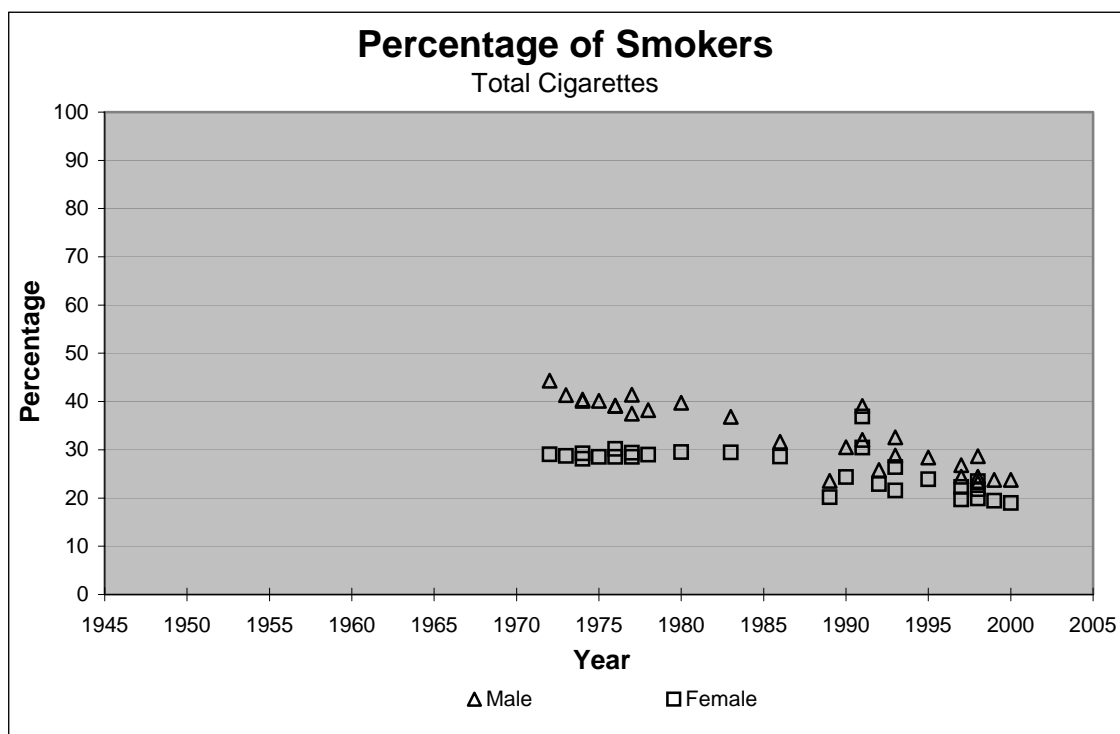
7 From Table 6

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

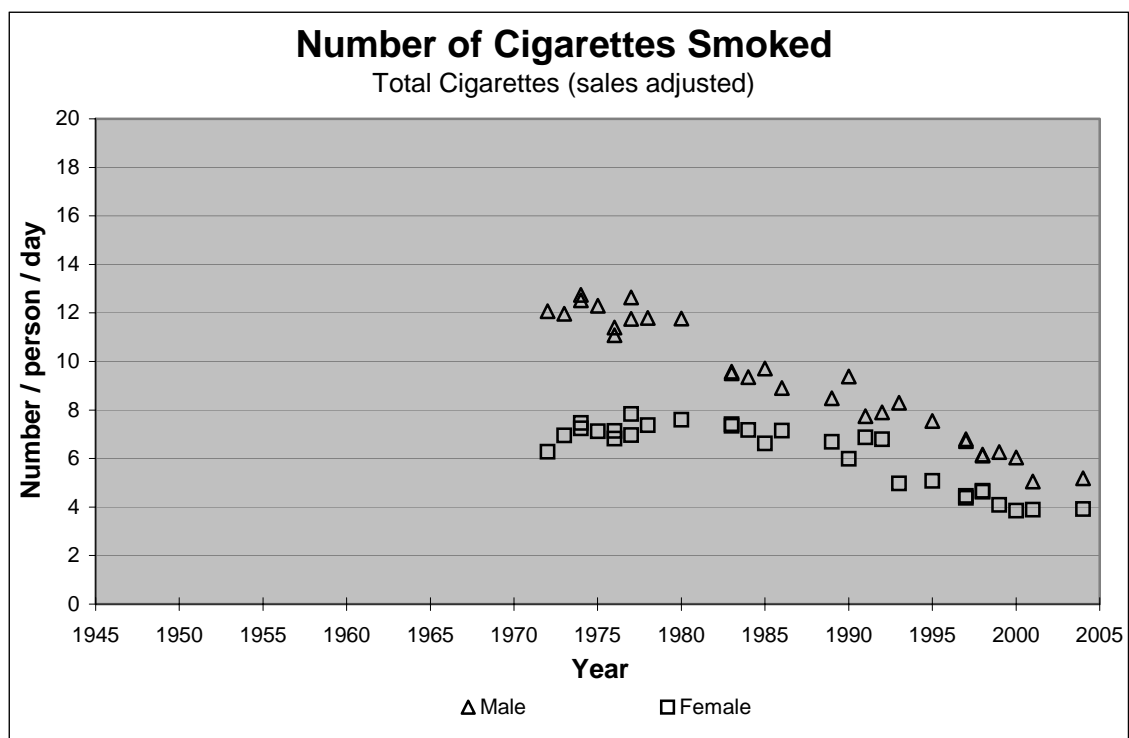
10 Calculations based on 2001 population

Figure 3 Estimated prevalence of smoking of (i) cigarettes and (ii) all tobacco products; by year of survey, 1945-2004
Males and females aged 15 years and over



Source: Table 8

Figure 4 Estimated number of cigarettes smoked per person per day, sales-adjusted; by year of survey, 1945-2004
Males and females aged 15 years and over



Source: Table 8

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. 37 under *References*.

Sales data before 1920

Walker (1984)

The following table shows the percentage of tobacco consumption by type of tobacco, and the average annual consumption of tobacco per head of population in selected years. Some data for 1920 and 1930 are included here for comparison with Tables 1.1 and 2. For 1903-1930, we have derived the average consumption per adult per day.

Date	Colony etc	Percentage of tobacco consumption				Average consumption	
		Manu- factured tobacco	Cigars	Snuff	Cigarettes	Kilograms per head per year	Grams per adult per day
1860-2	Tasmania	94.0	4.9	1.1	–	0.48	
	South Australia	90.9	7.6	1.4	–	0.76	
1885-7	Tasmania	92.9	6.4	0.3	–	0.83	
	South Australia	92.6	6.9	0.5	–	0.71	
1890	Australian Colonies	88.0	8.5	0.3	3.1		
1894-8	Australian Colonies					1.09	
1903	Australia	83.6	5.5	–	10.9	1.19	4.8 ¹
1909	Australia	80.0	5.0	–	15.0		
1913	Australia	73.3	6.2	–	20.5		
1916	Australia					1.32	5.3
1920	Australia				28.3		
1930	Australia				29.6	1.59	6.2

¹ Calculated using population for 1906

Sources as given by Walker (1984): Statistical Registers of Tasmania and South Australia; Commonwealth Parliamentary Papers 1906, 1914-17.

Sales data 1920-1973

RP6

Data by weight, originally given to nearest 100 000 pounds, have been converted to tonnes and given to nearest 10 tonnes (100 000 lbs = 45.359 tonnes).

Notes as given in RP6:

- (a) Details of the weight of tobacco consumed by products were obtained from the Commonwealth Bureau of Census and Statistics, Canberra, and from trade sources.
- (b) Factors for conversion from weight to count for cigarettes and cigars were obtained from H.M. Customs and trade sources.

Sales data for 1974 onwards

1974-1981: Quit Victoria (1995), United States Department of Agriculture Economic Research Service (USDA) (1996)

1982-1997: Quit Victoria (1995)

1998-2004: Australian Institute of Health and Welfare (AIHW) (2005b)

Data relate to dutied tobacco products (customs and excise clearances, but excluding customs clearances of unmanufactured tobacco, much of which would have been used in the manufacture of cigarettes). Year refers to year ending 30th June. Data for 1965-1973 also available from this source are very similar to those shown in Table 1.1.

Up to 1st November 1999, duty was paid (and data given) according to weight. Thereafter, this changed to payment according to number of sticks for cigarettes and cigars under 0.8g per stick.

For 1974-1981, numbers of cigarettes are taken from USDA (1996). For 1982-1992 we converted weights of cigarettes to numbers using the following data:

Year	Weight (g/1 000 cigarettes)
1982	823
1983	818
1984	808
1985	793
1986	787
1987	779
1988	764
1989	740
1990	735
1991	715
1992	712

Source: Quit Victoria (1995)

Numbers of cigarettes thus calculated are similar to those given by USDA (1996) for the same years. For 1993-1999, numbers of cigarettes were calculated assuming 0.7g per cigarette. After 1999, for conversion calculations for cigarettes and cigars under 0.8g and given as numbers we assumed 0.7g per stick. This was based on comparison of excise data given in both forms for the transition year (AIHW (2003, 2005b)) suggesting 0.68g, and White *et al* (2003) who used 0.725g. For cigarettes and cigars over 0.8g and given as weight, we assumed 1g per stick. However data presented by King and Borland (2004) suggest that average weights may have been lower (1980: 41 filter brands with 85% market share, median 0.656g, range 0.530-0.868g; 1994: 102 filter brands with 96% market share, median 0.536g, range 0.435-0.685).

Data on smokeless tobacco are not given, but it comprised less than 0.01% of consumption in recent decades (Department of Community Services and Health (1990)) and was banned in 1991 (Quit Victoria (1995)).

Illegal tobacco sales, often referred to as “chop-chop”, were estimated to have increased from 2% of total sales around 1997 to 7-10% in 2001 (Australian Financial Review (2000), Asia Pulse (2000), Australian Associated Press (2001)). In 2001, 19% of adults had come across unbranded loose tobacco (“chop-chop”) and 60% of smokers who had come across it had smoked it at least once (AIHW (2002))

The following table shows changes in cigarette pack sizes:

Year	Percentage share of market by pack size							Sales weighted average number of cigarettes per pack
	15	20	25	30	35	40	50	
1980-81	–	47	51	–	–	–	–	23
1983-84	1	28	64	7	–	–	–	24
1986-87	1	20	46	33	<1	–	–	26
1987-88	1	13	48	34	4	–	–	26
1988-89	<1	10	47	30	12	<1	–	27
1989-90	–	8	44	25	15	9	–	29
1990-91	–	6	39	22	13	16	5	31
1991-92	–	4	37	16	11	14	17	33
1992-93	–	3	35	18	10	15	18	34

Source: Quit Victoria (1995) quoting Beriot (1993)

Estimates of numbers of hand-rolled cigarettes for 1925-1960

Dean (1962) quoting British Tobacco Company (Australia) Ltd.

Estimates of numbers of hand-rolled cigarettes for 1961 onwards

Although there are no recent data available, we have taken as our estimate of hand-rolled cigarette consumption 85% of loose tobacco sales, at 1 g per cigarette, based on the following:

Hand-rolled cigarette consumption shows an increase from around 30% in 1925 to 95% in 1957 as the percentage of tobacco used in hand-rolled cigarettes rather than pipes (assuming 1 g per cigarette), then a slight fall to 93% in 1960 (Dean (1962)).

Estimates of hand-rolled cigarette consumption in the latest available year were also given in the introductions to successive editions of RP6, and are shown here (together with derived data):

Year	Annual (millions)	Number/ adult/day	% pipe and HR tobacco used in HR cigarettes
1967	3 456	1.2	77
1970	3 552	1.1	87
1973	3 292	1.0	82

Plain/Filter cigarette sales

1951-1961: Todd (1963)

1961-1981: Maxwell, Jr. (Successive years)

1994: Ruff (1994), based on 103 brands accounting for >96% of market share.

Alternative data are given by Walker (1984) quoting Retail Tobacconist and Australian Financial Review:

Year	% filter
1955	1 to 2
1959	25
1960	60
1961	61
1970	75

Also according to Walker (1984), sales of cork-tipped cigarettes overtook sales of plain in the 1930s, and were especially favoured by women smokers.

Tar and nicotine machine yields of cigarettes

1969-1989: Quit Victoria (1995).

1994: Ruff (1994)

Testing was first carried out on a sample of popular brands in 1967, with all brands tested from 1969. Routine testing by the Australian Government Analytical Laboratories ceased in 1991, and data for 1994 are based on 103 brands accounting for >96% of market share. Yields were measured by the Australian national standard until 1991 when the revised ISO standard was adopted; this differed mainly in the butt length specified (Baker (2002)).

Alternative data are presented by Doyle (1985) quoting Thompson (1978) (no details of reference):

Years	SWAT (mg/cig)
1961-1965	26.5
1966-1970	25.8
1971-1975	22.6

Hill *et al* (1998) gives the average tar per cigarette in 1995 as 8.2 mg for men, and 7.2 mg for women.

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. 37 under *References*.

We have not attempted to include information specific to indigenous peoples, see for instance Walker (1984), Brady (2002) for historical information, and Trewin and Madden (2005) for current prevalence.

Source number**1 Walker (1984), Woodward (1984)**

- a. 1950-1969: Australian Public Opinion Polls.
- b. Results for 1945 from Woodward (1984) quoting Australian Gallup Polls. Age group not stated (adults, presumed age 21+ as other years).
- c. Assumed extension to age distribution for prevalence, age 15-20: males (1945-1950) 45%, (1962-1964) 40%, (1967-1969) 35%; females (1945-1969) 20%.
- d. Assumed age (21+) differs from that assumed (16+) in earlier editions of this report.

2 Gray and Hill (1975, 1977), Hill and Gray (1982, 1984), Hill *et al* (1988, 1991), Hill and White (1995), Hill *et al* (1998), White *et al* (2003)

- a. National surveys of adults commissioned by the Anti-Cancer Council of Victoria. Part of 'omnibus' market research survey. Personal interviews, one interview per household.

Year	Sample size	
	Males	Females
1974	3 316	3 037
1976	2 044	1 829
1980	2 137	2 172
1983	2 677	2 903
1986	4 537	4 903
1989	2 364	2 456
1992	2 983	3 063
1995	2 819	2 880
1998	7 852	

- b. Consumption per smoker based on broader age groups than prevalence of smoking for 1974 and 1976.
- c. In 1992 7.9% of men and 2.3% of women smoked hand-rolled cigarettes, and in 1995 8% of men and 4% of women smoked them.
- d. For the early years, we have taken results from Hill *et al* (1988) where possible. The estimates are standardised to the age distribution of the 1986 sample so may differ from those published earlier.
- e. In 1998 a nationwide calibration study using the same methods assessed a change in the wording of the questions (Mullins *et al* (2000)). However prevalence estimates comparable to earlier estimates were not presented, because the analysis methods were different and because of the low response rate, apparently due to changes in the market research field interview procedures. Results presented are taken from White *et al* (2003).
- f. Calculation of cigarettes per person (1995) based on percentage of smokers (all products), and number of factory made cigarettes per cigarette smoker, so may overestimate.
- g. Consumption category estimation (1974 and 1976) based on 1-19, 20-24, and 25+ cigarettes/smoker/day.
- h. Assumed extension to age distribution for prevalence, age 15: males (1974, 1976, 1980, 1983, 1986 and 1989) 20%, (1992) 18%; females (1974 and 1976) 15%, (1980, 1983, 1986 and 1989) 20%, (1992 and 1995) 18%. Number of cigarettes/person/day, males and females (1974, 1976, 1980, 1983) 2.0, (1986, 1989, 1992, 1995) 1.0.

3 Australian Bureau of Statistics (1978)

- a. Part of the Alcohol and Tobacco Consumption Patterns Survey: a multistage area sample of private and non-private dwellings, comprising about 0.66% of population of Australia. Members of armed forces and institutionalized populations excluded. Personal interviews: alcohol and tobacco consumption sample obtained in about a quarter of households.
- b. Assumed extension to age distribution for prevalence, age 15-17: 25%. Number of cigarettes/person/day, 3.0.

4 Tobacco Institute of Australia

- a. Assumed extension to age distribution for prevalence, age 15-17: 25%.

5 Doyle (1985), quoting McNair Anderson Associates Pty Ltd (1972-1979)

- a. 1972 represents 1972-1973, and similarly for other years.
- b. Consumption category estimation by Doyle, based on 1-10, 11-10, and 20+ cigarettes/smoker/day, using an earlier method by Todd.

6 National Heart Foundation of Australia (1983), Department of Community Services and Health (1990) quoting National Heart Foundation of Australia (1980), Risk Factor Prevalence Study Management Committee (1990)

- a. National Heart Foundation of Australia Risk Factor Prevalence Study. Surveys in Australian State capital cities. Sampling based on electoral rolls, resulting in under-representation of

migrants, the young, and the more mobile. Results calculated by an estimation procedure designed to reduce bias arising from this source, and from non-response. Participants invited to take part in a risk factor prevalence study: self-completed questionnaire before physical examination.

Year	Sample size		
	Males	Females	Total
1980			5 617
1983	3 740	3 875	7 640
1989	4 552	4 727	9 279

- b. Non-response rate around 25%
- c. Calculation of consumption per person based on prevalence of all cigarette smokers and number of manufactured cigarettes per manufactured cigarette smoker – this assumes the same smoking level by hand-rolled cigarette smokers as by manufactured cigarette smokers. In 1983, there were 100 (2.7%) male and 10 (0.3%) female hand-rolled cigarette-only smokers
- d. Assumed extension to age distribution (1989 only) for prevalence, age 15-19: 25%; age 70+: males, cigarettes 15%, all products 18%, females 8%. Number of cigarettes/person/day, age 15-19: males and females 3.0, age 70+: 1.0

7-8 Tolonen *et al* (2000), Kuulasmaa *et al* (1998), Wolf *et al* (1998), Molarius *et al* (1999)

- a. Surveys using self-administered questionnaires in two regions carried out in three phases, forming part of WHO MONICA Project:

Region*	Phase	Participation rate (%)**		Sample used**		Date
		Males	Females	Males	Females	
7 Perth (a)	1	84	83	861	921	May 1983-Nov 1983
8 Newcastle	1	82	81	1 214	1 240	May 1983-Dec 1983
7 Perth (b)	2	82	80	816	824	Jun 1989-Dec 1989
8 Newcastle	2	71	69	674	668	Jun 1988-Nov 1989
7 Perth (b)	3	84	84	771	779	May 1994-Nov 1994
8 Newcastle	3	77	77	637	688	Jun 1994-Dec 1994

* Perth (b) comprises 2 study centres, one of which is Perth (a).

** Perth 'sample used' includes age 25-34, all other figures are for age 35-64 only.

- b. All ages column relates only to age 35-64 and is standardized to world population.
- c. The Australian centres did not use the standard MONICA smoking questionnaires, and the definitions of smoking are not always clear. For Perth phase 2, occasional smokers (included in UC A category in Table 4) were current smokers who recorded 0 as amount currently smoked; for phase 3 they also reported not smoking every day. Product code A refers to cigarettes, pipe and cigars.
- d. For phase 1, there are minor discrepancies between the data shown in Table 4 and equivalent data taken from WHO (1989) used in earlier editions of this report.

9 Dwyer *et al* (1986)

- a. Nationwide survey excluding Sydney. Control part of a study of anti-smoking campaign in Sydney. Sample size in 1983: 5 154; response rate 60%. Sample size in 1984: 4 318.

10 Hill *et al* (1987, 1990, 1993, 1995, 1999, 2002), White and Hayman (2004)

- a. A collaborative project between state member organizations of the Australian Cancer Society (now The Cancer Council Australia) and other bodies—a series of three-yearly surveys of the prevalence of cigarette smoking among Australian secondary school students. Questionnaires completed anonymously, usually with teachers absent. All states and territories included except as shown below:

Year	Sample size		Excluded regions
	Males	Females	
1984	11 058	10 846	Australian Capital Territory (ACT)
1987	9 490	9 676	South Australia
1990	12 411	12 481	ACT
1993	11 194	11 502	ACT
1996	14 569	15 281	–
1999	12 544	12 942	–
2002	11 646	11 771	–

- b. Regular smokers: (1984-1993, 1999-2002) smoked daily in past week, (1996) smoked on six or more days in past week. All smokers: smoked in past week.
- c. Prevalence of regular smoking in 12-year-olds (represented as 1% in Table 4) is actually given as '<1%' for girls only (1987 survey) and for both boys and girls (1990 survey).

11 Department of Community Services and Health (1990) quoting National Health and Medical Research Council (1969), National Health and Medical Research Council (1979)

- a. National surveys of school children aged 9-16 by the National Health and Medical Research Council. 1968 represents 1967-1968.

Year	Sample size
1967-1968	26 000
1973	25 253

- b. Both surveys used the same sample schools except that schools in Victoria were omitted in 1973. The Northern Territories were apparently excluded from both surveys.
- c. Regular smokers: smoked more than 10 cigarettes in their lifetime and considered themselves smokers at time of survey. Consumption per smoker: based on amount smoked in past week.
- d. Consumption category estimation based on weekly consumption of 0, 1-4, 5-10, 11-20, and 20+ cigarettes/smoker.

12 Department of Community Services and Health (1990), quoting Australian Council for Health Physical Education and Recreation (1985)

- a. Survey in all states and territories. Sample size 7 000 school students, age 9-15. Consent not obtained in 22.5% of initial sample, eventual sample 6 451.
- b. Regular smokers: smoked once or more per week. Data labelled UC* in Table 4, and data in Tables 5, 6, and 7 based on those who responded positively to number of cigarettes smoked in last 7 days, adjusted for non-respondents.
- c. Unexplained discrepancy with data presented by Gliksman *et al* (1989).
- d. Consumption category estimation based on weekly consumption of 1-5, 6-10, 11-20, 21-30, and 31+ cigarettes/smoker.

13 Castles (1992), Australian Bureau of Statistics (1996), Siahpush and Borland (2001), Australian Bureau of Statistics (ABS) (2002, 2003, 2004)

- a. National Health Survey (NHS). Five-yearly national surveys in all States and Territories. Smoking questions only asked of those age 18+. Personal interviews. All adults in household in 1990 and 1995, one randomly selected adult per household in 2001.

Year	Date	Sample coverage		Sample size		Response rate (%)*
		Areas	Dwellings	Households	Persons*	
1990	Oct 1989- Sep 1990	Urban and rural	Private and special	22 200	54 576	96
1995	Feb 1995- Jan 1996	Urban, rural and sparsely settled	Private and special	23 800	53 828	92
2001	Feb-Nov 2001	Urban and rural	Private	17 918	26 863	92

* includes children

- b. Castles (1992) states that the methodology was broadly similar to source 3 (Alcohol and Tobacco Consumption Patterns Survey). See also note d for source 14 (below).
- c. Results given in the *All ages* column of Table 4 for 1995 and 2001 are not age-adjusted. Age-standardised results are available from Australian Bureau of Statistics (ABS) (2002).
- d. Assumed extension to age distribution for prevalence, age 15-17: 20%. Number of cigarettes/person/day (1990 only), 2.0.

14 Department of Community Services and Health (1990), Jones (1993), Commonwealth Department of Health and Family Services (1995), Makkai and McAllister (1998), Australian Institute of Health and Welfare (AIHW) (1999, 2002, 2005a)

- a. National Campaign against Drug Abuse, later National Drug Strategy Household Survey (NDSHS). Conducted in all States and Territories. Estimates based on weighted combined samples. 1985: quota sample, later surveys: random samples. 1985-1991: urban centres of 5000+ population only. In 1985-1995, smoking information was obtained from personal interviews, later surveys used self completion booklets (1998 60%, 2001 85%, 2004 82%) and computer assisted telephone interviews (CATI)(2001 8%, 2004 18%).

Year	Sample size
1985	2 791
1988	2 255
1991	2 850
1993	3 500
1995	3 850
1998	10 030
2001	26 744
2004	29 445

- b. In 2004, 12-13 year-old were included for the first time, and most results continue to be presented for age 14+. The prevalence of smoking for age 12+ is given by AIHW (2005a) as regular smokers: males 18%, females 16%; all smokers: males 22%, females 18%.
- c. Siahpush (2003) compared the 2001 NDSHS and NHS (source 13), and found that prevalence estimates were nearly identical, when defined as all current smoking by age 18+, and excluding the CATI component of NDSHS.
- d. In 2001 and 2004, mean cigarettes per smoker (Table 5) refers to recent tobacco smokers (used tobacco in last 12 months).
- e. Sales adjustment calculations for 2004 based population for 2001.

15 Anonymous (1969)

- a. National Health and Medical Research Council survey of children aged 9-16 years. Results only available for ages 10 (not shown here) and 15. Total sample size 20 000.
- b. Regular smokers: smoked more than 20 cigarettes a week.

16 Gliksman *et al* (1989)

- a. Health and Fitness Survey of Australian Schoolchildren. Nationally representative sample of schools excluding those with less than 200 pupils. Total sample size 6 451 for age 9-15, of whom 3 564 age 12-15 are included here.
- b. Smokers: smoked at least one cigarette in the last seven days.

17 Siahpush and Borland (2004)

- a. National Tobacco Campaign evaluation surveys. Results shown for 1997 relate to a benchmark survey in May (before campaign) and first follow-up (November). Quota sampling using telephone interviews. Results shown here are self-respondents, weighted by gender, age and state to national population. Alternative results using proxy responses for all other household members and weighted only by state (including age-specific results) are given by Carter and Scollo (2000).

Year	Sample Size
1997 (benchmark)	6 628
1997 (follow-up)	17 558
1998	11 147
1999	12 248
2000	13 742

- b. Smoked cigarettes at least weekly.
- c. According to Scollo *et al* (2003), mean daily consumption per smoker was 15.4 in 1997 and 14.1 in 2000 (sexes combined).
- d. Assumed extension to age distribution for prevalence, age 15-17: 20%.

18 Pirkis *et al* (2003)

- a. Child and Adolescent component of National Survey of Mental Health and Wellbeing. Multistage household survey, one respondent per household. Results presented for age 14-17 only. Sample size 1 192, response rate 70%. Weighted to national population.
- b. Smokers: smoked in past 30 days.

19 Trahair (1965)

- a. Study in three suburbs of Melbourne. Age group not stated. Personal interviews conducted at home. Sample size 204.
- b. Data on prevalence not available in form suitable for inclusion in Table 4. Prevalence of smoking was higher among men than among women, and "a higher proportion of women under than over 40 smoked cigarettes. This was not so for men."
- c. Consumption category estimation based on based on 0-7 (assume 1-9), 10-18 (assume 10-19), 20-25, 27-35 (assume 26-39), and 40+ cigarettes/smoker/day.

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