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# **International Smoking Statistics**

Web Edition

A collection of worldwide historical data

## **Switzerland**

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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](http://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](http://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 20<sup>th</sup> 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](http://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.

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*.

Data are available since 1934, but for 1974 to 1992 they are incomplete and conflicting. In those years they include sales to tourists and frontier zone traffic but exclude imports. For 1993 onwards data are available that take account of imports and exports for the main tobacco types including hand-rolling tobacco.

From 1934 until 1972 the consumption of manufactured cigarettes per adult increased, with some fluctuations, from 2 cigarettes per day to a peak of nearly 11 cigarettes per day. Thereafter consumption decreased to 6 cigarettes per day by 2005. No information on smoking of hand-rolled cigarettes is available until 1993. From then until 2006 the smoking of hand-rolled cigarettes increased but was marginal compared with the smoking of manufactured cigarettes.

The consumption of tobacco products per adult increased, with some fluctuations, from 6 g per day in 1934 to 12-13 g at the beginning of the 1970s. This reduced to 8 g per day by the 1990s and reduced further (to 6-7 g) by the 2000s.

In the mid 1930s, 25% of all tobacco was consumed as manufactured cigarettes. This proportion increased to about 80% in the early 1970s and about 90% during the 1990s and early 2000s. Before the war, sales of cigars and of smoking tobacco were both greater than cigarette sales, but decreased to 7% and 3-4% respectively by the 2000s.

Trümpy (1983) summarized the development of smoking in Switzerland as follows: "According to Swiss documents, a resistance initially arose against smoking, which was imported from America and propagated mainly among soldiers, but it eventually became increasingly tolerated. Outdoor smoking was disapproved of up to the mid-nineteenth century, and women were not allowed to indulge in cigarette smoking before 1918; since 1945, it has increased in both sexes. Medical warning began extensively only after 1970."

### Survey data

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

Apart from a survey in a rural area in the 1950s, no data on adult smoking are available before the 1970s.

Nationally based surveys generally showed that the prevalence of tobacco smoking among men aged 15 years and over fell from about 50-60% in the mid-1970s to around 35% in the 2000s. The prevalence of cigarette smoking was initially about 8 percent lower when reported separately (source 1) but this difference reduced somewhat to around 4-6% by the 1990s (sources 9 and 10).

Over the same period, the prevalence of smoking among women fell from about 30-40% to 20-25%. Very few women smoked products other than cigarettes; for example in 2006 only 1-2% of women smokers smoked cigars, cigarillos or a pipe, while among male smokers 12% smoked cigars, 5% smoked cigarillos and 3% smoked a pipe, exclusively or in combination with cigarettes.

In general, more men smoked than women in each age group, but from the mid-1970s some surveys show that there were more young women who smoked than young men. A lower percentage of smokers in older age groups was more marked in women than in men. The prevalence of smoking other products but not cigarettes increased with age; for instance in 1975, other products were smoked by 2% of men under age 25, but by 15% over age 55.

Comparison of survey and sales data suggests that surveys under-reported consumption by 30-55%. Between 1971 and 2006, the estimated number of cigarettes smoked per person per day (sales-adjusted) decreased for men from about 15 to about 8, while for women it fell from around 6 to about 4.

**Table 1.1** Total annual sales of tobacco products, 1934-1973

Year	Manufactured cigarettes		Cigars		Pipe & HR <sup>1</sup> tobacco tonnes	All tobacco products tonnes
	tonnes	millions	tonnes	millions		
1934-1937	1 720	1 728	2 400	481	2 630	6 760
1938-1940	2 270	2 262	2 490	500	2 540	7 300
1941	2 720	2 746	3 040	611	2 770	8 530
1942	2 720	2 715	2 860	573	2 770	8 350
1943	3 180	3 167	2 860	567	2 590	8 620
1944	3 450	3 444	2 490	499	2 310	8 260
1945	3 950	3 964	2 360	473	2 090	8 390
1946	4 400	4 416	2 860	569	2 950	10 210
1947	4 990	5 009	2 990	597	2 490	10 480
1948	4 990	4 989	2 810	559	2 180	9 980
1949	5 130	5 143	2 180	437	2 130	9 430
1950	5 400	5 405	2 220	440	2 220	9 840
1951	5 400	5 672	2 360	470	2 220	9 980
1952	6 210	6 222	2 400	477	2 130	10 750
1953	5 900	6 191	2 450	489	2 130	10 480
1954	5 940	6 236	2 400	478	2 040	10 390
1955	6 300	6 625	2 540	504	2 000	10 840
1956	6 760	7 081	2 400	477	1 950	11 110
1957	6 800	7 488	2 270	454	1 860	10 930
1958	7 480	8 248	2 490	502	1 860	11 840
1959	7 760	8 557	2 450	492	1 860	12 070
1960	8 850	9 751	2 400	478	1 680	12 930
1961	9 840	10 866	2 590	517	1 720	14 150
1962	10 610	11 691	2 950	588	1 680	15 240
1963	11 970	11 986	2 900	582	1 720	16 600
1964	11 570	11 550	3 180	639	1 630	16 370
1965	13 740	13 728	3 080	620	1 590	18 420
1966	11 070	11 051	3 130	624	1 360	15 560
1967	12 700	12 715	3 180	634	1 410	17 280
1968	13 610	13 603	3 310	661	1 320	18 230
1969	15 420	15 427	3 270	650	1 270	19 960
1970	16 280	16 300	3 310	662	1 220	20 820
1971	17 870	17 900	3 360	679	1 000	22 230
1972	18 690	18 700	3 670	744	1 000	23 360
1973	16 470	16 500	3 580	727	910	20 960

1 Tobacco for hand-rolled cigarettes

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

**Table 1.2** Total annual sales/production of Swiss-produced tobacco products, 1974-2000

Year	Manufactured cigarettes sales millions	Pipe & HR <sup>1</sup> tobacco production tonnes	Cigars <sup>2</sup> production millions	Tessin specialities (cigars)	
				Toscana production millions	Brissago production millions
1974	16 479	983	597	20	37
1975	15 493	880	468	17	34
1976	15 317	821	438	15	34
1977	15 906	807	430	14	34
1978	15 369	739	393	11	31
1979	15 038	679	339	10	30
1980	15 381	707	360	10	29
1981	15 689	647	353	9	27
1982	15 991	621	334	8	26
1983	16 305	573	266	8	23
1984	16 163	532	260	8	23
1985	15 793	497	262	7	22
1986	15 823	432	250	7	21
1987	15 886	403	241	6	20
1988	15 855	348	219	6	17
1989	15 964	354	219	6	17
1990	15 887	299	208	5	17
1991	16 051	294	197	5	16
1992	16 926	272	197	6	15
1993	15 929	255	177	6	14
1994	15 592	214	155	5	14
1995	15 507	189	158	4	14
1996	15 243	142	173	4	14
1997	14 873	135	178	3	13
1998	15 157	110	157	4	11
1999	14 612	125	188	3	15
2000	14 527	99	150	3	11

1 Tobacco for hand-rolled cigarettes

2 Excluding Tessin specialities

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

**Table 1.3** Total annual sales of tobacco products, 1993-2006

Year	Manufactured cigarettes		Cigars		Pipe tobacco tonnes	Hand-rolling tobacco tonnes	All tobacco products tonnes
	millions	tonnes	millions	tonnes			
1993	15 929	15 929	235	1 177	381	73	17 560
1994	15 592	15 592	210	1 051	356	76	17 075
1995	15 507	15 507	203	1 016	340	78	16 941
1996	15 243	15 243	211	1 055	331	83	16 711
1997	14 873	14 873	209	1 046	315	95	16 329
1998	15 157	15 157	215	1 077	306	102	16 642
1999	14 612	14 612	212	1 061	291	107	16 071
2000	14 527	14 527	207	1 035	273	99	15 934
2001	14 214	14 214	212	1 061	258	104	15 637
2002	14 498	14 498	214	1 068	236	107	15 909
2003	14 554	14 554	211	1 057	229	132	15 971
2004	14 212	14 212	212	1 059	213	184	15 669
2005	12 761	12 761	212	1 061	203	280	14 305
2006	13 168	13 168	221	1 106	184	320	14 779

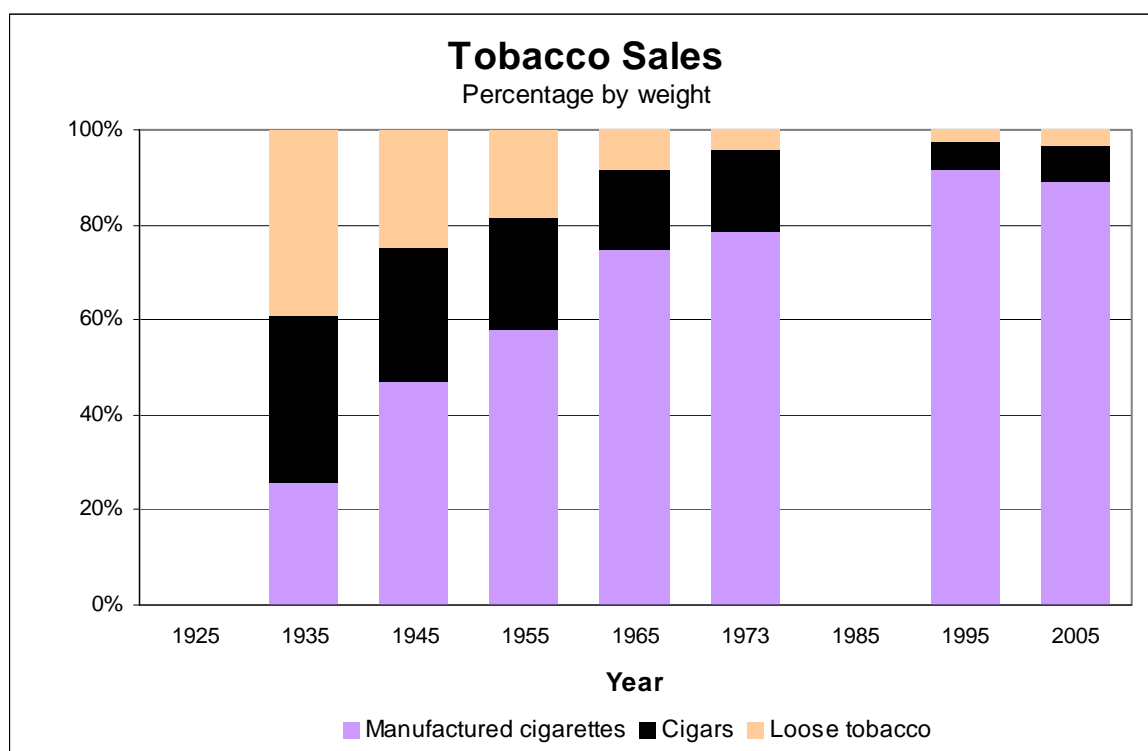
Source: see *Notes on sources of sales data: Sales data for 1974 onwards*, p. 30

**Table 1.4** Percentage of sales of tobacco in different forms (by weight), selected years, 1935-2005

Year	Manufactured cigarettes %	Cigars %	Loose tobacco %
1935	25.5	35.6	39.0
1945	47.0	28.1	24.9
1955	58.1	23.4	18.5
1965	74.6	16.7	8.6
1973	78.6	17.1	4.3
1995	91.5	6.0	2.5
2005	89.2	7.4	3.4

Source: calculated from Tables 1.1 & 1.3

**Figure 1** Percentage of sales of tobacco in different forms (by weight), selected years, 1935-2005



Source: Table 1.4

**Table 2** Sales of cigarettes and of all tobacco products; 1934-2006  
Annual total and average per adult (age 15 years and over) per day

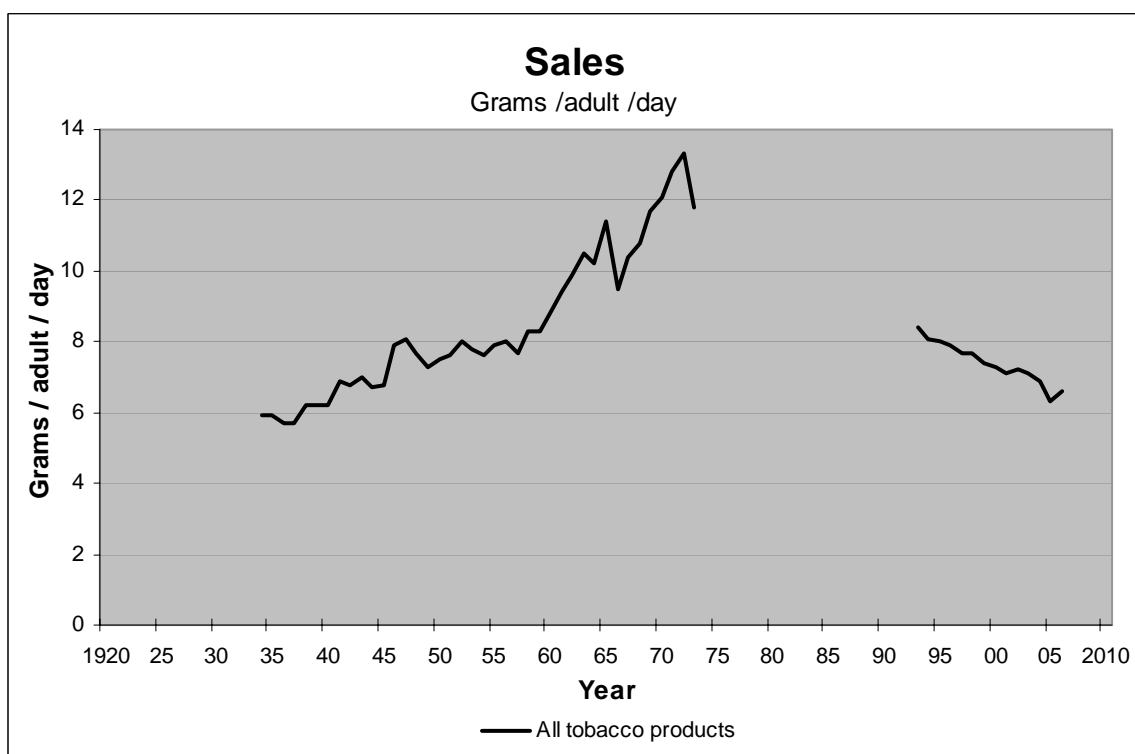
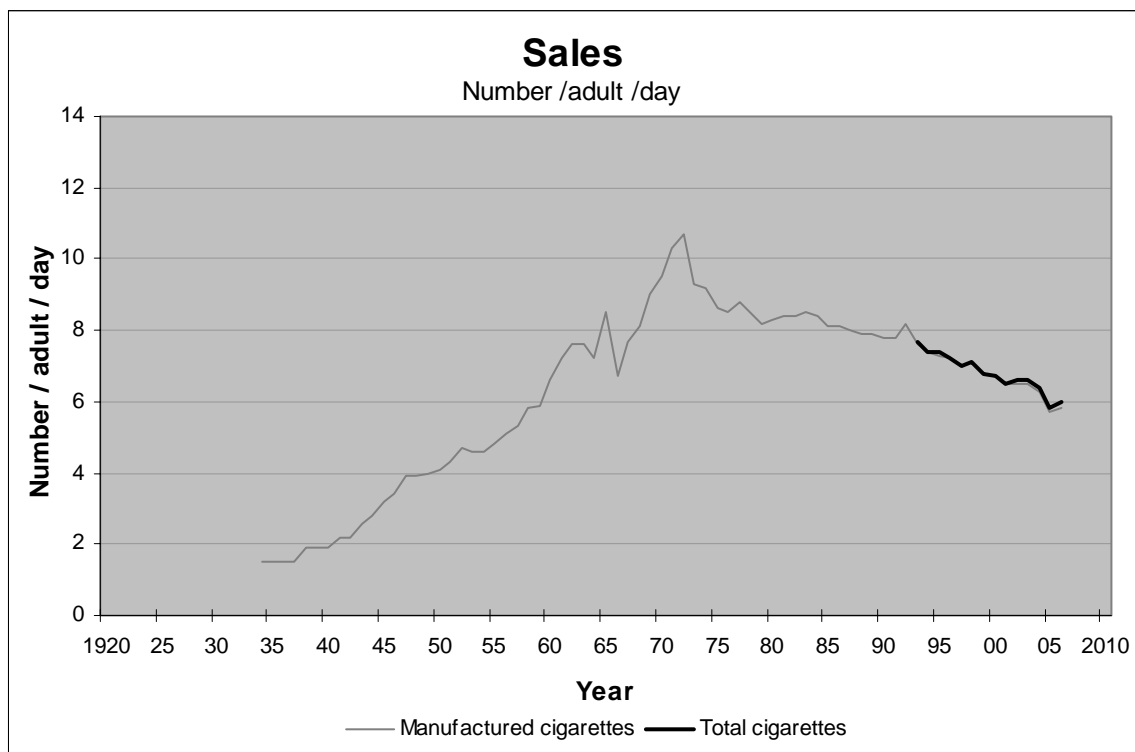
Year	Manufactured cigarettes		Hand-rolled cigarettes		Total cigarettes		All tobacco products	
	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual tonnes	Grams/ adult/day
1934-1937	1 728	1.5					6 760	5.9
1938-1940	2 262	1.9					7 300	6.2
1941	2 746	2.2					8 530	6.9
1942	2 715	2.2					8 350	6.8
1943	3 167	2.6					8 620	7.0
1944	3 444	2.8					8 260	6.7
1945	3 964	3.2					8 390	6.8
1946	4 416	3.4					10 210	7.9
1947	5 009	3.9					10 480	8.1
1948	4 989	3.9					9 980	7.7
1949	5 143	4.0					9 430	7.3
1950	5 405	4.1					9 840	7.5
1951	5 672	4.3					9 980	7.6
1952	6 222	4.7					10 750	8.0
1953	6 191	4.6					10 480	7.8
1954	6 236	4.6					10 390	7.6
1955	6 625	4.8					10 840	7.9
1956	7 081	5.1					11 110	8.0
1957	7 488	5.3					10 930	7.7
1958	8 248	5.8					11 840	8.3
1959	8 557	5.9					12 070	8.3
1960	9 751	6.6					12 930	8.8
1961	10 866	7.2					14 150	9.4
1962	11 691	7.6					15 240	9.9
1963	11 986	7.6					16 600	10.5
1964	11 550	7.2					16 370	10.2
1965	13 728	8.5					18 420	11.4
1966	11 051	6.7					15 560	9.5
1967	12 715	7.7					17 280	10.4
1968	13 603	8.1					18 230	10.8
1969	15 427	9.0					19 960	11.7
1970	16 300	9.5					20 820	12.1
1971	17 900	10.3					22 230	12.8
1972	18 700	10.7					23 360	13.3
1973	16 500	9.3					20 960	11.8
1974	16 479	9.2						
1975	15 493	8.6						
1976	15 317	8.5						
1977	15 906	8.8						
1978	15 369	8.5						
1979	15 038	8.2						
1980	15 381	8.3						
1981	15 689	8.4						
1982	15 991	8.4						
1983	16 305	8.5						
1984	16 163	8.4						
1985	15 793	8.1						
1986	15 823	8.1						
1987	15 886	8.0						
1988	15 855	7.9						
1989	15 964	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
1990	15 887	7.8						
1991	16 051	7.8						
1992	16 926	8.2						
1993	15 929	7.6	73	0.0	16 002	7.7	17 560	8.4
1994	15 592	7.4	76	0.0	15 668	7.4	17 075	8.1
1995	15 507	7.3	78	0.0	15 585	7.4	16 941	8.0
1996	15 243	7.2	83	0.0	15 326	7.2	16 711	7.9
1997	14 873	7.0	95	0.0	14 968	7.0	16 329	7.7
1998	15 157	7.1	102	0.0	15 259	7.1	16 642	7.7
1999	14 612	6.8	107	0.0	14 719	6.8	16 071	7.4
2000	14 527	6.7	99	0.0	14 626	6.7	15 934	7.3
2001	14 214	6.5	104	0.0	14 318	6.5	15 637	7.1
2002	14 498	6.5	107	0.0	14 605	6.6	15 909	7.2
2003	14 554	6.5	132	0.1	14 686	6.6	15 971	7.1
2004	14 212	6.3	184	0.1	14 396	6.4	15 669	6.9
2005/1	12 761	5.7	280	0.1	13 041	5.8	14 305	6.3
2006/1	13 168	5.8	320	0.1	13 488	6.0	14 779	6.6

1 Per adult data based on 2004 population  
Source: Tables 1.1, 1.2 and 1.3. Population, see *Population*, Methods p. 14.

**Figure 2** Sales of (i) manufactured cigarettes and total<sup>1</sup> cigarettes and (ii) all tobacco products; 1934-2006  
Average per adult (aged 15 years and over) per day



<sup>1</sup> Includes estimated hand-rolled cigarette consumption  
Source: Table 2

**Table 3** Manufactured cigarettes: percentage of total sales as filter cigarettes, 1945-1996; sales-weighted average machine yields per cigarette of tar (SWAT), 1970-1978 and nicotine (SWAN), 1970-1975

Year	Filter %	SWAT mg/cig	SWAN mg/cig
1945	5.5		
1950	23.8		
1955	49.9		
1960	74.7		
1961	77.4		
1962	78.7		
1963	81.3		
1964	83.8		
1965	85.3		
1966	86.5		
1967	87.9		
1968	89.2		
1969	90.8		
1970	92.9	24.3	1.38
1971	94.4	20.2	1.29
1972	94.7	18.7	1.19
1973	94.7	18.3	1.13
1974	93.0	17.4	1.08
1975	94.0	15.6	0.95
1976	96.1	14	
1977	96.6	13	
1978	96.8	13	
1979	96.9		
1980	97.3		
1981	97.0		
1982	96.8		
1983	97.1		
1984	97.2		
1985	97.2		
1986	97.5		
1987	97.8		
1988	98.1		
1989	98.3		
1990	98.6		
1991	97.7		
1992	97.9		
1996	98.3		

Source: see *Notes on sources of sales data: Plain/Filter cigarette sales*, p. 31 and *Tar and nicotine machine yield of cigarettes*, p. 31





**Table 4M** (continued from p. 16 )  
Prevalence of smoking, males

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
92	2	U	A	32				44				37				28				36				
92	2	U	A	24				43	43	46	44	41	37			29				37				
92	12	A	R	25				38	38			32	28		18									
92	12	A	A	29				42	45	41	42	42		33		26			37					
92	12	A	A	16		38	34	41; 46;																
93	2	U	A	41																				
93	9	UC	R					37				35		20		24			27					
93	9	UC	A					41				41		26		29			33					
93	9	A	A					44				44		35		39			39					
93	10	UC	R									42		30		33			36					
93	10	UC	A									45		36		36			40					
93	10	A	A									50		43		38			44					
93	18	U	R	20																				
93	19	U	R	30																				
94	11	U	*	2	11																			
94	11	U	R	5	17																			
97	2	U	A	30				46	44	45	40	43		37		29			39					
97	12	A	R	35				44	37			35		28		18								
97	12	A	A	42				52	46	44	44	44		34		26			39					
97	12	A	A	27		48	47	58; 51;																
98	11	U	*	3	16																			
98	11	U	R	6	24																			
01	17	A	R	18				31	38		29		21		18			27						
01	17	A	A	33				48	47		38		31		26			37						
01	17	A	R	1	12	23	25																	
01	17	A	A	7	26	37	41																	
02	11	U	*	4	16																			
02	11	U	R	7	23																			
02	12	A	R	36				39		38		38		29		24		15		34				
02	12	A	A	40				42		40		40		30		25		15		36				
02	12	A	A	22		42	47	50; 45;																
02	17	A	R	16				31	29		28		24		21			25						
02	17	A	A	27				43	43		38		34		29			36						
02	18	U	R	18		15	20	28	34;										21					
02	19	U	R	25		31	39	44	45;										38					
03	17	A	R	17				34	29		25		24		21			25						
03	17	A	A	27				46	39		34		32		28			34						
03	20	UC	*	22																				
03	20	UC	A	19	24	33	38																	
04	17	A	R	16				35	31		22		25		21			24						
04	17	A	A	27				46	42		33		33		27			34						
05	17	A	R	15				35	30		24		23		18			24						
05	17	A	A	27				48	42		35		34		25			35						
06	11	U	*	2	11																			
06	11	U	R	3	15																			
06	17	A	R	13				35	27		21		24		18			23						
06	17	A	A	23				48	41		29		31		24			32						

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

Frequency: A = all smokers (including occasional)  
 R = regular or daily smokers  
 U = unspecified  
 \* = refer to *Notes on sources of survey data*, p. 32  
 All ages: relates to ages reported; as given in original source

**Table 4F** (continued from p. 17)  
Prevalence of smoking, females

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	
92	2	U	A	27				35			26				14				26		
92	2	U	A	20				37	38	39	36	32	23	13				29			
92	12	A	R	15				29	31		29	23	17								
92	12	A	A	18				33	34	33	33	28	21	11				24			
92	12	A	A	12	20	24	36, 33														
93	2	U	A	32																	
93	9	UC	R					34	33	22	18					25					
93	9	UC	A					40	40	26	23					31					
93	9	A	A					41	40	26	22					31					
93	10	UC	R							29	27	21					26				
93	10	UC	A							34	31	24					30				
93	10	A	A							34	31	24					30				
93	18	U	R	17																	
93	19	U	R	27																	
94	11	U	*	2	11																
94	11	U	R	5	18																
97	2	U	A	31				37	35	33	38	32	30	16				31			
97	12	A	R	31				34	31		32	26	17								
97	12	A	A	39				42	34	38	36	34	25	11				28			
97	12	A	A	26		48	54	45, 33													
98	11	U	*	3	17																
98	11	U	R	8	24																
01	17	A	R	14				24	21	24	22	17					21				
01	17	A	A	28				37	31	32	29	22					30				
01	17	A	R	3	9	21	26														
01	17	A	A	6	21	36	40														
02	11	U	*	3	16																
02	11	U	R	7	23																
02	12	A	R	30				27	31	26	19	12	6					23			
02	12	A	A	35				30	34	28	21	13	6					26			
02	12	A	A	20	43	40	38, 37														
02	17	A	R	15				27	21	24	24	16					21				
02	17	A	A	25				41	31	29	29	19					28				
02	18	U	R	17		15	21	23	22											19	
02	19	U	R	29		33	38	39	41											37	
03	17	A	R	15				27	22	25	21	16					21				
03	17	A	A	27				42	30	30	27	19					28				
03	20	UC	*	22																	
03	20	UC	A	23	28	36	38														
04	17	A	R	14				25	19	23	23	16					20				
04	17	A	A	22				36	27	29	29	21					27				
05	17	A	R	10				25	17	20	23	15					19				
05	17	A	A	23				38	25	27	28	20					26				
06	11	U	*	1	10																
06	11	U	R	4	15																
06	17	A	R	14				27	18	20	22	15					19				
06	17	A	A	26				38	27	25	29	18					26				

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  
 Frequency: A = all smokers (including occasional)  
 R = regular or daily smokers  
 U = unspecified  
 \* = refer to *Notes on sources of survey data*, p. 32  
 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, 1956-2006

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+		
56	13	UC	E	16																							
56	13	A	E					12		16		17		16		17		13		9.2				16			
71	3	UC	E					16																			
71	6	UC		16																							
71	14	UC																									
75	1	UC	E					13				20				16				14					17		
77	4	A						20				21				16											
78	3	UC	E					16																			
79	1	UC	E					15				17				19				14					17		
79	16	UC	E					19				21				16									19		
80	4	A						22				21				18											
81	1	UC	E*					17				20				21				21					20		
82	7	UC	E					21				22		21		22		18		14					20		
85	9	UC						22				25		23		18									22		
86	10	UC										23		24		20									23		
89	9	UC						23				25		24		20									23		
89	10	UC										23		22		22									23		
92	12	A						14				17		18		18		20		14		14					
92	12	A				5.4	12		14		15; 16;																
93	9	UC						21				23		20		19									21		
93	10	UC										22		21		22									22		
94	11	UC	E*			8.4																					
97	12	A						11				14		16		18		17		15		11					
97	12	A				6.2	8.2		12		13; 15;																
98	11	U		2.0	2.9	4.6																					
01	17	UC	E*	17																							
02	11	U		2.5	3.9	4.6																					
02	12	A						10				15		15		17		14		12		10					
02	12	A				5.7	7.5		12		12; 16;																
03	20	UC	E			11																					
05	17	UC		17																							
06	11	U	E*			8.5	12																				
06	17	UC		17																							

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, 1956-2006

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	
56	13	UC	E																		
56	13	A	E	8.4																	
71	3	UC	E	10																	
71	6	UC		11																	
71	14	UC		9.8																	
75	1	UC	E	11																	11
77	4	A		13																	
78	3	UC	E	12																	
79	1	UC	E	9.6																	13
79	16	UC	E	14																	14
80	4	A		15																	
81	1	UC	E*	15																	15
82	7	UC	E	15																	16
85	9	UC		18																	17
86	10	UC		18																	18
89	9	UC		16																	17
89	10	UC		14																	15
92	12	A		11																	13
92	12	A		11																	7.2
93	9	UC		17																	17
93	10	UC		17																	16
94	11	UC	E*	8.2																	
97	12	A		8.8																	11
97	12	A		5.0																	11
98	11	U		1.7																	4.2
01	17	UC	E*	14																	
02	11	U		1.8																	5.0
02	12	A		9.0																	11
02	12	A		4.7																	10
03	20	UC	E	10																	
05	17	UC		14																	
06	11	U	E*	10																	11
06	17	UC		14																	

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 6M** Number of cigarettes smoked per person per day, males:  
selected surveys by age, 1956-2006; with percentage total sales

Year	Source	Product	Age Groups																	All ages	% Total sales									
			12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60			65	70	75	80+					
56	13	UC	3.7																		**									
56	13	A					5.4				8.7				10				9.6				10		5.6		4.1		8.5	51%A
71	3	UC							8.6																				**	
71	6	UC*	6.9																		46%m									
71	14	UC																			**									
75	1	UC					4.6				9.5				7.0				4.6				6.7	56%m						
77	4	A					8.6				11				7.5										**					
78	3	UC							6.7																				**	
79	1	UC					5.1				8.5				8.7				3.4				6.3	58%m						
79	16	UC					7.5				7.1				4.9									6.7	54%m					
80	4	A					10				9.3				8.1										**					
81	1	UC*					6.8				11				8.0				4.2				7.6	68%m						
82	7	UC					8.5				9.8				8.1				7.2		4.9		3.7			7.4	62%m			
85	9	UC					8.3				8.3				7.8		5.0							7.3	**					
86	10	UC					10				8.8				6.6							8.7	**							
89	9	UC					9.9				9.4				7.3		6.4							7.9	**					
89	10	UC					7.4				7.0				6.1							6.9	**							
92	12	A					4.9				7.4				7.5		7.2		6.2		3.8		2.6			54%A				
92	12	A		0.9	4.4	4.6	6.1	7.5																			**			
93	9	UC					7.6				7.9				3.9		4.7							5.7	**					
93	10	UC					9.2				6.3				7.4							7.7	**							
94	11	UC*		1.4																			**							
97	12	A					5.3				6.4				7.2		7.2		5.1		3.8		2.2			60%A				
97	12	A		1.7	3.9	5.5	7.6	7.4																			**			
98	11	U	0.1	1.1																			**							
01	17	UC*	4.7																		54%T									
02	11	U	0.2	1.1																			**							
02	12	A					4.2				6.2				6.0		6.6		4.3		2.9		1.5			55%A				
02	12	A		1.3	3.1	5.5	6.0	7.0																			**			
03	20	UC		2.4																			**							
05	17	UC*	4.2																		55%T									
06	11	U*	0.1	1.3																			**							
06	17	UC*	3.9																		51%T									

Source: *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: estimated % of total sales implied by survey, sexes combined, of M = manufactured, T = total cigarettes, A = all products (cigarette equivalents), m = manufactured cigarettes - regard with caution (see Methods p. 12)  
 \*\* = cannot be calculated  
 -- = adjusted by original author



**Table 7M** Number of cigarettes smoked per person per day, sales-adjusted, males: selected surveys<sup>1</sup> by age, 1956-2006; with percentage total sales

Year	Source	Product	Age Groups																All ages	% Total sales						
			12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55			60	65	70	75	80+	
56	13	A							11																17	51%A
71	6	UC*																								46%m
75	1	UC							8.2																12	56%m
79	1	UC							8.8																11	58%m
79	16	UC																							12	54%m
81	1	UC*							10																11	68%m
82	7	UC																							12	62%m
92	12	A							9.0																	54%A
97	12	A							8.8																	60%A
01	17	UC*																								54%T
02	12	A							7.5																	55%A
05	17	UC*																								55%T
06	17	UC*																								51%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: *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 implied by survey, sexes combined, of M = manufactured, T = total cigarettes, A = all products (cigarette equivalents) or m = manufactured cigarettes – regard with caution (see *Methods* p. 12)  
 -- = adjusted by original author

**Table 7F** Number of cigarettes smoked per person per day, sales-adjusted, females: selected surveys<sup>1</sup> by age, 1956-2006; with percentage total sales

Year	Source	Product	Age Groups																	All ages	% Total sales						
			12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60			65	70	75	80+		
56	13	A	0.6																		51%A						
71	6	UC*	6.2																		46%m						
75	1	UC	9.3					9.3					5.5					2.8		5.9	56%m						
79	1	UC	6.0					11					5.2					2.6		6.7	58%m						
79	16	UC	9.2					5.5					2.2						6.3	54%m							
81	1	UC*	9.5					10					6.4					2.4		6.4	68%m						
82	7	UC	8.8					7.4					5.6					4.0		2.6		1.1		5.4	62%m		
92	12	A	5.1					8.2					8.0					6.6		4.7		2.0		0.6			54%A
97	12	A	5.9					6.7					8.1					7.1		5.2		2.3		1.3			60%A
01	17	UC*	5.4																		54%T						
02	12	A	5.7					5.9					7.9					6.4		4.9		2.6		1.0			55%A
05	17	UC*	4.9																		55%T						
06	17	UC*	5.2																		51%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: *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 implied by survey, sexes combined, of M = manufactured, T = total cigarettes, A = all products (cigarette equivalents) or m = manufactured cigarettes – regard with caution (see Methods p. 12)  
 -- = adjusted by original author

**Table 8** Estimated<sup>1</sup> prevalence of smoking and estimated<sup>1</sup> number of cigarettes per person per day (unadjusted and sales-adjusted): summary of Tables 4, 6 and 7; 1956-2006  
Males and females aged 15 years and over

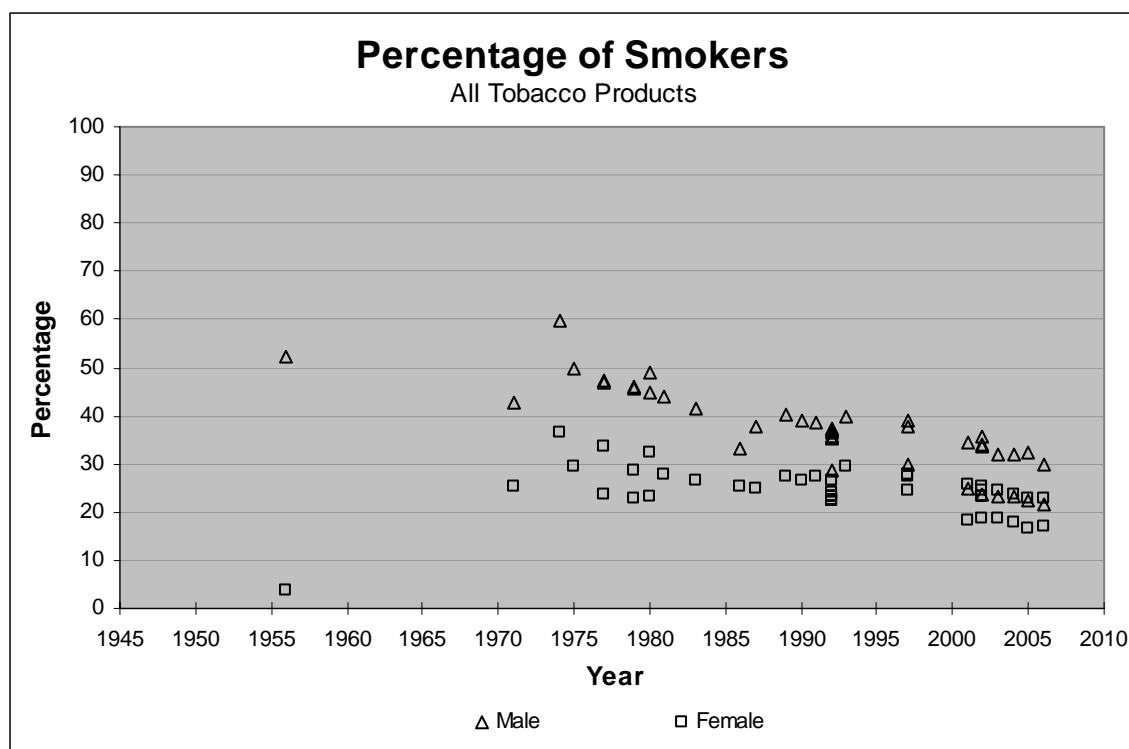
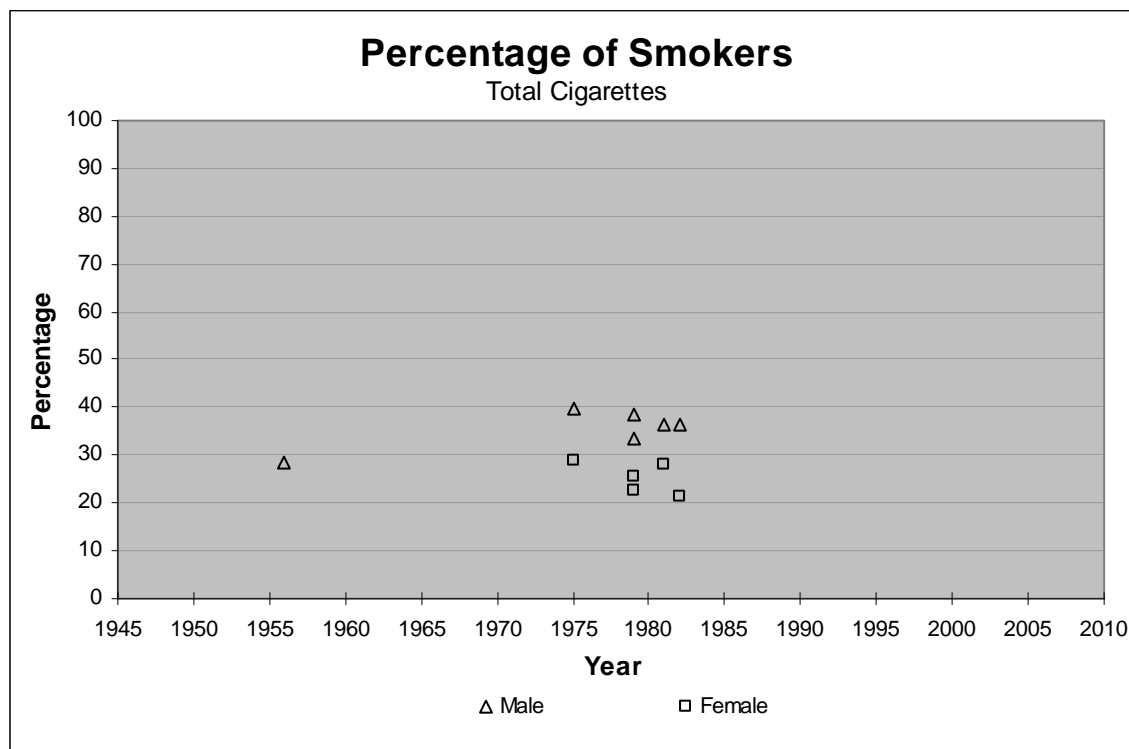
Year	Source <sup>2</sup>	Product <sup>3</sup>	Prevalence <sup>4</sup>				Number of cigarettes									
			Manufactured cigarettes		Total cigarettes <sup>5</sup>		All products <sup>6</sup>		Unadjusted <sup>7</sup>			Sales-adjusted <sup>8</sup>				
			M	F	M	F	M	F	number/ person/day	Total sales %	Manufactured cigarettes number/ person/day	Total cigarettes <sup>9</sup> number/ person/day				
						M	F		M	F	M	F				
1956	13	UC+A			28		52	4	8.2	0.3	51			16.1	0.6 / <sub>11</sub>	
1971	6	UC+U				43	25	6.8	2.9	46	14.7	6.2				
1974	2	U				60	37									
1975	1	UC+A			40	29	50	29	6.4	3.3	56	11.5	6.0			
1977	2	U				47	34									
	4	A				47	23	8.7	3.5	/ <sub>10</sub>						
1979	1	UC+A			39	26	46	29	6.5	3.1	58	11.3	5.4			
	16	UC+A			34	22	46	23	6.1	2.9	54	11.3	5.3			
1980	2	U				49	32									
	4	A				45	23	8.5	3.7	/ <sub>10</sub>						
1981	1	UC+A			36	28	44	28	7.2	4.2	68	10.7	6.2			
1982	7	UC			36	21			7.3	3.4	62	11.7	5.4			
1983	2	U				41	27									
1986	2	U				33	25									
1987	1	U				38	25									
1989	2	U				40	27									
1990	2	U				39	27									
1991	2	U				38	27									
1992	2	U				35	24									
	2	U				37	26									
	12	A				28	22	6.2	3.0	54			11.5	5.6 / <sub>11</sub>		
	12	A				36	23									
1993	2	U				40	30									
1997	2	U				38	28									
	12	A				30	25	5.9	3.4	60			9.8	5.7 / <sub>11</sub>		
	12	A				39	28									
2001	17	UC+A				25	18	4.6	2.4	54			8.6	4.6		
	17	A				34	26									

**Table 8** (continued)

Year	Source <sup>2</sup>	Product <sup>3</sup>	Prevalence <sup>4</sup>				Number of cigarettes								
			Manufactured cigarettes		Total cigarettes <sup>5</sup>		All products <sup>6</sup>		Unadjusted <sup>7</sup>			Sales-adjusted <sup>8</sup>			
			M	F	M	F	M	F	number/ person/day	Total sales %	Manufactured cigarettes number/ person/day	Total cigarettes <sup>9</sup> number/ person/day			
						M	F		M	F	M	F			
2002	12	A			34	23	5.0	2.9	55			9.1	5.3		
	12	<b>A</b>			36	25									
	17	A			24	19									
	17	<b>A</b>			34	25									
2003	17	A			23	19									
	17	<b>A</b>			32	24									
2004	17	A			23	18									
	17	<b>A</b>			32	24									
2005/12	17	UC+A			23	16	4.1	2.3	55			7.5	4.2		
	17	<b>A</b>			32	23									
2006/12	17	UC+A			21	17	3.9	2.2	51			7.7	4.4		
	17	<b>A</b>			30	23									

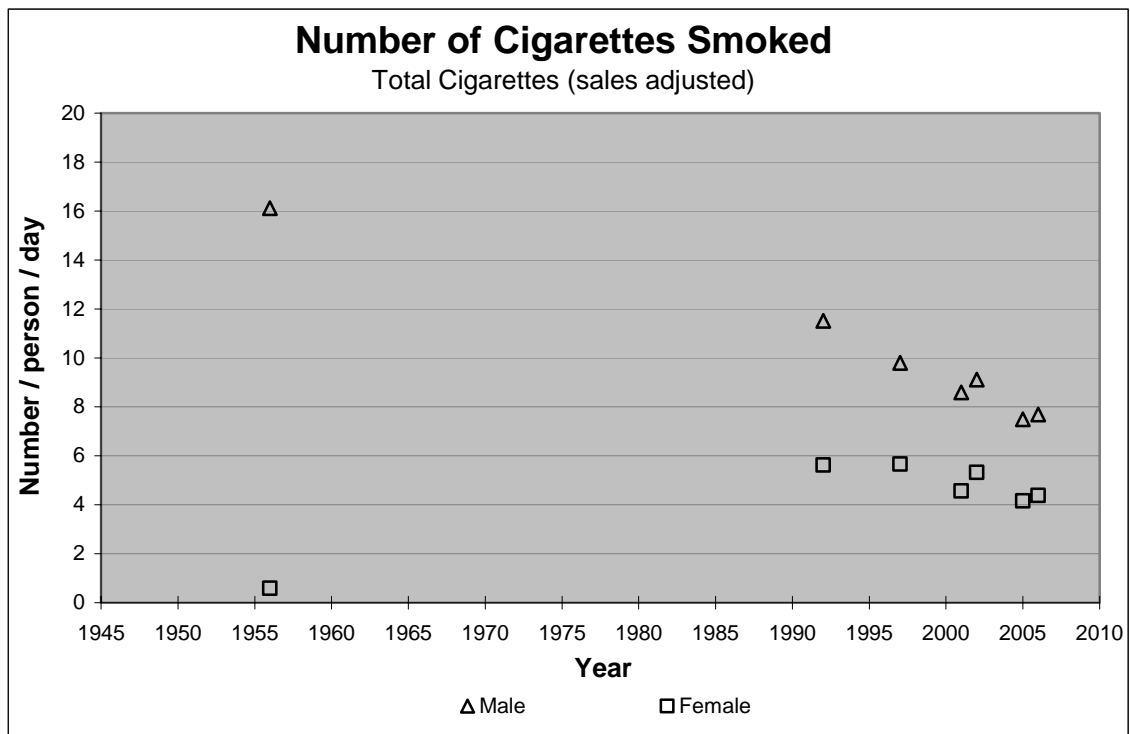
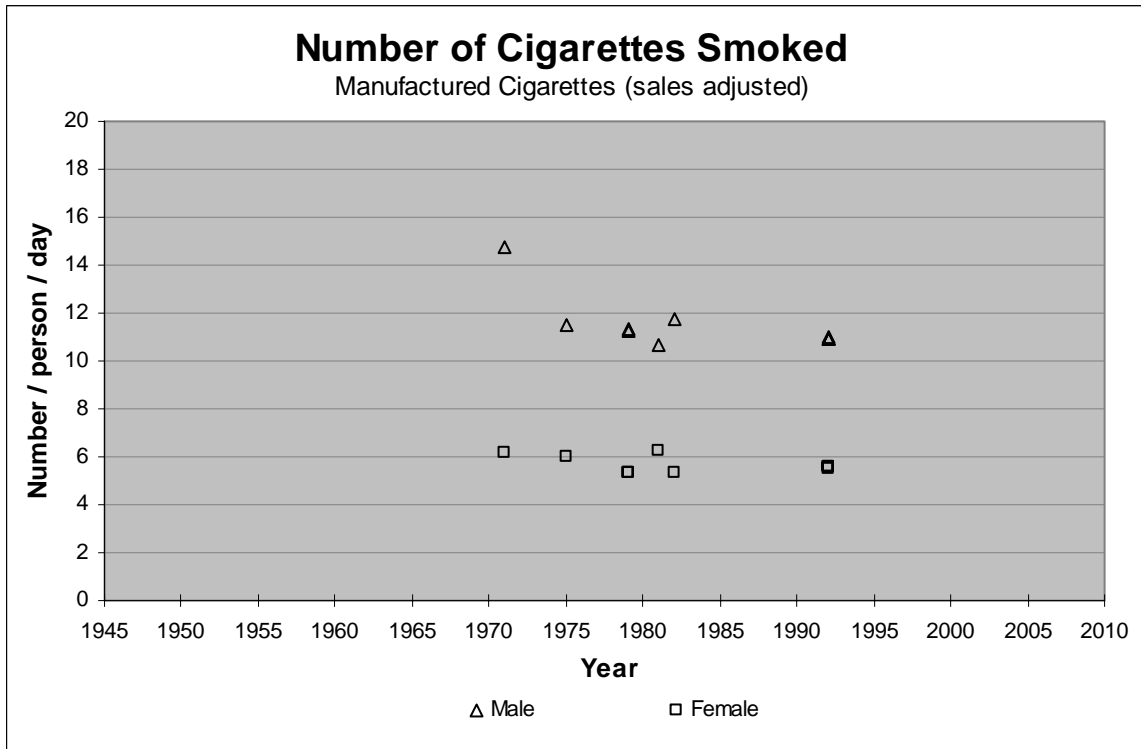
- 1 Surveys covering an age range of at least 21-64 are included. Any gaps in the data for ages 15-20 and 65 years and over are filled in by assumed extensions to the age distribution, given in *Notes on sources of survey data*, p. 32. Method: see *Summary of adult smoking*, Methods p. 13.
- 2 See *Notes 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 All tobacco products, grams/person/day. Not adjusted due to lack of suitable sales data
- 11 All tobacco products, grams/person/day. Data for 1992 adjusted to 1993 sales
- 12 Calculations based on 2004 population

**Figure 3** Estimated prevalence of smoking of (i) total cigarettes and (ii) all tobacco products; by year of survey, 1956-2006  
Males and females aged 15 years and over



Source: Table 8

**Figure 4** Estimated number of (i) manufactured cigarettes and (ii) total cigarettes<sup>1</sup> smoked per person per day, sales-adjusted; by year of survey, 1956-2006  
Males and females aged 15 years and over



<sup>1</sup> Includes estimates shown in Table 8 for all tobacco products, grams/person/day  
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 1974*

##### RP6

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).

Notes as given in RP6:

(a) Details of the production, import and export of the numbers of cigarettes and cigars and of the weight of pipe tobacco from which consumption data was calculated were provided by the Federal Bureau of Statistics, Berne and the Swiss Customs Administration. Statistics of sales of tobacco goods in Switzerland were provided by the Swiss Cigarette Manufacturers Association.

(b) Factors for converting numbers of cigarettes and cigars consumed into pounds weight were provided by trade sources in Switzerland.

(c) Details of the amount of tobacco consumed in individual years before 1941 were not provided. The figures shown for the years 1934 to 1940 are annual averages.

(d) The consumption per adult figures are exaggerated owing to the increasing consumption by borderers, tourists, and seasonal workers. It is estimated that these three categories represented 30%-35% of Swiss sales in recent years.

#### *Sales data for 1974 onwards*

Table 1.2: Bardy (1990), Zgraggen (2001) (quoting Direction générale des douanes and *Annuaire statistique suisse*), Swiss Cigarette (2007).

This table relates to Swiss-produced tobacco products only. The data for manufactured cigarettes show sales in Switzerland of Swiss production and so have taken account of exports but not of imports. The data for the other tobacco products are production values and so take account of neither exports nor imports. Although Table 1.3 shows sales data for 1993 onwards, Table 1.2 shows data up to 2000 to allow the comparison of production and sales values.

Table 1.3: Swiss Cigarette (2007), Zgraggen (2007).

This table shows sales of tobacco products. However, the estimates shown for manufactured cigarettes for 1993-2001 represent Swiss cigarette production sold in Switzerland and so do not take account of imports. The values shown are therefore underestimates of sales. The estimates of cigarette sales for 2002-2006 take account of production, exports and imports. Cigarette imports for 2002-2006 were (Swiss Cigarette (2007)):

Year	Imports of manufactured cigarettes (millions)
2002	300
2003	330
2004	377
2005	449
2006	681

Tourist and cross-border sales were estimated as 1.7% of the cigarette market in 1995 (Tobacco Reporter (1997)). In 2004 the Federal Authorities of the Swiss Confederation described the smuggling of cigarettes to the detriment of Switzerland as insignificant and marginal (Département fédéral des finances (2002)).

We have not been able to estimate total tobacco consumption for 1974-1992, since import/export figures for cigars and pipe and hand-rolling tobacco are not available for these years. In 1990 imports and exports of smoking tobacco were estimated as 268 tonnes and 31 tonnes respectively (Mäder (1991)).

Data for cigarettes were given in numbers. For 1993-2006 we have converted these to weight assuming 1 g per cigarette.

We have converted numbers of cigars to weight assuming an average of 5 g per cigar.

Swiss-made cigars are of several types known as stumpen or bouts (a type of cheroot), Kopfzigarren or bouts tournés, Toscani and Brissago, these last two being specialities of the Italian canton of Tessin (Ticino). According to Hutson (1937) stumpen are short cigars, rather small, clipped at both ends and wrapped in Java tobacco; Brissago are long slender cigars made entirely from Kentucky-Tennessee and dark Virginia tobacco; Toscani are short cigars of conical shape manufactured almost entirely from Kentucky tobacco. According to Abelin and Gsell (1967) Swiss cigar products generally are drier and burn more easily than American types.

Legislation in 2004 clarified that oral snuff was prohibited but chewing tobacco permitted, in line with European Union legislation (Der Schweizerische Bundesrat (2004)).

Estimates of cigarette sales in Switzerland vary considerably between sources, for instance for the years 1971-1975

Year	RP6	ASFC <sup>1</sup>	SFA <sup>2</sup>	Maxwell International Estimates <sup>3</sup>	
				Series A	Series B
1971	17 900	17 857	19 640	30 900	—
1972	18 700	18 685	18 039	32 000	—
1973	16 500	18 455	17 834	31 076	—
1974	—	16 479	17 170	28 000	17 600
1975	—	15 492	16 247	—	15 500

1 Association suisse des fabricants de cigarettes: sales in Switzerland of Swiss production

2 Schweizerische Fachstelle für Alkoholprobleme: production plus imports less exports

3 Maxwell gives no explanation of the two series, but series A is equivalent to SFA production data; series B is believed to exclude sales in Italy of Swiss-made cigarettes

#### *Estimates of numbers of hand-rolled cigarettes for 1993-2006*

We have estimated the number of hand-rolled cigarettes by converting tonnes of hand-rolling tobacco at 1 g per cigarette.

#### *Plain/Filter cigarette sales*

1945-1989: Bardy (1990)

1990-1992: Parry (1994)

1996: Tobacco Reporter (1997)

The values represent the percentages of cigarette production rather than of sales.

#### *Tar and nicotine machine yield of cigarettes*

1970-1975: Weber (1976)

1976-1978: Gubéran (1980)

In 1995 legislation was passed limiting cigarette tar yield to 15 mg, in line with European Union legislation (Harkin *et al* (1997)). Previously there were voluntary agreements on cigarette yields and advertising (Anonymous (1995)). In 1996, cigarettes with between 1 and 5 mg of tar accounted for 32% of the market, and those over 10 mg for 31% (Tobacco Reporter (1997)).

In 2004 the legislation was updated to limit cigarette yield to 10 mg tar, 1.0 mg nicotine and 10 mg carbon monoxide, again in line with European Union legislation (Der Schweizerische Bundesrat (2004)).

## 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*.

### Source number

#### 1 Abelin and Wüthrich (1976), Müller (1981), Abelin and Müller (1983) and Gmel (1995) quoting Fahrenkrug and Müller (1989)

- a. Surveys by Institut suisse de prévention de l'alcoolisme et autres toxicomanies / Schweizerische Fachstelle für Alkohol- und andere Drogenprobleme (ISPA/SFA) in French and German speaking regions.

Year	Sample size	
	Males	Females
1975	417	482
1979	547	586
1981	562	749
1987	1 115	

The 1979 questionnaire used just four of the smoking and drinking questions included in the other surveys. The context of the questions was therefore different from that in the other years.

- b. Smokers: smoked at least one cigarette per day or equivalent weight of pipe or cigar tobacco. For 1981 the consumption per smoker is for smokers of cigarettes only (i.e. excluding smokers of cigarettes plus another form of tobacco). Calculation of consumption per person (1981) for males assumes that consumption by 'cigarette and other' smokers is the same as by 'cigarette only' smokers.
- c. Consumption category estimation based on (1975, 1979) 1-9, 10-19, 20 and 21+ cigarettes/smoker/day; (1981) 1-9, 10-19, and 20+ cigarettes/smoker/day.
- d. Assumed extension to age distribution for percentage smokers, age 75+:  
 males (UC R) (1975) 25%, (1979) 20%, (1981) 15%; males (A R) (1975) 30%, (1979) 30%, (1981) 25%;  
 males (U) (1987) 20%; females (UC R) (1975) 10%, (1979) 8%, (1981) 8%;  
 females (A R) (1975) 10%, (1979) 10%, (1981) 8%; females (U) (1987) 8%.  
 For number of cigarettes/person/day, age 75+: males 3.0 and females 0.5.

#### 2 Gmel (1995, 2000)

- a. PKS and Perma studies carried out by Demoscope (an opinion poll organization). The Perma studies used a random quota sampling method and, once per quarter, included questions on smoking that had been specified by l'Office fédéral de la santé publique / Bundesamt für Gesundheit. The Perma studies excluded Tessin.

Year	Study name	Sample size	Source reference <sup>1</sup>
1974	PKS	2 060	Demoscope (1989)
1977	PKS	2 003	Demoscope (1989)
1980	PKS	2 041	Demoscope (1989)
1983	Perma-Umfrage	10 307	Demoscope (1989)
1986	Perma-Umfrage	12 842	Demoscope (1989)
1989	Enquête Perma	12 885	Demoscope (1989)
1990	Enquête Perma	12 848	Demoscope (Various years)
1991	Enquête Perma	13 031	Demoscope (Various years)
1992	Enquête Perma	13 198	Demoscope (Various years), Gmel (2000)
1993	Enquête Perma	12 855	Demoscope (Various years)
1997	Perma-Daten	*	Gmel (2000)

<sup>1</sup> Gmel (1995) cites the Demoscope sources.

\* Specified only as being a relatively constant 12 000 to 13 000 people per year.

- b. For 1992, results from both sources, using different age groupings, are presented in Table 4. There are some minor discrepancies between these results (and also between these results

and those for smoking prevalence given in Schmid *et al* (1999) for 1992 and 1997, not shown).

- c. Assumed extension to age distribution for percentage smokers, age 75+: males (1974-1983) 25%, (1986-1997) 20%; females (1974-1980) 10%, (1983-1997) 8%.

### 3 Binder *et al* (1979)

- a. Surveys of 19-20-year-olds in the Canton of Zürich. Representative samples.

	Sample size	
	Males	Females
1971	6 033	1 376
1978	3 579	2 296

- b. Regular smokers: smoked daily.  
c. Consumption category estimation based on 1-2, 3-7, 8-14, 15-21, and 22+ cigarettes/smoker/day.

### 4 Nater *et al* (1985)

- a. Survey in two cities in 1977-1978, controls in a community intervention programme, with follow-up in 1980-1981. Sample size 1 358.  
b. Consumption data per smoker and per person (Tables 5-8) are for all tobacco types, in grams.  
c. Assumed extension to age distribution for:  
Percentage smokers: age 15: males and females 15%; age 70+: males 40% and females 10%.  
Number of cigarettes/person/day: age 15: males 2.0 and females 1.0; age 70+: males 5.0 and females 1.0.

### 5 Battegay *et al* (1975)

- a. Survey among military recruits. Sample size 4 056 men. Age group not stated.

### 6 Le Meitour-Kaplan (1977), quoting Anonymous (1972)

- a. A survey by a commercial firm (Konsonanz). Year not stated.  
b. Calculation of consumption per person based on percentage (unspecified product) smokers and number of (unspecified) cigarettes per smoker.  
c. Assumed extension to age distribution for percentage smokers, age 15: males and females 15%; for number of cigarettes/person/day, age 15: males 2.0 and females 1.0.

### 7 Swiss National Health Survey SOMIPOPS, reported by La Vecchia *et al* (1988)

- a. Questionnaire mailed to randomly selected sample, representative of population age 20 years and over. Personal interviews were then arranged with each person in the sample. 1981-1983. Sample size 4 255, of whom 836 were foreign residents. Response rate 73%.  
b. Consumption category estimation (age-specific only) based on <5, 5-14, 15-24, and 25+ cigarettes/smoker/day. Estimation for overall age group by original authors.  
c. Assumed extension to age distribution for percentage smokers, age 15-19: males 30% and females 25%; for number of cigarettes/person/day: males 5.0 and females 4.0.

### 8 Geizerova and Masironi (1988)

- a. Findings of the WHO Tobacco or Health Programme. No details are provided of the individual surveys.

### 9-10 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 the WHO MONICA Project:

	Region	Phase	Participation rate (%)		Sample used*		Date
			Males	Females	Males	Females	
9	Vaud/Fribourg	1	72	66	853	782	Oct 1984 – Jun 1985
10	Ticino	1	85	81	781	769	Nov 1985 – May 1986
9	Vaud/Fribourg	2	72	69	919	844	Nov 1988 – Jun 1989
10	Ticino	2	77	76	745	709	Oct 1988 – Apr 1989
9	Vaud/Fribourg	3	64	63	755	787	Nov 1992 – Jun 1993
10	Ticino	3	80	80	733	770	Oct 1992 – May 1993

\* Vaud/Fribourg '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. Regular cigarette smokers: smoked cigarettes daily. All smokers: smoked cigarettes daily or occasionally, or smoked 1 g pipe tobacco or 1 cigar per week.  
d. For phases 1 and 2 there are minor discrepancies between the data shown in Table 4 and equivalent data taken from World Health Organization (1989) used in earlier editions of this report.

**11 Schmid *et al* (1999), Gmel *et al* (2006), Schmid *et al* (2007)**

- a. Part of the HBSC (Health Behaviour in School-Aged Children) Study, a collaborative cross-national research study sponsored by the WHO and, since 1994, carried out every four years. School classes or schools were randomly selected, targeting age groups 11 (not presented here), 13 and 15. The target sample size was 1 300 in each age group.
- b. Within Switzerland HBSC is also known as Consommation de psychotropes chez les écoliers / Der Konsum psychoaktiver Substanzen von Schülerinnen und Schülern in der Schweiz and is carried out by ISPA/SFA.
- c. Sample sizes:

	Age 13		Age 15	
	Male	Female	Male	Female
1986	269	284	269	329
1994	1 400	1 320	1 464	1 383
1998	926	946	863	845
2002	1 046	1 144	965	915
2006	1 048	1 099	864	838

- d. Regular smokers: smoked once a week or more. Smokers marked as frequency \*: smoked daily.
- e. There are some minor discrepancies between the smoking prevalence values presented (taken from Schmid *et al* (2007)) and those given in other sources (Nutbeam and Aarø (1990), King *et al* (1996), Institut suisse de prévention de l'alcoolisme et autres toxicomanies (SFA/ISPA) (1999), Schmid *et al* (1999), Delgrande Jordan *et al* (2004), Gmel and Annaheim (2006), Schweizerische Fachstelle für Alkohol- und andere Drogenprobleme (SFA) (2007)).
- f. Cigarettes per smoker for 1998 and 2002 (ages 13, 14 and 15, product unspecified) relate to current smokers (both regular and non-regular) and so give small values. The calculation of the related cigarettes per person values took this into account.
- g. Consumption category estimation (1994 and 1998) based on two categories (up to 4 cigarettes/smoker/day and 5+ cigarettes/smoker/day) and resulting figures should be regarded with caution.
- h. Consumption category estimation (2006) based on 1-5, 6-10, 11-20 and 21+ cigarettes/smoker/day. The method designed for adults was used so the resulting figures should be regarded with caution.

**12 Enquête suisse sur la santé/Schweizerische Gesundheitsbefragung (ESS/SGB) reported by Gmel (1995, 2000), Gmel and Annaheim (2006), Gmel *et al* (2006), Eurostat**

- a. Telephone surveys representative of the Swiss population. The 1992/3 survey used four-stage sampling, with 3 stages in 1992 and the 4<sup>th</sup> stage in 1993.

	Sample size	Response rate (%)
1992/3	15 288	71
1997	13 004	69
2002	19 699	

- b. Consumption per smoker and per person take account of all tobacco products. Consumption was converted by the original authors into cigarette equivalents at the rate of a pipe or cigarillo = 2.5 cigarettes, and a cigar = 5 cigarettes.
- c. Highest age groups for young people relate to ages 21-22 and 23-24.
- d. Assumed extension to age distribution for percentage smokers, age 75+: males 20% and females 8%; for regular smokers age 65+: males 15% and females (1992, 1997) 10%, (2002) 8%.

**13 Gsell (1958), Abelin and Gsell (1967)**

- a. A survey of a rural town in the Canton of Zürich. Sample included 1 653 persons, practically all the adults aged 17-86. Response rate 98%. Sample size (males) 822, (females) 813.
- b. Cigarette smokers: smoked one cigarette or more per day. All smokers: smoked one unit per day or 30 units per month or more, where units were defined as a cigarette = 1 unit, a Brissago, Toscani or classic cigar = 5 units, a Stumpfen = 4 units, a pipe = 2.5 units.
- c. Consumption data per smoker and per person (Tables 5-8) are for all tobacco types, in grams.
- d. Consumption category estimation based on 1-9, 10-19, 20-34 and 35+ units/cigarette smoker/day or units/smoker/day.
- e. Assumed extension to age distribution for percentage smokers age 15-16 or 15-17: (males) 15%, (females) 5%; for number of cigarettes/person/day, age 15-17: (males) 3.0 and (females) 0.1.

**14 Le Meitour-Kaplan (1977)**

- a. Survey of young women in the Canton of Zürich. Sample size 1 381.
- b. Highest age group relates to ages 20-21.

**15 Berrino *et al* (1988)**

- a. A survey of the Canton of Geneva. Upper age limit 85.
- b. Smokers: smoked more than a gram of tobacco/day for at least the last six months.

**16 Schüler *et al* (1980)**

- a. A study of two rural communities in the Canton of Zürich. Year not stated. Sample size (males) 1 754, (females) 1 628.
- b. The prevalence values presented have been adjusted to exclude subjects who did not answer the question.
- c. Consumption category estimation based on categories described as <10, 10-20, 20 exactly, 20-40 and >40 cigarettes/smoker/day (1-9, 10-19, 20, 21-40 and >40 cigarettes/smoker/day assumed).
- d. Assumed extension to age distribution for percentage smokers, age 15-19: males and females, 35%. For age 65+: males (UC) 25%, (A) 30%; females 10%. For number of cigarettes/person/day, age 15-19: males and females 5.0; age 65+: males 4.0 and females 0.5.

**17 Tabakmonitoring reported by Keller *et al* (2003b, 2003a, 2006, 2007)**

- a. Quarterly surveys by telephone of a representative sample of the residential population aged 14-65 years. Sample sizes:

	Males	Females
2001	5 027	5 012
2002	5 017	5 003
2003	5 015	5 001
2004	5 022	5 005
2005	5 021	5 002
2006	5 047	5 026

- b. Regular smokers: smoked daily.
- c. Consumption category estimation based on 1-5, 6-10, 11-15, 16-20 and 21+ cigarettes/smoker/day.
- d. Calculation for cigarettes per person based on % regular smokers (all products) and cigarettes per regular cigarette smoker, so may overestimate. The cigarette per smoker values shown for 2001 are based on data gathered during the years 2001 and 2002. These have been combined with prevalence data for 2001 alone in the calculation of cigarettes per person.
- e. Assumed extension to age distribution:  
For percentage smokers age 66+: males 20%, females 10%;  
For regular smokers age 66+: males 15%, females 8%;  
Number of cigarettes/person/day age 66+: males 3.5 and females 0.5.

**18, 19 SMASH (Swiss Multicenter Adolescent Survey on Health) reported by Narring *et al* (2004), Michaud *et al* (2006)**

- a. Nationally representative survey of young people aged 16-20; in school (source 18) or apprenticed (source 19). Questionnaires distributed in class and completed by the subject during March-June of 1993 and 2002. Sample sizes:

Source	1993		2002	
	Males	Females	Males	Females
18 School pupils	1 495	1 829	861	1 252
19 Apprentices	3 780	2 164	3 183	2 131

The data for 1993 were imputed by the original authors to ensure comparability with the 2002 data.

- b. Regular smokers: smoked daily.
- c. Highest age group relates to age 20.

**20 ESPAD reported by Hibell *et al* (2004), Gmel *et al* (2004)**

- a. European School Survey on Alcohol and Other Drugs. Surveys carried out in selected school classes (grades 8-10) during May and June 2003. Sample size (boys) 1 278, (girls) 1 335. Response rate 83%.
- b. Smokers marked as frequency \*: smoked daily.
- c. Consumption category estimation based on 1-5, 6-10, 11-20 and 21+ cigarettes/smoker/day.

*Additional information (not presented in tables)*

Gmel *et al* (2006) presents the distribution of tobacco products used by smokers (using data from ESS/SGB, sexes not shown separately):

	<b>1992</b>	<b>1997</b>	<b>2002</b>
Cigarettes only	85.8	85.0	82.1
Cigars only	3.5	3.2	3.3
Cigarillos only	1.0	1.5	1.2
Pipe only	3.8	2.6	2.5
Cigarettes and cigars	1.7	2.0	3.4
Cigarettes and cigarillos	0.6	0.7	1.7
Cigarettes and pipe	1.7	1.1	0.8
Other combinations	2.0	4.0	5.0

In 2006 99% of female smokers smoked cigarettes, only 1-2% indicating that they smoked cigars, cigarillos or a pipe; among male smokers 12% smoked cigars, 5% smoked cigarillos and 3% smoked a pipe (exclusively or in combination with other tobacco products). Among cigarette smokers of both sexes 4% smoked hand-rolled cigarettes only and 11% smoked some hand-rolled cigarettes (Tabakmonitoring reported by Keller *et al* (2007)).

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§ Original paper not obtained, but information taken as quoted by another author