

---

# **International Smoking Statistics**

**Web Edition**

**A collection of worldwide historical data**

## **Spain**

---

**Barbara Forey, Jan Hamling,  
John Hamling, Peter Lee**

P N Lee Statistics & Computing Ltd  
17 Cedar Road  
Sutton SM2 5DA, UK  
[www.pnlee.co.uk](http://www.pnlee.co.uk)

This report is an updated version of Chapter 24 of International Smoking Statistics 2nd edition, 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)

Date of issue: 7-Oct-2011

(First issue)

© Barbara Forey, Jan Hamling, John Hamling, Peter Lee, 2011

This work is copyright. It may be reproduced or quoted in whole or in part for study or research purposes, subject to inclusion of an acknowledgement of the source. It may not be reproduced for purposes other than those above or sold without written permission from the authors.

**Issue History:**

First issued 7-Oct-2011

# Contents

Contents .....	3
List of Figures .....	4
Preface .....	5
Downloads .....	5
Acknowledgements .....	6
Introduction.....	7
Sales data .....	7
Survey data.....	8
<b>Table 1.1</b> Total annual sales of tobacco products, 1730-1798.....	9
<b>Table 1.2</b> Total annual sales of tobacco products, 1920-1973.....	10
<b>Table 1.3</b> Total annual sales of tobacco products, 1965 and 1974-2010.....	11
<b>Table 1.4</b> Percentage of sales of tobacco in different forms (by weight), selected years .....	12
<b>Table 1.5</b> Smuggling of cigarettes, estimated .....	13
<b>Table 2</b> Sales of cigarettes (including estimated number of hand-rolled cigarettes) and of all tobacco products. Annual total and average per adult (age 15 years and over) per day.....	14
<b>Table 3</b> Manufactured cigarettes: percentage of filter (rather than plain) cigarettes; percentage using blond (rather than dark) tobacco.....	17
<b>Table 4M</b> Prevalence of smoking, males: selected surveys by age.....	18
<b>Table 4F</b> Prevalence of smoking, females: selected surveys by age .....	19
<b>Table 5M</b> Number of cigarettes smoked per smoker per day, males: selected surveys by age .....	30
<b>Table 5F</b> Number of cigarettes smoked per smoker per day, females: selected surveys by age .....	31
<b>Table 6M</b> Number of cigarettes smoked per person per day, males: selected surveys by age; with percentage total sales .....	34
<b>Table 6F</b> Number of cigarettes smoked per person per day, females: selected surveys by age; with percentage total sales .....	35
<b>Table 7M</b> Number of cigarettes smoked per person per day, sales-adjusted, males: selected surveys <sup>1</sup> by age; with percentage total sales .....	38
<b>Table 7F</b> Number of cigarettes smoked per person per day, sales-adjusted, females: selected surveys <sup>1</sup> by age; with percentage total sales .....	39
<b>Table 8</b> 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. Males and females aged 15 years and over.....	40
Notes .....	46
Notes on sources of sales data .....	46
Sales data before 1920 .....	46
Sales data for 1920-1973 .....	46
Sales data for 1974 onwards.....	46
Estimates of smuggling .....	47
Estimates of numbers of hand-rolled cigarettes .....	47
Plain/Filter cigarette sales .....	47
Blond/Dark tobacco cigarette sales.....	48
Tar and nicotine machine yields of cigarettes .....	48

Notes on sources of survey data.....	48
Additional information .....	56
References .....	57

<sup>1</sup> See footnotes to Tables

## List of Figures

<b>Figure 1</b>	Percentage of sales of tobacco in different forms (by weight), selected years .....	12
<b>Figure 2</b>	Sales of (i) manufactured and total <sup>1</sup> cigarettes and (ii) all tobacco products. Average per adult (aged 15 years and over) per day .....	16
<b>Figure 3</b>	Estimated prevalence of smoking of (i) manufactured cigarettes, (ii) total cigarettes and (iii) all tobacco products; by year of survey. Males and females aged 15 years and over .....	43
<b>Figure 4</b>	Estimated number of total cigarettes smoked per person per day, sales- adjusted; by year of survey. Males and females aged 15 years and over .....	45

<sup>1</sup> See footnotes to Figures

## 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. Since 2006, work has been ongoing to make individual country updates 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/iss.htm](http://www.pnlee.co.uk/iss.htm) 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 from the eighteenth century show a move from powdered tobacco (for chewing and, late in the century, as snuff) towards smoking tobacco (Grupo de Estudios del Tabaco (GRETA) (2002)).

More recent data are available since 1920, except for the years of the Spanish Civil War (1936-1939). From 1920 until 1950 sales of manufactured cigarettes per adult remained fairly stable at about 1 cigarette per day. Consumption rose to 7 cigarettes per day by the late 1970s and remained around that level until the mid-2000s, apart from an apparent decline in the mid-1990s which may have been an artefact associated with increased consumption of smuggled cigarettes. There are signs of declining consumption from 2005 onwards. Filter cigarettes became popular quite early, forming 10% of all cigarettes by 1961 and exceeding 90% since the late 1970s. Although cigarettes using dark tobacco were predominant in the 1960s and 1970s, they have gradually been superseded by blond cigarettes which made up 80% of sales by 2002.

Although there are difficulties in estimating the numbers of hand-rolled cigarettes consumed, our estimates suggest that, in the late 1950s, consumption per adult was about 1.5 cigarettes per day. It then decreased, and by the 1980s very few hand-rolled cigarettes were being consumed. However, since 2000 consumption has risen again, reaching 0.4 cigarettes per day by 2010.

The consumption of tobacco products per adult rose from 3.5 g per day in 1920 to about 4.5 g per day in the period 1923-35, but then fell, reaching a minimum of 2 g in 1942. Consumption then rose to around 4 g per day by 1946 and this level continued until about 1960. It then rose to nearly 8 g per day by the late 1970s, continuing around that level through the 1980s and 1990s. There is some indication that consumption has fallen since 2005, reaching 6 g per day in 2010.

In the pre-war period, around 25% of tobacco was consumed in manufactured cigarettes, increasing to over 90% by the late 1970s but has reduced slightly below that level since 2005. Consumption of pipe and hand-rolling tobacco declined from over 60% pre-war to very low levels by the 1980s. An increase to 6% in the most recent years is primarily due to a rise in use of hand-rolling tobacco. The proportion consumed as cigars fluctuated somewhat, but accounted for around 7% of sales since 2000.

These estimates relate to legal sales of tobacco. In the 1860s smuggled tobacco may have accounted for 25% of legal sales. In more recent years smuggling reduced from a maximum in 1993 (realistic estimates of which vary from 13% to nearly 30%) to around 1% in 2010. This reduction follows national and international actions to reduce smuggling which came into force at the end of 1993 and during 1997.

## Survey data

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

Few survey data are available for Spain before 1978 when the first nationally based survey was carried out. Many of the data presented refer to regional surveys.

Around 1970 the prevalence of tobacco smoking among those aged 15 years and over was 65% in men and 10% in women. By 2009, the prevalence of daily smoking among men had fallen to about 31% while among women it had increased to about 21%. For women the highest prevalence (25%) was seen around 2001. Surveys in Madrid (source 30) show that prevalence in women has been higher there than in the country as a whole by around 2-3 percentage points, while prevalence in men has been lower there, by a similar amount.

The prevalence of smoking is higher among men than among women at all ages over 25. Very few elderly women smoke. Although comparisons are difficult due to different smoking definitions reported, between 1978 and the mid 1990s the prevalence of smoking decreased most noticeably in younger (below 25) and older (over 50) men. Conversely among women, prevalence altered little in those age groups but increased among the middle age groups. Prevalence then steadied or fell slightly in both sexes and each age group. When first reported in 1978 (source 3) the prevalence of smoking among teenage boys was higher than among girls. Since then the prevalence among young teenagers (12-14 years) has become similar in the two sexes. Among older teenagers (the 15 -19 year age group), prevalence varied slightly until 2000 and has fallen since then in both sexes. However, in this age group prevalence in girls has gradually become greater than among boys. This was first evident in the 1990s and has become more marked since then.

Comparison between survey and sales data suggests that a survey carried out in 1978 (source 3) overestimated sales by 4%, while later national surveys under-reported sales increasingly over time: by 10-25% in the 1980s and 1990s, and by 30-40% in the 2000s. The estimated number of cigarettes smoked per person per day (sales-adjusted) for men was about 11-12 between 1970 and the late 1980s, falling to 8-9 by the 2000s. For women, it increased from 1-3 to 5-6 over the same period.

**Table 1.1** Total annual sales of tobacco products, 1730-1798

Year	Powdered tobacco tonnes	Smoking tobacco tonnes	All tobacco products tonnes
1730			1 816
1734			1 557
1740	993	479	1 472
1745	806	390	1 196
1750	787	443	1 230
1755	811	531	1 342
1760	851	588	1 440
1765	847	599	1 446
1770	851	753	1 604
1775	848	818	1 665
1780	680	719	1 399
1785	701	720	1 421
1790	667	762	1 429
1795	535	649	1 184
1798	467	764	1 231

Source: see *Notes on sources of sales data: Sales data before 1920*, p. 46.

**Table 1.2** Total annual sales of tobacco products, 1920-1973

Year	Manufactured cigarettes		Cigars		Smoking tobacco tonnes	All tobacco products tonnes
	tonnes	millions	tonnes	millions		
1920	5 509	5 509	1 691	249	11 217	18 417
1921	5 435	5 435	1 701	250	12 739	19 875
1922	5 783	5 783	1 761	259	15 472	23 017
1923	6 285	6 285	1 915	282	17 238	25 439
1924	5 999	5 999	2 094	308	15 518	23 610
1925	5 379	5 379	2 326	342	14 639	22 344
1926	5 087	5 087	2 521	371	17 953	25 560
1927	5 400	5 416	2 130	315	19 230	26 760
1928	6 580	6 592	1 950	287	19 050	27 580
1929	7 350	7 367	1 860	275	18 140	27 350
1930	7 800	7 822	1 810	266	17 960	27 580
1931	7 620	7 611	1 860	272	18 330	27 810
1932	8 210	8 198	1 950	284	17 640	27 810
1933	7 760	7 775	1 950	285	15 970	25 670
1934	7 120	7 117	1 810	268	17 600	26 540
1935	6 710	6 718	1 720	250	18 960	27 400
1940	6 760	6 756	730	110	11 840	19 320
1941	7 210	7 198	680	98	7 260	15 150
1942	7 440	7 440	640	93	5 850	13 930
1943	9 160	9 160	450	69	6 490	16 100
1944	8 800	8 813	500	73	9 570	18 870
1945	9 210	9 192	450	69	13 790	23 450
1946	10 250	10 261	450	68	18 190	28 890
1947	10 930	10 927	410	62	15 380	26 720
1948	9 800	9 783	410	63	14 700	24 900
1949	10 020	10 010	410	61	18 780	29 210
1950	8 850	8 825	540	80	19 370	28 760
1951	9 660	9 682	590	89	16 280	26 540
1952	11 520	11 538	590	89	20 590	32 700
1953	12 700	12 707	590	88	12 470	25 760
1954	13 830	13 839	640	90	14 970	29 440
1955	15 560	15 554	680	98	14 420	30 660
1956	15 100	15 109	950	144	13 020	29 080
1957	18 230	18 222	1 180	175	11 930	31 340
1958	21 860	21 872	1 320	193	12 020	35 200
1959	22 820	22 839	1 320	193	10 210	34 340
1960	24 900	24 892	1 220	180	9 210	35 330
1961	27 260	27 220	1 360	199	8 530	37 150
1962	30 300	30 294	1 450	210	6 990	38 740
1963	33 930	33 915	1 860	276	5 260	41 050
1964	36 560	36 570	2 310	337	4 220	43 090
1965	40 100	40 087	2 720	397	4 080	46 900
1966	42 320	42 324	3 130	461	3 580	49 030
1967	45 000	44 999	3 360	493	2 950	51 300
1968	47 170	47 174	3 490	515	2 540	53 210
1969	47 310	47 287	3 400	502	2 310	53 020
1970	50 080	50 084	3 810	560	1 950	55 840
1971	50 850	50 843	4 130	606	1 770	56 740
1972	53 250	53 234	4 580	671	1 590	59 420
1973	56 650	56 623	5 170	763	1 500	63 320

Source: see *Notes on sources of sales data: Sales data for 1920-1973*, p. 46.

**Table 1.3** Total annual sales of tobacco products, 1965 and 1974-2010

Year	Manufactured cigarettes		Cigars		Pipe tobacco tonnes	Hand-rolling tobacco tonnes	All tobacco products tonnes
	tonnes	millions	tonnes	millions			
1965	40 550	40 550	2 706	398		4 026	47 282
1974	60 378	60 378	6 400	941	1 397		68 175
1975	58 321	58 321	7 463	1 098	1 189		66 973
1976	63 205	63 205	6 931	1 019	1 078		71 214
1977	66 869	66 869	6 775	996	993		74 637
1978	63 490	63 490	5 825	857	709		70 024
1979	70 508	70 508	6 063	892	667		77 238
1980	70 437	70 437	6 146	904	705		77 288
1981	64 256	64 256	6 227	916	628		71 111
1982	68 739	68 739	6 045	889	546		75 330
1983	71 190	71 190	5 612	825	488		77 290
1984	74 205	74 205	5 688	836	435		80 328
1985	79 137	79 137	5 601	824	404		85 142
1986	77 827	77 827	5 434	799	360		83 621
1987	79 955	79 955	5 304	780	364		85 623
1988	77 310	77 310	5 080	747	537		82 927
1989	79 356	79 356	4 955	729	514		84 825
1990	81 920	81 920	4 960	729	490		87 370
1991	84 464	84 464	4 934	726	114	353	89 865
1992	80 312	80 312	4 723	695	114	362	85 511
1993	74 394	74 394	4 320	635	114	385	79 213
1994	80 140	80 140	4 510	663	120	484	85 254
1995	75 348	75 348	4 716	694	125	555	80 744
1996	72 062	72 062	4 824	709	120	564	77 570
1997	78 140	78 140	5 658	832	125	677	84 600
1998	86 862	86 862	5 812	855	131	733	93 538
1999	85 861	85 861	6 524	959	139	886	93 411
2000	87 522	87 522	7 319	1 076	146	1 044	96 030
2001	89 921	89 921	7 721	1 135	143	1 515	99 300
2002	90 616	90 616	7 209	1 060	145	1 455	99 425
2003	92 333	92 333	7 228	1 063	147	1 779	101 487
2004	93 261	93 261	7 731	1 137	150	2 235	103 378
2005	92 700	92 700	7 609	1 119	140	2 743	103 192
2006	90 098	90 098	7 041	1 035	131	2 606	99 876
2007	89 103	89 103	7 497	1 102	141	3 054	99 795
2008	90 289	90 289	7 675	1 129	157	4 132	102 253
2009	81 357	81 357	8 008	1 178	197	5 477	95 038
2010	72 431	72 431	10 442	1 536	376	5 400	88 649

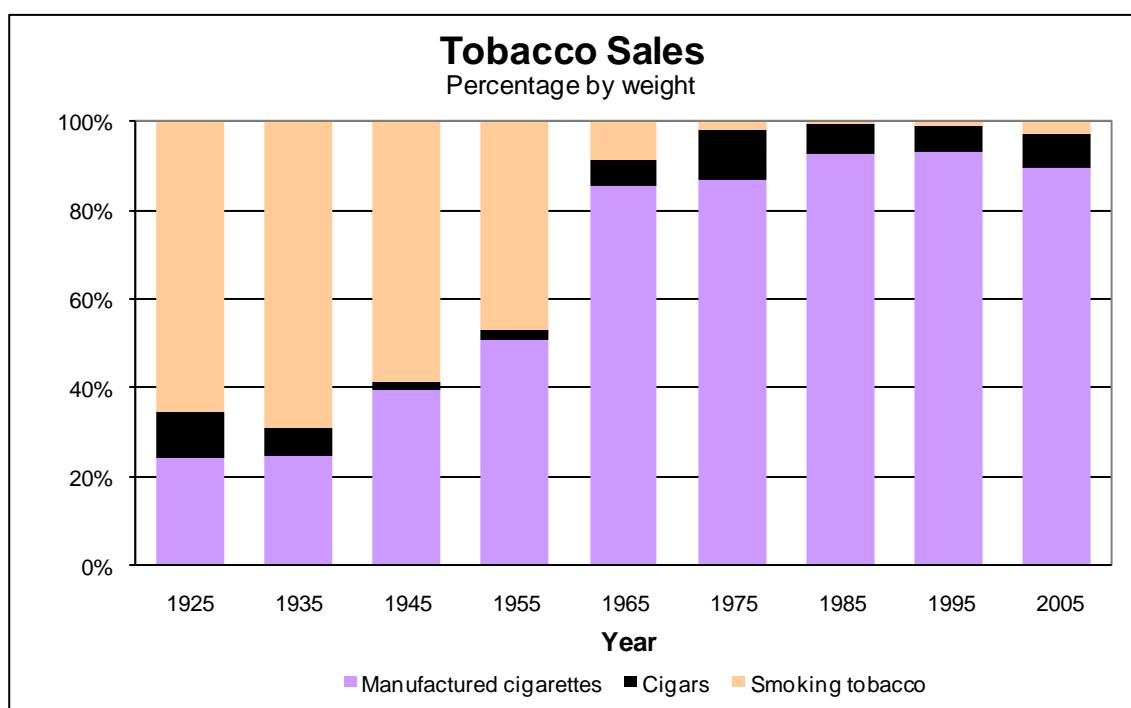
Source: see *Notes on sources of sales data: Sales data for 1974 onwards*, p. 46.

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

Year	Manufactured cigarettes %	Cigars %	Smoking tobacco %
1925	24.1	10.4	65.5
1935	24.5	6.3	69.2
1945	39.3	1.9	58.8
1955	50.8	2.2	47.0
1965	85.5	5.8	8.7
1975	87.1	11.1	1.8
1985	92.9	6.6	0.5
1995	93.3	5.8	0.8
2005	89.8	7.4	2.8

Source: calculated from Tables 1.2 & 1.3.

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



Source: Table 1.4.

**Table 1.5** Smuggling of cigarettes, estimated

Year	Smuggled cigarettes % of legal market
1869	25
1993	Maximum <sup>1</sup>
1994	14.5
1995	16.2
1996	12.9
1997	12.8
1998	9.0
1999	5.1
2000	2.5
2001	2.1
2002	1.8
2003	1.3
2005	1.2
2006	1
2010	1

1 See *Notes on sources of sales data: Estimates of smuggling*, p. 47 for estimates of the value of this maximum (over recent years) given by various sources.

Source : see *Notes on sources of sales data: Estimates of smuggling*, p. 47.

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

Year	Manufactured cigarettes		Hand-rolled cigarettes		Total cigarettes		All tobacco products	
	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual tonnes	Grams/ adult/day
1920	5 509	1.0					18 417	3.5
1921	5 435	1.0					19 875	3.7
1922	5 783	1.1					23 017	4.3
1923	6 285	1.2					25 439	4.7
1924	5 999	1.1					23 610	4.3
1925	5 379	1.0					22 344	4.1
1926	5 087	0.9					25 560	4.6
1927	5 416	1.0					26 760	4.8
1928	6 592	1.2					27 580	4.9
1929	7 367	1.3					27 350	4.8
1930	7 822	1.4					27 580	4.8
1931	7 611	1.3					27 810	4.7
1932	8 198	1.4					27 810	4.7
1933	7 775	1.3					25 670	4.3
1934	7 117	1.2					26 540	4.4
1935	6 718	1.1					27 400	4.5
1940	6 756	1.0					19 320	2.9
1941	7 198	1.1					15 150	2.2
1942	7 440	1.1					13 930	2.1
1943	9 160	1.3					16 100	2.4
1944	8 813	1.3					18 870	2.7
1945	9 192	1.3					23 450	3.4
1946	10 261	1.4					28 890	4.0
1947	10 927	1.5					26 720	3.7
1948	9 783	1.3					24 900	3.4
1949	10 010	1.4					29 210	4.0
1950	8 825	1.2					28 760	3.9
1951	9 682	1.3					26 540	3.5
1952	11 538	1.5					32 700	4.3
1953	12 707	1.7					25 760	3.4
1954	13 839	1.8					29 440	3.8
1955	15 554	2.0					30 660	4.0
1956	15 109	1.9					29 080	3.7
1957	18 222	2.3	11 930	1.5	30 152	3.8	31 340	4.0
1958	21 872	2.8	12 020	1.5	33 892	4.3	35 200	4.5
1959	22 839	2.9	10 210	1.3	33 049	4.2	34 340	4.3
1960	24 892	3.1	9 210	1.1	34 102	4.2	35 330	4.4
1961	27 220	3.4	8 530	1.1	35 750	4.4	37 150	4.6
1962	30 294	3.7	6 990	0.9	37 284	4.6	38 740	4.7
1963	33 915	4.1	5 260	0.6	39 175	4.7	41 050	5.0
1964	36 570	4.4	4 220	0.5	40 790	4.9	43 090	5.2
1965	40 087	4.8	4 080	0.5	44 167	5.2	46 900	5.6
1966	42 324	5.0	3 580	0.4	45 904	5.4	49 030	5.8
1967	44 999	5.3	2 950	0.3	47 949	5.6	51 300	6.0
1968	47 174	5.4	2 540	0.3	49 714	5.7	53 210	6.1
1969	47 287	5.4	2 310	0.3	49 597	5.6	53 020	6.0
1970	50 084	5.6	1 950	0.2	52 034	5.8	55 840	6.2
1971	50 843	5.7	1 770	0.2	52 613	5.9	56 740	6.3
1972	53 234	5.9	1 590	0.2	54 824	6.0	59 420	6.6
1973	56 623	6.2	1 500	0.2	58 123	6.4	63 320	6.9
1974	60 378	6.6	1 397	0.2	61 775	6.7	68 175	7.4
1975	58 321	6.3	1 189	0.1	59 510	6.4	66 973	7.2
1976	63 205	6.6	1 078	0.1	64 283	6.7	71 214	7.4
1977	66 869	6.9	993	0.1	67 862	7.0	74 637	7.7
1978	63 490	6.4	709	0.1	64 199	6.5	70 024	7.1
1979	70 508	7.1	667	0.1	71 175	7.1	77 238	7.7

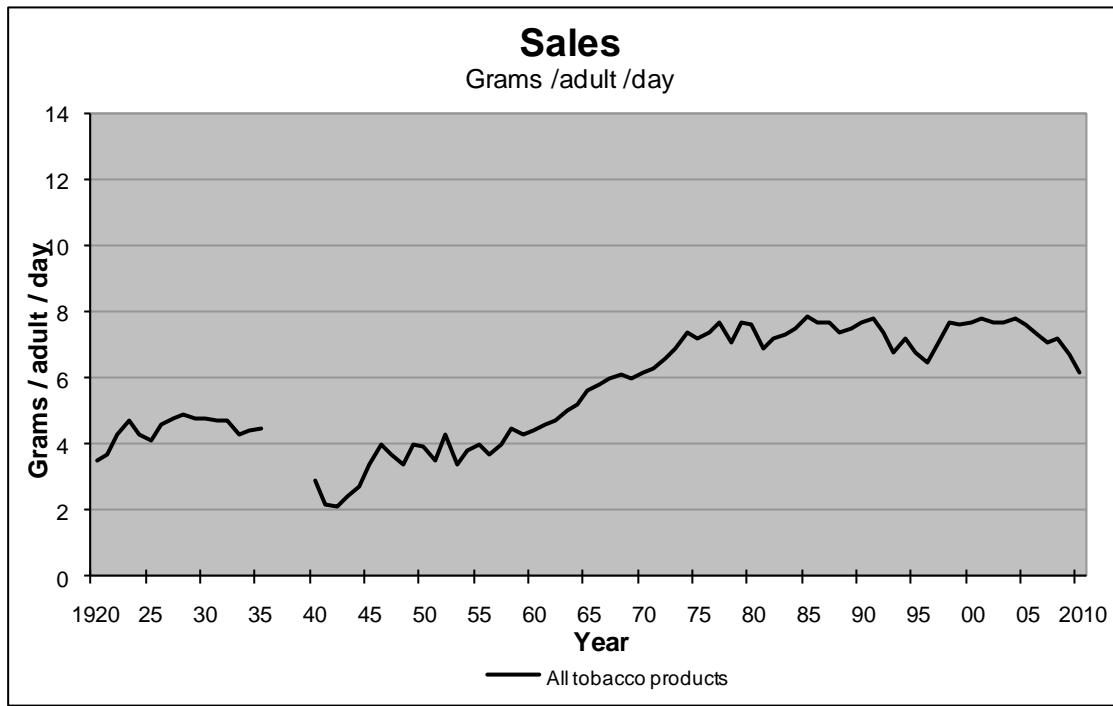
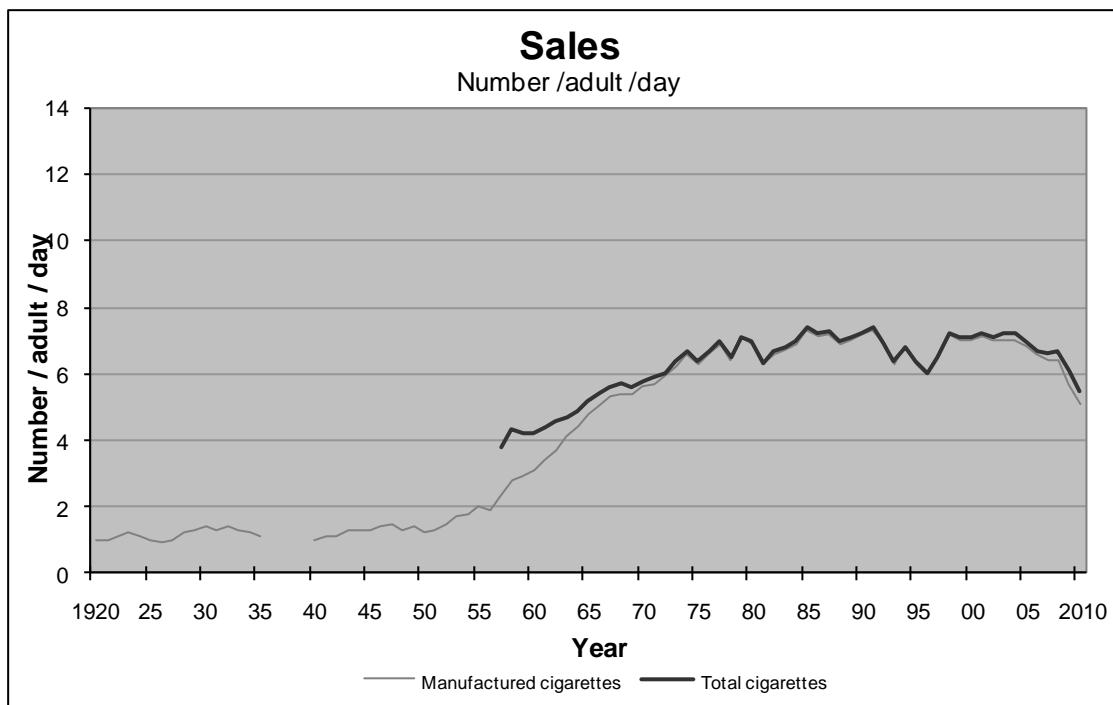
**Table 2** (continued)

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	70 437	6.9	705	0.1	71 142	7.0	77 288	7.6
1981	64 256	6.3	628	0.1	64 884	6.3	71 111	6.9
1982	68 739	6.6	546	0.1	69 285	6.7	75 330	7.2
1983	71 190	6.7	488	0.0	71 678	6.8	77 290	7.3
1984	74 205	6.9	435	0.0	74 640	7.0	80 328	7.5
1985	79 137	7.3	404	0.0	79 541	7.4	85 142	7.9
1986	77 827	7.1	360	0.0	78 187	7.2	83 621	7.7
1987	79 955	7.2	364	0.0	80 319	7.3	85 623	7.7
1988	77 310	6.9	537	0.0	77 847	7.0	82 927	7.4
1989	79 356	7.0	476	0.0	79 832	7.1	84 825	7.5
1990	81 920	7.2	414	0.0	82 334	7.2	87 370	7.7
1991	84 464	7.3	353	0.0	84 817	7.4	89 865	7.8
1992	80 312	6.9	362	0.0	80 674	6.9	85 511	7.4
1993	74 394	6.3	385	0.0	74 779	6.4	79 213	6.8
1994	80 140	6.8	484	0.0	80 624	6.8	85 254	7.2
1995	75 348	6.3	555	0.0	75 903	6.4	80 744	6.8
1996	72 062	6.0	564	0.0	72 626	6.0	77 570	6.5
1997	78 140	6.5	677	0.1	78 817	6.5	84 600	7.0
1998	86 862	7.2	733	0.1	87 595	7.2	93 538	7.7
1999	85 861	7.0	886	0.1	86 747	7.1	93 411	7.6
2000	87 522	7.0	1 044	0.1	88 566	7.1	96 030	7.7
2001	89 921	7.1	1 515	0.1	91 436	7.2	99 300	7.8
2002	90 616	7.0	1 455	0.1	92 071	7.1	99 425	7.7
2003	92 333	7.0	1 779	0.1	94 112	7.2	101 487	7.7
2004	93 261	7.0	2 235	0.2	95 496	7.2	103 378	7.8
2005	92 700	6.8	2 743	0.2	95 443	7.0	103 192	7.6
2006	90 098	6.6	2 606	0.2	92 704	6.7	99 876	7.3
2007	89 103	6.4	3 054	0.2	92 157	6.6	99 795	7.1
2008	90 289	6.4	4 132	0.3	94 421	6.7	102 253	7.2
2009/1	81 357	5.7	5 477	0.4	86 834	6.1	95 038	6.7
2010/1	72 431	5.1	5 400	0.4	77 831	5.5	88 649	6.2

1 Per adult data based on 2008 population.

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

**Figure 2** Sales of (i) manufactured and total<sup>1</sup> cigarettes and (ii) all tobacco products. 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 filter (rather than plain) cigarettes; percentage using blond (rather than dark) tobacco

Year	Filter		Blond tobacco % of sales
	% of sales	% of production	
1957			15.02
1958			12.16
1959		8.00	8.90
1960		11.79	6.48
1961	10.0	15.19	6.25
1962	13.0	17.99	6.24
1963	15.0	20.72	6.74
1964	17.0	24.01	7.36
1965			7.84
1966	31.5	33.93	7.97
1967	37.3	39.19	7.92
1968	42.9	44.69	7.88
1969	47.2	45.22	7.32
1970	48.8	45.80	7.42
1971	52.5	52.61	7.97
1972		63.52	8.53
1973		61.32	9.78
1974	81.0	66.00	9.87
1975	84.1	78.00	12.49
1976	87.1	81.00	14.43
1977	88.8	83.00	17.60
1978	91.2	83.00	17.68
1979	93.2	83.00	21.30
1980	94.0	85.00	25.49
1981	93.8	90.00	31.58
1982		91.94	37.41
1983		96.01	42.44
1984		96.01	43.89
1985		97.00	44.20
1986		96.99	46.06
1987		97.95	47.36
1988		98.21	50.32
1989		97.99	52.14
1990		98.00	56.20
1991		97.77	59.27
1992		97.80	59.64
1993		97.81	59.84
1994		97.80	63.18
1995		97.78	63.62
1996		97.80	69.21
1997	99.8	97.83	68.87
1998	99.8	97.80	71.74
1999		97.80	72
2000		97.80	76
2001		97.80	78
2002		98.14	80
2003		98.14	

Source: see *Notes on sources of sales data: Plain/Filter cigarette sales*, p. 47 and *Blond/Dark tobacco cigarette sales*, p. 48.

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

Year	Source	Product	Frequency	Age Groups																		All ages		
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	
68	4	UC A										24	29	34	39	44	49	54	59	64	69	74	79	67
70	1	U U														65	67	72						
78	3	UC U		14	23			62	72					66			65			46				54
78	3	U U						67						66			65			47				64
81	13	UC R															56							
81	13	A R															63							
81	14	UC R															41							
81	14	A R															50							
82	2	A A						59				67		61		61		48						58
83	15	A R															45							
83	15	A A										46		64		67		58		52		40		55
85	5	U U															59							
86	2	A A						54				69		61		57		47						58
86	8	U *		3																				
86	8	U R			7																			
86	8	U A			25																			
86	12	U R													54									
86	17	UC U														51								
87	6	UC R												61		55		43		42				48
87	6	UC A													63		59		47		44			51
87	6	A A													65		66		57		51			59
87	7	UC R														52								
87	7	A A						55				68		60		58		49		37		27		55
87	16	A *		3																				
87	16	A R			13																			
87	16	A A			31																			
87	23	UC U						61				64		60			26							53
87	23	A U						61				67		65			29							55
88	23	TC U							40			50		48			35							43
88	23	A U							43			58		53			38							48
88	23	TC U							44			50		48			28							42
88	23	A U						52			60		62			36								51
89	7	U U													55									
89	10	U R													56		46		45					49
89	10	U A													58		52		56					55
89	11	U R													48		37		31					39
89	11	U A													56		45		37					47
89	12	U R														52								
89	17	UC U														53								
89	23	TC U							43			63		56			45							52
89	23	A U							46			69		64			48							57
89	23	TC U							45			65		58			37							51
89	23	A U						46			66		64			41								54

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

Year	Source	Product	Frequency	Age Groups																				All ages	
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	80+	
68	4	UC A																							
70	1	U U																							
78	3	UC U	3	4																					17
78	3	U U																							18
81	13	UC R																							
81	13	A R																							
81	14	UC R																							
81	14	A R																							
82	2	A A																							20
83	15	A R																							
83	15	A A																							22
85	5	U U																							
86	2	A A																							23
86	8	U *		3																					
86	8	U R		6																					
86	8	U A		24																					
86	12	U R																							22
86	17	UC U																							20
87	6	UC R																							7
87	6	UC A																							9
87	6	A A																							9
87	7	UC R																							22
87	7	A A																							23
87	16	A *		5																					
87	16	A R		13																					
87	16	A A		31																					
87	23	UC U																							27
87	23	A U																							27
88	23	TC U																							22
88	23	A U																							22
88	23	TC U																							26
88	23	A U																							32
89	7	U U																							23
89	10	U R																							10
89	10	U A																							12
89	11	U R																							17
89	11	U A																							19
89	12	U R																							21
89	17	UC U																							25
89	23	TC U																							30
89	23	A U																							31
89	23	TC U																							25
89	23	A U																							25

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

Year	Source	Product	Frequency	Age Groups																				All ages			
				12	13	14	15	16	17	18	19	20	-	24	25	30	35	40	45	50	55	60	65	70	75		
90	2	A	A									39		53		57		65		48		34		47			
90	8	U	*		4		12																				
90	8	U	R		7		18																				
90	8	U	A		18		27																				
90	9	U	R			3	15																				
90	9	U	A		0		10																				
90	16	A	R		3																						
90	17	UC	U									72		70		50		45		41						59	
90	18	A	A									49		60		64		53		47		40		37		52	
90	23	MC	U									46		63		50										48	
90	23	TC	U									46		63		50										48	
90	23	A	U									46		63		55										51	
91	6	UC	R										64		51		44		37							45	
91	6	UC	A										65		52		46		37							46	
91	6	A	A										67		59		54		44							53	
91	23	MC	U									41		62		56										46	
91	23	TC	U									41		63		58										47	
91	23	A	U									41		64		61										48	
92	15	A	R											44													
92	15	A	A									43		60		55		51		46		26				47	
92	16	A	*		6																						
92	16	A	R		11																						
92	16	A	A		27																						
92	19	A	R									28		54		56		64		47		29				47	
92	19	A	A									46		62		64		69		53		32				55	
92	23	MC	U									49		59		50										47	
92	23	TC	U									50		62		51										48	
92	23	A	U									50		63		52										50	
93	7	A	R									39		58		57		48		37		22		16		44	
93	7	A	A									46		63		61		52		41		26		19		49	
94	2	A	R									35		55		52		43		34			21			39	
94	2	A	A									39		58		54		46		37			23			42	
94	8	U	*		1		15		24		27																
94	8	U	R		3		20		30		35																
94	8	U	A		9		28		37		40																
94	16	A	*		5																						
94	16	A	R		10																						
94	16	A	A		17																						
94	22	UC	*									18															
94	22	UC	A									26															
94	23	MC	U									41		53		51										44	
94	23	TC	U									42		53		51										44	
94	23	A	U									42		55		53										46	
94	24	MC	U									41		53		51										44	
94	24	TC	U									42		53		51										45	
94	24	A	U									42		55		52										46	
94	25	UC	R																32								
94	25	A	R																44		44		36			41	

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

Year	Source	Product	Frequency	Age Groups																				All ages		
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	80+		
90	2	A	A																						22	
90	8	U	*		1		19																			
90	8	U	R		5		27																			
90	8	U	A		12		35																			
90	9	U	R			3	11																			
90	9	U	A	0	0	11																				
90	16	A	R		2																					
90	17	UC	U										58		32		15		3		1				23	
90	18	A	A										21		50		21		6		2		0		0	18
90	23	MC	U										52		48		32									31
90	23	TC	U										53		48		33									31
90	23	A	U										53		48		33									31
91	6	UC	R											47		23		7		4						12
91	6	UC	A											50		25		8		4						14
91	6	A	A											50		25		8		4						14
91	23	MC	U										48		49		24									29
91	23	TC	U										48		49		25									30
91	23	A	U										48		50		26									30
92	15	A	R														22									
92	15	A	A										42		54		36		16		9		4			27
92	16	A	*		4																					
92	16	A	R		10																					
92	16	A	A		26																					
92	19	A	R			33		56		47		24		17		6										32
92	19	A	A			52		62		55		31		19		8										39
92	23	MC	U				45			48																29
92	23	TC	U				46			49																30
92	23	A	U				46			49																30
93	7	A	R				34			41				28		12		5		2		2				21
93	7	A	A				42			47				32		14		7		2		2				24
94	2	A	R				30			41				29		10		3		1						19
94	2	A	A				34			45				30		11		3		2						21
94	8	U	*		3		19	29	37																	
94	8	U	R		6		27	38	46																	
94	8	U	A		9		37	44	52																	
94	16	A	*		4																					
94	16	A	R		9																					
94	16	A	A		18																					
94	22	UC	*			25																				
94	22	UC	A			36																				
94	23	MC	U				41			47				17				5								26
94	23	TC	U				42			48				18				5								26
94	23	A	U				42			48				18				5								26
94	24	MC	U				41			48				18				5								26
94	24	TC	U				42			48				19				5								26
94	24	A	U				42			48				19				5								26
94	25	UC	R															19								
94	25	A	R														34		12		4					19

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

Year	Source	Product	Frequency	Age Groups																			All ages			
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75			
95	6	UC R										29	34	39	44	49	54	59	64	69	74	79	80+			
95	6	UC A											60	52	39	32								43		
95	6	A A											61	56	46	42								49		
95	7	A R											39	56	52	45	41		30		14			43		
95	7	A A											45	59	56	48	44		32		17			47		
95	20	U U		2	14	15	12	22																		
95	21*	A R											25	42	48	54	52		42						43	
95	21	A A												50												
95	24	MC U											40		57		39			29					42	
95	24	TC U											40		58		39			29					42	
95	24	A U											40		58		39			32					43	
95	30	UC A													46											
96	16	A *			3																					
96	16	A R			10	27																				
96	16	A A			15																					
96	22	UC *				19																				
96	22	UC A				26																				
96	30	UC A													43											
96	31	U *			24																					
97	7	A R											36		53		58		49		34		23		15	42
97	7	A A											40		56		60		52		36		26		16	45
97	21	A R											41						44						43	
97	21	A A												51												
97	30	UC A													43											
97	31	U *			26																					
98	2	A R													36											
98	2	A A											43		50		54		40		30		21		39	
98	22	UC *			18																					
98	22	UC A			26																					
98	26	U *			9																					
98	26	U A			11	27	54	53																18		
98	27	UC *			2																					
98	27	UC R			3																					
98	27	UC A			10																					
98	28	UC *			2																					
98	28	UC R			4																					
98	29	UC R											30		49		47		38		33		25		12	37
98	29	A R											30		49		48		42		36		27		14	38
98	29	A A											38		55		55		48		39		34		18	44
98	30	UC A													45											
98	31	U *			22																					
99	16	A *			5																					
99	16	A R			10																					
99	16	A A			17																					
99	21	A R											36				40								38	
99	21	A A												45												
99	24	U U											46		51		59			33					47	
99	29	UC R											28		44		50		39		34		19		13	35
99	29	A R											28		44		51		42		36		22		15	36
99	29	A A											35		50		58		48		42		28		18	43
99	30	UC A													44											
99	31	U *			20																					

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

Year	Source	Product	Frequency	Age Groups																				All ages					
				12	13	14	15	16	17	18	19	20	-	25	30	35	40	45	50	55	60	65	70	75	80+				
95	6	UC R										24	-	29	34	39	44	49	54	59	64	69	74	79		15			
95	6	UC A												45		30		10		4							16		
95	6	A A												45		30		10		4							16		
95	7	A R												41		47		32		14		7		2		0	25		
95	7	A A												46		52		36		16		8		2		0	27		
95	20	U U	1	17	20	22	23																						
95	21*	A R												23		41	45	42	35		14							27	
95	21	A A													34														
95	24	MC U												37		53		20									26		
95	24	TC U												37		54		20									26		
95	24	A U												37		54		20									26		
95	30	UC A														39													
96	16	A *		4																									
96	16	A R		9		42																							
96	16	A A		16																									
96	22	UC *			28																								
96	22	UC A			38																								
96	30	UC A													36														
96	31	U *		31																									
97	7	A R												34		50		35		18		6		2		1	25		
97	7	A A												40		55		37		19		6		2		1	27		
97	21	A R												37					19								27		
97	21	A A													34														
97	30	UC A													38														
97	31	U *		32																									
98	2	A R														21													
98	2	A A												45		44		40		16		2		2			23		
98	22	UC *		28																									
98	22	UC A		38																									
98	26	U *		9																									
98	26	U A	10	36	45	60																					20		
98	27	UC *	2																										
98	27	UC R	3																										
98	27	UC A	13																										
98	28	UC *	3																										
98	28	UC R	5																										
98	29	UC R												26		38		35		17		5		2		0	0	20	
98	29	A R												26		38		35		17		5		2		0	0	20	
98	29	A A												31		43		41		21		7		3		1	0	24	
98	30	UC A														35													
98	31	U *		30																									
99	16	A *	7																										
99	16	A R	13																										
99	16	A A	27																										
99	21	A R												34			25											29	
99	21	A A													35														
99	24	U U												45		48		21				6						28	
99	29	UC R												23		35		35		17		4		3		1	1	20	
99	29	A R												23		35		35		17		4		3		1	1	20	
99	29	A A												29		40		42		20		5		4		1	1	24	
99	30	UC A													38														
99	31	U *		32																									

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

Year	Source	Product	Frequency	Age Groups																			All ages				
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75				
00	15	A	R									37		42		45		39		30		25		12	35		
00	15	A	A									40		46		47		42		33				23	38		
00	22	UC	*									19															
00	22	UC	A									27															
00	22*	UC	A									12	22	26	33	44									25		
00	29	UC	R									27		43		46		37		32		20		13	6	34	
00	29	A	R									27		43		47		39		37		22		15	6	35	
00	29	A	A									35		48		55		46		41		25		20	8	41	
00	30	UC	R																								
00	30	UC	A																								
00	31	U	*									20															
01	7*	UC	R									32															
01	7	A	R									36		48		52		43		36		19		13		39	
01	7	A	A									41		51		55		47		38		21		16		42	
01	16	A	R									24															
01	21	A	R										40														
01	21	A	A																								
01	29	UC	R									29		45		47		35		33		19		12	5	35	
01	29	A	R									29		45		49		37		37		21		14	5	36	
01	29	A	A									36		51		53		44		41		25		19	5	41	
01	30	UC	A																								
01	31	U	*									21															
02	8	A	*	1	5	17	26																				
02	8	A	R	3	8	24	33																				
02	8	A	A	6	13	32	39																				
02	22	UC	*									18															
02	22	UC	A									25															
02	24	MCR											34		53		51										
02	24	TCR											34		53		51										
02	24	AR											34		53		54										
02	24	MCU											44		57		53										
02	24	TCU											44		57		53										
02	24	AU											44		58		56										
02	30	UCR																									
02	30	UCA												37		46		34									
02	31	U	*										21														
02	32	A	*	1	4	10	16	22	25	33																	
02	32	A	R	3	7	15	21	28	31	39																	
02	32	A	A	6	10	22	28	33	37	46																	
03	7	A	R										35		39		44		42		27		19		9	34	
03	7	A	A										39		43		48		44		30		22		10	38	
03	21	A	R										40														
03	21	A	A																								
03	30	UCA																									
03	31	U	*										16														

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

Year	Source	Product	Frequency	Age Groups																				All ages			
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	80+			
00	15	A	R									39	39	41	21	9	3	1						23			
00	15	A	A									42	42	42	23	10			2					25			
00	22	UC	*									27															
00	22	UC	A									37															
00	22*	UC	A									20	33	37	44	59									36		
00	29	UC	R									24	33	32	18	5	3	1	0						19		
00	29	A	R									24	33	32	18	5	3	1	0						19		
00	29	A	A									31	42	38	22	5	4	2	0						23		
00	30	UC	R											35													
00	30	UC	A											38													
00	31	U	*									29															
01	7*	UC	R									31		36		15		5								22	
01	7	A	R									37	40	40	23	8	2	1								25	
01	7	A	A									43	45	43	25	9	3	1								27	
01	16	A	R									37															
01	21	A	R									36		26												31	
01	21	A	A										36														
01	29	UC	R									24	30	36	19	5	4	1	0						19		
01	29	A	R									24	30	36	19	5	4	1	0						19		
01	29	A	A									32	37	42	24	6	4	2	1						24		
01	30	UC	A											36													
01	31	U	*									28															
02	8	A	*	1	4	23	38																				
02	8	A	R	1	8	31	44																				
02	8	A	A	3	13	37	50																				
02	22	UC	*									24															
02	22	UC	A									33															
02	24	MCR										37		49	34		5									29	
02	24	TCR										37		49	34		5									29	
02	24	AR										37		49	34		5									29	
02	24	MCU										43		56	36		8									33	
02	24	TCU										43		56	36		8									33	
02	24	AU										43		56	36		8									33	
02	30	UCR												33													
02	30	UCA												40		42		25									35
02	31	U	*									30															
02	32	A	*	1	3	14	25	30	35	54																	
02	32	A	R	1	9	21	33	37	42	63																	
02	32	A	A	4	14	26	39	43	46	63																	
03	7	A	R									31		34	36	26	8	2	1							22	
03	7	A	A									35		37	39	28	9	2	1							25	
03	21	A	R									37			27											31	
03	21	A	A											38													
03	30	UCA												35													
03	31	U	*									23															

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

Year	Source	Product	Frequency	Age Groups																				All ages												
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	80+												
04	16	A *			3	14	24																													
04	16	A R			5	20	29																													
04	16	A A			7	23	33																													
04	22	UC *				19																														
04	22	UC A					25																													
04	30	UC A													37																					
04	31	U *				19																														
05	21	A R						37								37										37										
05	21	A A							43																											
05	24	MCR						30				40			39											30										
05	24	TC R						31				41			40											31										
05	24	A R						31				41			44											32										
05	24	MC U						37				46			40											34										
05	24	TC U						39				47			42											35										
05	24	A U						39				47			46											37										
05	30	UC R											33																							
05	30	UC A											37																							
05	31	U *				13																														
06	7	A R							25				40			37			39			28			19		9	32								
06	7	A A						31				46			41			41			31			21		9	35									
06	8	A *			2	10																														
06	8	A R			3	14																														
06	15	A R						32				37			34			34			26			13			28									
06	15	A A						37				43			39			35			29			15			33									
06	22	UC *				13																														
06	22	UC A				25																														
06	24	MCR						35				45			42													36								
06	24	TC R						35				46			42													36								
06	24	A R						35				46			42													36								
06	24	MC U						38				47			48													39								
06	24	TC U						38				48			48													39								
06	24	A U						38				48			48													40								
06	30	UC R											32																							
06	30	UC A											35																							
06	31	U *				13																														
07	21	A R							32							34																				
07	21	A A								43																										
07	30	UC R											32																							
07	30	UC A											35																							
07	31	U *						16																												
08	16	A *			4	9		20																												
08	16	A R			6	17		27																												
08	16	A A			8	22		31																												
08	22	UC *					13																													
08	22	UC A					31																													
08	30	UC R											30																							
08	30	UC A											33																							
08	31	U *						13																												

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

Year	Source	Product	Frequency	Age Groups																				All ages	
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	80+	
04	16	A *		5		20		30																	
04	16	A R		9		26		37																	
04	16	A A		11		28		41																	
04	22	UC *				24																			
04	22	UC A				32																			
04	30	UC A													35										
04	31	U *				23																			
05	21	A R						33							25										29
05	21	A A												34											
05	24	MCR						28					37		29										22
05	24	TCR						28					37		30										22
05	24	AR						28					37		30										22
05	24	MCU						35					42		32										26
05	24	TCU						35					43		33										26
05	24	A U						35					43		33										26
05	30	UCR												30											
05	30	UCA												33											
05	31	U *				19																			
06	7	A R						29					30		31		28		12		4		1		22
06	7	A A						33					34		34		31		13		5		1		24
06	8	A *			2	13																			
06	8	A R			4	20																			
06	15	AR						26					25		33		28		10		4				19
06	15	AA						36					32		37		31		12		4				24
06	22	UC *					17																		
06	22	UCA					31																		
06	24	MCR						32					41		39										26
06	24	TCR						32					41		39										26
06	24	AR						32					41		39										26
06	24	MCU						40					42		41										28
06	24	TCU						41					42		41										28
06	24	A U						41					42		41										28
06	30	UCR												30											
06	30	UCA												31											
06	31	U *				15																			
07	21	A R						30							24										
07	21	A A												35											
07	30	UCR												30											
07	30	UCA												33											
07	31	U *					18																		
08	16	A *		3	15	28																			
08	16	A R		5	21	35																			
08	16	A A		7	24	38																			
08	22	UC *				16																			
08	22	UCA				34																			
08	30	UCR												31											
08	30	UCA												34											
08	31	U *				15																			

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

Year	Source	Product	Frequency	Age Groups																				All ages	
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	80+	
09	21	A	R									36													
09	30	UC	R																						
09	30	UC	A																						
09	31	U	*									11													
09	33	A	R									29		37	37	38	27	16	10	31					
09	33	A	A									35		43	42	42	30	18	12	35					

Source: see *Notes on sources of survey data*, p. 48  
 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. 48  
 All ages: relates to ages reported; as given in original source

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

Year	Source	Product	Frequency	Age Groups																				All ages	
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	80+	
09	21	A	R									28													
09	30	UC	R																						
09	30	UC	A																						
09	31	U	*									15													
09	33	A	R									24		29	29	30	13	5	2						21
09	33	A	A									30		34	33	33	14	6	2						25

Source: see *Notes on sources of survey data*, p. 48  
 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. 48  
 All ages: relates to ages reported; as given in original source

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

Year	Source	Product	Estimated	Age Groups																		All ages			
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75		
68	4	UC		-	24	29	-	-	-	-	34	39	44	49	-	54	-	59	-	64	69	-	74	79	16
78	3	UC E*		12		13	18						20				19			18					
87	6	UC									19		21		19		15								19
87	7	UC											19												
87	23	UC E				16					19		19							17					18
88	23	TC E				13					15		16							16					15
89	10	UC E										21		20			18								20
89	11	UC E										20		21			18								20
89	23	TC E				14					19		16							15					17
90	17	UC E									19		18		20		17		15						18
90	18	UC											19												
90	23	TC E				13					19		18							18					17
91	6	UC									19		22		19		17								20
91	23	TC E				13					19		18							12					17
92	19	UC									19														
92	23	TC E				15					20		18							17					18
93	7	UC E										17													
94	2	UC					19						20												19
94	22	UC				9.1																			
94	23	TC E				15					17		17							17					17
94	24	TC E				15					17		17							17					17
94	25	UC E											17												
95	6	UC									18		20		20		17								19
95	7	UC E										18													
95	21	UC									19														
95	24	TC E				12					20		20							17					18
96	22	UC				8.3																			
97	7	UC E*				14					15		16		18		19		20		19	*			16
97	21	UC									18														
98	2	UC										20													
98	22	UC				7.9																			
98	26	U	*	4.3	6.4	8.0	12	12																8.7	
98	29	UC E*				16					20		21		22		21		19		16		18		20
99	21	UC									18														
99	29	UC E*				16					20		21		22		21		20		18		10		20
00	15	UC				14					17		20		18		16				14				17
00	22	UC				7.6																			
00	29	UC E*				16					20		21		22		22		21		18		17		20
00	30	UC E*									18														
01	7	UC E				14					18			20						17					18
01	21	UC									18														
01	29	UC E*				17					20		21		22		20		20		17		20		20
02	22	UC				7.8																			
02	24	TC E				14					17		20							16					17
02	30	UC E*									18														
03	7	UC E				15					18		20		21		19		16		13				19
03	21	UC									18														

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

Year	Source	Product	Estimated	Age Groups																			All ages			
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	-		
68	4	UC																								
78	3	UC E*		9.7		11		13					14					13				12				
87	6	UC											13		11		12		15						12	
87	7	UC															12									
87	23	UC E				11							14			11						10			12	
88	23	TC E					8.7						11			13						8.6			10	
89	10	UC E												14		11		10							13	
89	11	UC E													15		15		13						15	
89	23	TC E				11							13			11						17			12	
90	17	UC E											10		11		11		11		15				10	
90	18	UC														12										
90	23	TC E					14						12			13					25				13	
91	6	UC											12		13		13		13						13	
91	23	TC E						8.9					13			11					15				11	
92	19	UC												14												
92	23	TC E							11				13			18					14				14	
93	7	UC E														12										
94	2	UC											14				14								14	
94	22	UC						7.2																		
94	23	TC E							9.9				16			11					11				13	
94	24	TC E							9.9				16			12					11				13	
94	25	UC E															13									
95	6	UC											13		13		14		14						14	
95	7	UC E														13										
95	21	UC												12												
95	24	TC E							13				13			14					22				13	
96	22	UC							6.9																	
97	7	UC E*								13				15		17		21		25		22		*	16	
97	21	UC											13													
98	2	UC														14										
98	22	UC							7.0																	
98	26	U	*	4.7	5.3	5.2	9.0	12																6.4		
98	29	UC E*							13				15		16		16		15		17		13		15	
99	21	UC												13												
99	29	UC E*								13				16		15		16		14		15		9.7		
00	15	UC								12				14		16		16		17			12		14	
00	22	UC							6.8																	
00	29	UC E*								13				16		17		16		13		15		17	0.0	15
00	30	UC E*													15											
01	7	UC E								12				14			14					8.4			14	
01	21	UC													13											
01	29	UC E*									14			15		16		16		15		16		22		9.7
02	22	UC							7.3																	
02	24	TC E								12				13			15					12			13	
02	30	UC E*													14											
03	7	UC E								12				14		15		15		15		15		11		14
03	21	UC													13											

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

Year Source Product Estimated	Age Groups																				All ages	
	12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	80+	
04 22 UC								8.1	-	-	-	-	-	-	-	-	-	-	-	-		
05 21 UC													17									
05 24 MC E								11				15			18							16
05 24 TC E								11				15			17							15
05 30 UC E*													17									
06 7 UC E								15			16		19		20		19		16		14	18
06 15 A								11			14		17		16		16		13			15
06 22 UC								5.8														
06 24 MC E								10			16		19						17			16
06 24 TC E								10			16		19						17			16
06 30 UC E*												17										
07 21 UC												18										
07 30 UC E*												16										
08 22 UC								5.1														
08 30 UC E*												17										
09 30 UC E*												16										
09 33 UC E								14			16		18		20		18		17		14	17

Source: see *Notes on sources of survey data*, p. 48  
 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. 48  
 All ages: relates to ages reported; as given in original source

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

Year	Source	Product	Estimated	Age Groups																				All ages	
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	79	
04	22	UC										-	-	-	-	-	-	-	-	-	-	-	-	80+	
05	21	UC										24	29	34	39	44	49	54	59	64	69	74	79		All ages
05	24	MC E										12		13		13									12
05	24	TC E										12		13		12									12
05	30	UC E*													15										
06	7	UC E										11		14		15		15		15		15		*	14
06	15	A										9.5		11		13		13		13			13		12
06	22	UC										5.3													
06	24	MC E										13		12		13									12
06	24	TC E										12		12		13									12
06	30	UC E*													14										
07	21	UC												14											
07	30	UC E*													14										
08	22	UC										5.0													
08	30	UC E*													14										
09	30	UC E*													14										
09	33	UC E										12		12		13		15		16		14		8.8	13

Source:	see <i>Notes on sources of survey data</i> , p. 48
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. 48

All ages: relates to ages reported; as given in original source

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

Year	Source	Product	Age Groups																		% Total sales			
			12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70			
68	4	UC									9.8		11		11							11	**	
78	3	UC*		2.7		7.9		13				13					13						104%T	
87	6	UC										12		11		8.2		6.1					8.9	
87	7	UC											10										84%T	
87	23	UC*				9.7					12		11					4.4					9.5	
88	23	TC*				5.4					7.6		7.5					5.5					6.5	
89	10	UC										12		9.0		7.9							9.7	
89	11	UC										9.5		7.6		5.4							7.7	
89	23	TC*				6.1					12		8.7					6.6					8.7	
90	17	UC									13		13		12		7.8		6.0				11	
90	18	UC											9.9											79%T
90	23	TC*				6.1					12		9.0					6.2					8.4	
91	6	UC										12		11		8.6		6.1					8.9	
91	23	TC*				5.3					12		11					3.2					7.8	
92	19	UC										8.7											88%T	
92	23	TC*				7.3					13		9.0					5.3					8.6	
93	7	UC*											7.3										76%T	
94	2	UC										7.4											66%T	
94	22	UC				1.6																	**	
94	23	TC*				6.2					9.3		8.7					5.3					7.4	
94	24	TC*				6.3					9.3		8.7					5.3					7.4	
94	25	UC											5.3										**	
95	6	UC									11		10		7.5		5.4						8.1	
95	7	UC										7.2											78%T	
95	21	UC*										8.0											79%T	
95	24	TC*				4.7					12		7.7					5.1					7.6	
96	22	UC				1.6																	**	
97	7	UC*				5.6					8.5		9.7		9.2		6.9		5.2		3.4		7.3	
97	21	UC*									7.5												74%T	
98	2	UC										7.2											69%T	
98	22	UC				1.4																	**	
98	26	U				1.7																	**	
98	29	UC*				4.8					9.7		9.8		8.5		6.9		4.8		1.9		7.3	
99	21	UC*										6.8											65%T	
99	29	UC*				4.5					8.7		10		8.6		7.1		3.8		2.3		7.0	
00	15	UC				5.0					7.3		8.8		7.1		4.8			2.8		5.9		
00	22	UC				1.5																	**	
00	29	UC*				4.4					8.5		9.9		8.2		6.9		4.2		2.3		6.9	
00	30	UC*										6.5											66%T	
01	7*	UC				4.5					8.6		7.2						2.2				6.4	
01	21	UC*									7.4												66%T	
01	29	UC*				4.8					8.7		10		7.7		6.7		3.8		2.1		7.0	
02	22	UC				1.4																	**	
02	24	TC				4.7					9.1		10					4.6					7.2	
02	30	UC*										6.4											64%T	
03	7	UC				5.3					7.0		9.0		8.7		5.1		3.0		1.1		6.4	
03	21	UC*									7.4												68%T	

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

Year	Source	Product	Age Groups																		All ages	% Total sales					
			12	13	14	15	16	17	18	19	20	-	25	30	35	40	45	50	55	60	65	70	75	80+			
68	4	UC																							**		
78	3	UC*			0.4		5.3		6.3					2.1				0.6							104%T		
87	6	UC												4.4		1.4		0.5		0.2					0.8	**	
87	7	UC													2.6											84%T	
87	23	UC*									5.6		7.0		1.0				0.6						3.3	86%T	
88	23	TC*									3.3		4.5		1.5				0.3						2.3	62%T	
89	10	UC												2.9		0.1		0.4							1.4	**	
89	11	UC												4.9		1.9		0.5							2.5	**	
89	23	TC*									4.5		7.0		1.7				0.8						3.6	83%T	
90	17	UC										5.9		3.4		1.7		0.4		0.1					2.4	81%T	
90	18	UC												2.0												79%T	
90	23	TC*									7.3		5.8		4.3				0.6						4.1	86%T	
91	6	UC										5.6		2.9		0.8		0.5							1.5	**	
91	23	TC*									4.3		6.4		2.7				0.9						3.4	75%T	
92	19	UC											4.5													88%T	
92	23	TC*									5.2		6.6		4.4				1.1						4.1	90%T	
93	7	UC*												2.6												76%T	
94	2	UC											2.6													66%T	
94	22	UC									1.8															**	
94	23	TC*									4.1		7.5		2.0				0.5						3.4	78%T	
94	24	TC*									4.1		7.5		2.2				0.5						3.4	78%T	
94	25	UC												2.5												**	
95	6	UC										5.6		3.8		1.3		0.4							2.0	**	
95	7	UC												3.1												78%T	
95	21	UC*											3.4													79%T	
95	24	TC*									4.6		7.0		2.8				0.4						3.5	85%T	
96	22	UC									1.9															**	
97	7	UC*									5.1		8.2		6.3		4.0		1.6		0.4		*		4.3	89%T	
97	21	UC*											3.5													74%T	
98	2	UC												2.9												69%T	
98	22	UC									1.9															**	
98	26	U									1.2															**	
98	29	UC*									3.3		5.6		5.6		2.6		0.8		0.4		0.1		0.0	3.0	70%T
99	21	UC*											3.8													65%T	
99	29	UC*									3.0		5.4		5.4		2.6		0.6		0.4		0.1		0.1	2.9	70%T
00	15	UC									4.6		5.3		6.6		3.4		1.5				0.2			3.3	62%A
00	22	UC									1.8															**	
00	29	UC*									3.0		5.2		5.4		2.9		0.6		0.5		0.1		0.0	2.9	68%T
00	30	UC*											5.0													66%T	
01	7*	UC									3.7		5.2			2.1				0.4						3.1	65%T
01	21	UC*											4.0													66%T	
01	29	UC*									3.3		4.4		5.9		3.1		0.7		0.6		0.2		0.0	2.9	68%T
02	22	UC									1.8															**	
02	24	TC									4.2		6.4		5.0				0.6						3.7	77%T	
02	30	UC*												4.8												64%T	
03	7	UC									3.6		4.6		5.3		3.9		1.1		0.4		0.1		3.1	65%T	
03	21	UC*											4.1													68%T	

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

Year	Source	Product	Age Groups																		% Total sales						
			12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60	65	70	75	80+				
04	22	UC								1.5														**			
05	21	UC*													6.4										63%T		
05	24	MC												3.4	6.1	6.8								4.7	55%M		
05	24	TC												3.5	6.1	6.7								4.7	52%T		
05	30	UC*														5.7									59%T		
06	7	UC*												3.8	6.6	7.0	7.8	5.4						5.6	63%T		
06	15	A												3.7	5.1	5.5	5.1	4.0						4.2	46%A		
06	22	UC												0.7											**		
06	24	MC												3.7	7.1	7.8								5.8	69%M		
06	24	TC												3.7	7.1	7.8								5.8	67%T		
06	30	UC*														5.5									59%T		
07	21	UC*													5.8										63%T		
07	30	UC*														5.2									59%T		
08	22	UC												0.7											**		
08	30	UC*														5.6									64%T		
09	30	UC*														5.4									65%T		
09	33	UC*												4.0	6.0	6.7	7.5	4.9						2.7	1.4	5.4	65%T

Source: *Notes on sources of survey data*, p. 48  
 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. 48  
 All ages: = relates to ages reported; as given in original source  
 % Total sales: = estimated % of total sales of M = manufactured or T = total cigarette consumption implied by survey, sexes combined,  
 \*\* = cannot be calculated  
 -- = adjusted by original author

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

Year	Source	Product	Age Groups																		% Total sales					
			12	13	14	15	16	17	18	19	20	-	25	30	35	40	45	50	55	60	65	70	75	80+		
04	22	UC									1.8													**		
05	21	UC*													4.1										63%T	
05	24	MC												3.4				4.6							2.7	55%M
05	24	TC												3.3				4.7							2.8	52%T
05	30	UC*															4.4								59%T	
06	7	UC*												3.3				4.2							3.0	63%T
06	15	A												2.5				2.7							2.4	46%A
06	22	UC												0.9											**	
06	24	MC												4.0				4.9							3.2	69%M
06	24	TC												3.9				4.9							3.2	67%T
06	30	UC*															4.2								59%T	
07	21	UC*															3.9								63%T	
07	30	UC*															4.2								59%T	
08	22	UC												0.8											**	
08	30	UC*															4.7								64%T	
09	30	UC*															4.2								65%T	
09	33	UC*												2.8				3.3							2.8	65%T

Source: Notes on sources of survey data, p. 48  
 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. 48  
 All ages: relates to ages reported; as given in original source  
 % Total sales: estimated % of total sales of M = manufactured or T = total cigarette consumption implied by survey, sexes combined,  
 \*\* = cannot be calculated  
 -- = adjusted by original author

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

Year	Source	Product	Age Groups																% Total sales							
			12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74	75 - 79	80+			
78	3	UC*			2.6		7.6		12		13		13		12		8.0						104%T			
87	7	UC																					84%T			
87	23	UC*									11		14		13		5.2						11	86%T		
88	23	TC*									8.7		12		12		8.9						11	62%T		
89	23	TC*									7.3		15		10		8.0						10	83%T		
90	17	UC									16		16		15		9.6		7.4				13	81%T		
90	18	UC															12							79%T		
90	23	TC*									7.1		14		10		7.2						9.8	86%T		
91	23	TC*									7.0		16		14		4.2						10	75%T		
92	19	UC												9.8										88%T		
92	23	TC*									8.1		14		10		5.9						9.5	90%T		
93	7	UC*													9.7									76%T		
94	2	UC													11									66%T		
94	23	TC*									8.0		12		11		6.8						9.5	78%T		
94	24	TC*									8.0		12		11		6.8						9.5	78%T		
95	7	UC													9.1									78%T		
95	21	UC*													10									79%T		
95	24	TC*									5.5		14		9.1		5.9						9.0	85%T		
97	7	UC*									6.3		9.6		11		10		7.8		5.9		3.9	* 8.3	89%T	
97	21	UC*													10									74%T		
98	2	UC													10									69%T		
98	29	UC*									6.8		14		14		12		9.8		6.8		2.7	2.5	10	70%T
99	21	UC*													10									65%T		
99	29	UC*									6.5		12		15		12		10		5.5		3.3	0.4	10	70%T
00	15	UC									8.0		12		14		11		7.7		4.4				9.5	62%A
00	29	UC*									6.4		12		14		12		10		6.1		3.3	1.3	10	68%T
00	30	UC*													9.9									66%T		
01	7	*	UC								6.9		13		11				3.4					9.9	65%T	
01	21	UC*													11									66%T		
01	29	UC*									7.1		13		15		11		9.8		5.6		3.2	1.5	10	68%T
02	24	TC									6.1		12		13				6.0					9.3	77%T	
02	30	UC*													10									64%T		
03	7	UC									8.2		11		14		13		7.9		4.7		1.7		9.8	65%T
03	21	UC*													11									68%T		
05	21	UC*													10									63%T		
05	24	MC									6.3		11		12				4.1					8.6	55%M	
05	24	TC									6.7		12		13				3.3					9.0	52%T	
05	30	UC*													9.6									59%T		
06	7	UC*									6.0		11		11		12		8.5		4.8		1.9		8.9	63%T
06	15	A									8.1		11		12		11		8.9				3.5		9.3	46%A
06	24	MC									5.3		10		11				5.5					8.4	69%M	
06	24	TC									5.5		11		12				5.7					8.7	67%T	
06	30	UC*													9.2									59%T		
07	21	UC*													9.3									63%T		
07	30	UC*													8.7									59%T		
08	30	UC*													8.8									64%T		
09	30	UC*													8.3									65%T		
09	33	UC*									6.1		9.3		10		12		7.5		4.2		2.2		8.3	65%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. 48  
 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. 48  
 All ages: relates to ages reported; as given in original source  
 % Total sales: Adjustment factor used, estimated % of total sales  
 M = manufactured or T = total cigarette consumption implied by survey, sexes combined  
 -- = adjusted by original author

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

Year	Source	Product	Age Groups																		All ages	% Total sales					
			12	13	14	15	16	17	18	19	20 - 24	25	30	35	40	45	50	55	60	65	70	75					
78	3	UC*			0.4		5.1		6.0			2.0				0.6			0.4					104%T			
87	7	UC																						84%T			
87	23	UC*									6.5		8.2		1.1					0.7				3.8	86%T		
88	23	TC*									5.4		7.3		2.5					0.4				3.7	62%T		
89	23	TC*									5.5		8.5		2.0					1.0				4.4	83%T		
90	17	UC									7.3		4.2		2.1		0.5		0.1					3.0	81%T		
90	18	UC																	2.5					79%T			
90	23	TC*									8.5		6.8		5.0					0.7				4.8	86%T		
91	23	TC*									5.7		8.6		3.6					1.2				4.5	75%T		
92	19	UC												5.1											88%T		
92	23	TC*									5.8		7.3		4.9					1.2				4.5	90%T		
93	7	UC*																	3.4						76%T		
94	2	UC											4.0												66%T		
94	23	TC*									5.3		9.6		2.6					0.7				4.3	78%T		
94	24	TC*									5.2		9.5		2.8					0.7				4.4	78%T		
95	7	UC																	3.9						78%T		
95	21	UC*												4.3											79%T		
95	24	TC*									5.4		8.2		3.2					0.5				4.1	85%T		
97	7	UC*									5.8		9.2		7.1		4.5		1.8		0.4	*			4.9	89%T	
97	21	UC*												4.7											74%T		
98	2	UC														4.2									69%T		
98	29	UC*									4.7		7.9		7.9		3.7		1.1		0.5	0.1	0.1		4.3	70%T	
99	21	UC*											5.9													65%T	
99	29	UC*									4.3		7.8		7.7		3.8		0.9		0.6	0.1	0.1		4.2	70%T	
00	15	UC									7.4		8.5		11		5.5		2.5						5.3	62%A	
00	29	UC*									4.3		7.6		7.8		4.3		0.8		0.7	0.1	0.0		4.2	68%T	
00	30	UC*												7.6												66%T	
01	7*	UC									5.7		8.0				3.3				0.7				4.7	65%T	
01	21	UC*											6.0													66%T	
01	29	UC*									4.9		6.5		8.7		4.5		1.0		0.8	0.3	0.1		4.3	68%T	
02	24	TC									5.5		8.3			6.5					0.8				4.8	77%T	
02	30	UC*													7.5											64%T	
03	7	UC									5.6		7.2		8.2		6.0		1.7		0.5	0.1			4.8	65%T	
03	21	UC*											6.1													68%T	
05	21	UC*												6.5												63%T	
05	24	MC									6.2		8.5		6.7					0.6					5.0	55%M	
05	24	TC									6.4		9.0		7.1					0.6					5.3	52%T	
05	30	UC*													7.4											59%T	
06	7	UC*									5.2		6.6		7.2		6.7		2.8		0.9	*				4.7	63%T
06	15	A									5.4		5.8		9.4		7.6		2.9			1.1				5.2	46%A
06	24	MC									5.8		7.1			7.3					0.6				4.7	69%M	
06	24	TC									5.8		7.3		7.5					0.6					4.8	67%T	
06	30	UC*													7.0											59%T	
07	21	UC*												6.2												63%T	
07	30	UC*												7.1												59%T	
08	30	UC*												7.3												64%T	
09	30	UC*												6.4												65%T	
09	33	UC*									4.3		5.1		5.9		6.6		3.2		1.2	0.3			4.3	65%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. 48  
 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. 48  
 All ages: relates to ages reported; as given in original source  
 % Total sales: Adjustment factor used, estimated % of total sales  
 M = manufactured or T = total cigarette consumption  
 implied by survey, sexes combined  
 -- = 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.  
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>		Manufactured cigarettes number/person/day	
			M	F	M	F	M	F	M	F	Total sales %	M	F	Total cigarettes number/person/day
														M
1970	1	<i>U</i>					65	10						( 10.7 1.3 )
1978	3	<i>UC+U</i>			61	17	62	17	11.7	2.2	104			11.3 2.1
1982	2	<b>A</b>					57	20						
1983	15	<b>A</b>					45	17						
	15	<b>A</b>					55	24						
1985	5	<i>U</i>					59	20						
1986	2	<b>A</b>					56	22						
	12	<i>U</i>					54	22						
	17	<i>UC</i>			50	20								( 11.0 3.5 )
1987	7	<i>UC+A</i>			51	22	54	22	9.8	2.6	84			11.7 3.1
	23	<i>UC+A</i>			52	27	55	27	9.4	3.3	86			10.9 3.9
1988	23	<i>TC+A</i>			43	21	48	22	6.5	2.3	62			10.5 3.7
	23	<i>TC+A</i>			42	24	52	29						
1989	7	<i>U</i>					54	23						
	12	<i>U</i>					52	21						
	17	<i>UC</i>			53	25								( 10.4 3.9 )
	23	<i>TC+A</i>			52	28	57	29	8.5	3.4	83			10.3 4.1
	23	<i>TC+A</i>			51	25	54	25						
1990	2	<b>A</b>					49	21						
	17	<i>UC</i>			54	23			9.5	2.4	81			11.8 2.9
	18	<i>UC+A</i>					52	18	9.7	2.0	79			12.2 2.5
	23	<i>MC+TC+A</i>	48	30	48	31	51	31	8.5	4.1	86			9.8 4.7
1991	23	<i>MC+TC+A</i>	46	29	47	30	48	30	7.8	3.4	75			10.4 4.5
1992	15	<b>A</b>					44	22						
	15	<b>A</b>					47	28						
	19	<i>UC+A</i>					46	29	8.4	4.0	88			9.5 4.5
	19	<b>A</b>					53	35						
	23	<i>MC+TC+A</i>	47	28	48	30	50	30	8.6	4.0	90			9.6 4.5
1993	7	<i>UC+A</i>					44	21	7.2	2.6	76			9.5 3.4
	7	<b>A</b>					48	24						
1994	2	<i>UC+A</i>					41	20	6.9	2.2	66			10.5 3.3
	2	<b>A</b>					43	22						
	23	<i>MC+TC+A</i>	44	25	44	26	46	26	7.4	3.4	78			9.5 4.3
	24	<i>MC+TC+A</i>	44	26	44	26	46	26	7.4	3.4	78			9.4 4.3

**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	M	F	Total sales %	Manufactured cigarettes number/person/day	M	F	Total cigarettes number/person/day	M	F
1995	7	UC+A					43	24	7.1	3.0	78				9.0	3.9	
	7	A					47	27									
	21	UC+A					39	22	7.4	2.8	79				9.4	3.5	
	21	A					46	27									
	24	MC+TC+A	42	26	42	26	43	26	7.5	3.4	85				8.8	4.0	
	30	UC			42	31									(	8.0	4.8 )
1996	30	UC			40	29									(	7.7	4.5 )
1997	7	UC+A					42	24	7.3	4.3	89				8.3	4.9	
	7	A					45	27									
	21	UC+A					39	22	7.0	2.8	74				9.4	3.8	
	21	A					47	27							(	8.2	4.9 )
1998	2	UC+A					36	21	7.2	2.9	69				10.4	4.2	
	2	A					41	25									
	29	UC+A			37	20	38	20	7.3	3.0	70				10.3	4.3	
	29	A					44	24							(	9.4	5.2 )
1999	21	UC+A					35	23	6.2	3.1	65				9.5	4.8	
	21	A					42	28									
	24	U					47	27									
	29	UC+A			35	19	37	19	7.0	2.9	70				10.1	4.2	
	29	A					43	23							(	8.9	5.3 )
2000	15	UC+A					36	25	6.0	3.6	62				9.7	5.8	
	15	A					39	27									
	29	UC+A			34	19	35	19	6.9	2.9	68				10.1	4.2	
	29	A					41	24									
	30	UC			33	27			5.5	3.9	66				8.4	5.9	
	30	UC			37	30											
2001	7*	UC+A			35	23	39	24	6.4	3.1	65				9.8	4.8	
	7	A					42	27									
	21	UC+A					37	24	6.4	3.2	66				9.7	4.9	
	21	A					43	29									
	29	UC+A			35	19	36	19	7.0	3.0	68				10.2	4.4	
	29	A					41	24							(	9.0	5.5 )
	30	UC			37	28											

**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>		Manufactured cigarettes number/person/day		
			M	F	M	F	M	F	M	F	Total sales %	M	F	M	F
2002	24	MC+TC+A	42	29	42	29	43	29	7.3	3.8	77			9.5	4.9
	24	MC +TC +A	46	33	46	33	48	33							
	30	UC			33	26			5.5	3.7	64			8.5	5.8
	30	UC			36	28									
2003	7	UC+A					34	22	6.3	3.1	65			9.7	4.8
	7	A					37	25							
	21	UC+A					38	25	6.5	3.3	68			9.6	4.9
	21	A					44	30							
	30	UC			35	27								( 8.9	5.5 )
2004	30	UC			35	28								( 8.8	5.6 )
2005	21	UC+A					34	23	5.6	3.3	63			9.0	5.2
	21	A					40	27							
	24	MC+TC+A	30	22	31	23	32	23	4.8	2.8	55	8.7	5.0		
	24	MC+TC	34	26	35	26			4.6	2.8	52			8.9	5.3
	24	A					37	26							
	30	UC			31	24			4.9	3.5	59			8.3	5.8
	30	UC			34	26									
2006	7	UC+A					31	21	5.6	3.0	63			8.8	4.7
	7	A					35	24							
	15	A					30	21	4.3	2.4	46			9.3	5.3
	15	A					34	25							
	24	MC+TC+A	36	26	36	26	37	26	5.8	3.3	69	8.5	4.7		
	24	MC+TC	39	28	40	29			5.8	3.3	67			8.7	4.9
	24	A					40	29							
	30	UC			29	23			4.8	3.3	59			8.0	5.5
	30	UC			33	25									
2007	21	UC+A					31	21	5.2	3.1	63			8.2	5.0
	21	A					40	28							
	30	UC			30	24			4.5	3.3	59			7.6	5.6
	30	UC			33	26									
2008	30	UC			28	24			4.9	3.7	64			7.6	5.7
	30	UC			32	27									
2009	21	A					33	22							
	30	UC			29	22			4.7	3.3	65			7.2	5.0
	30	UC			32	24									
	33	UC+A					31	21	5.3	2.7	65			8.1	4.2
	33	A					35	24							

1 Surveys covering an age range of at least 21-64 are included. Any gaps in the data for ages 15-20 and 65 years and over are filled in by assumed extensions to the age distribution, shown in the extended versions of Tables 4 and 6 in the Excel tables workbook. Method: see *Summary of adult smoking*, Methods p. 13. Exceptionally, calculation is based on the All ages value from Tables 6 and 7 in those surveys for which some age-specific data are not available (age groups marked as \* in Tables 6 and 7).

2 See *Notes on sources of survey data*, p. 48.

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 Estimated from data in Table 4 (see also the extended version of Table 4 in the Excel tables workbook)

5 This column includes prevalence of smoking classified as UC = cigarettes (type unspecified).

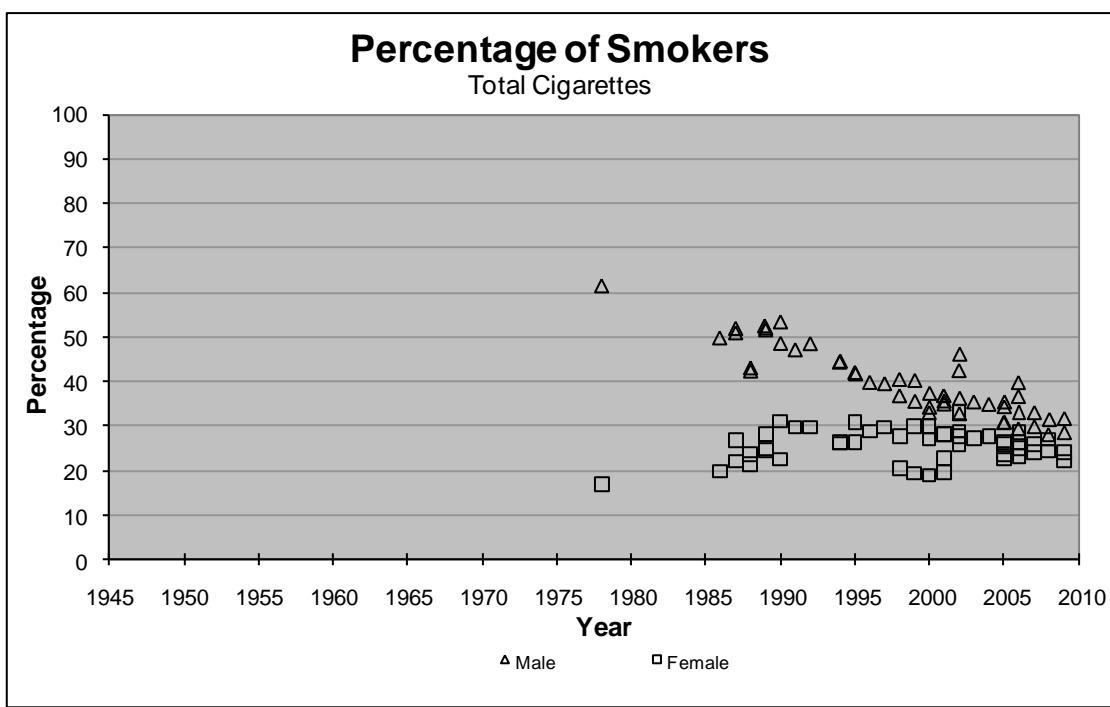
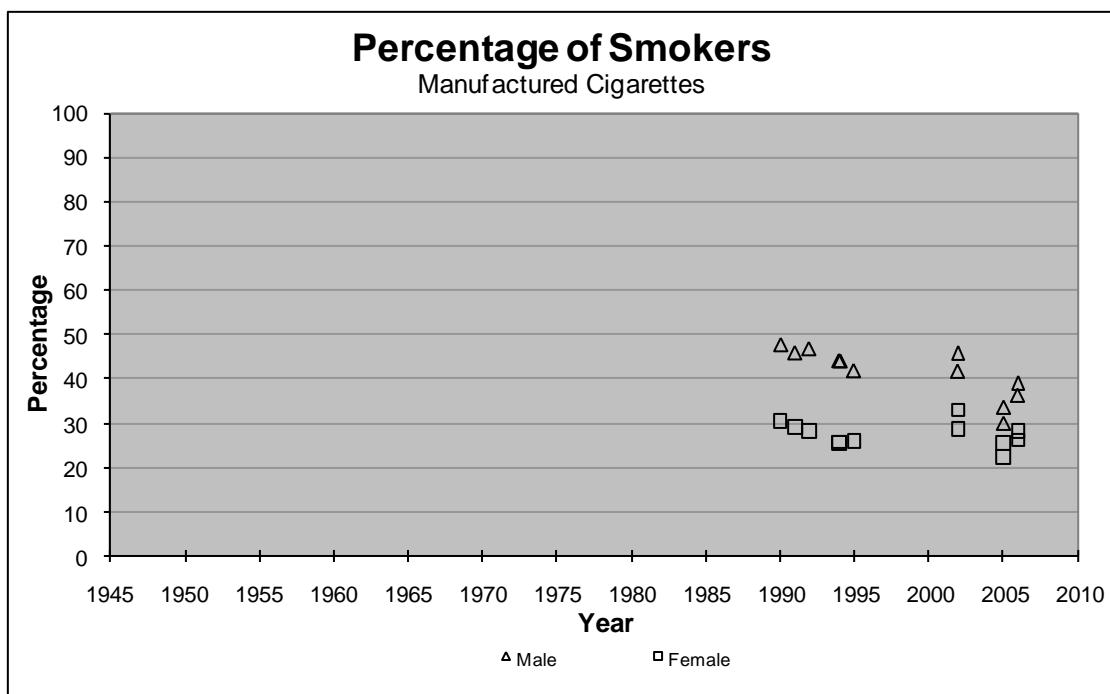
6 This column includes prevalence of smoking classified as U = unspecified product.

7 Estimated from data in Table 6 (see also the extended version of Table 6 in the Excel tables workbook)

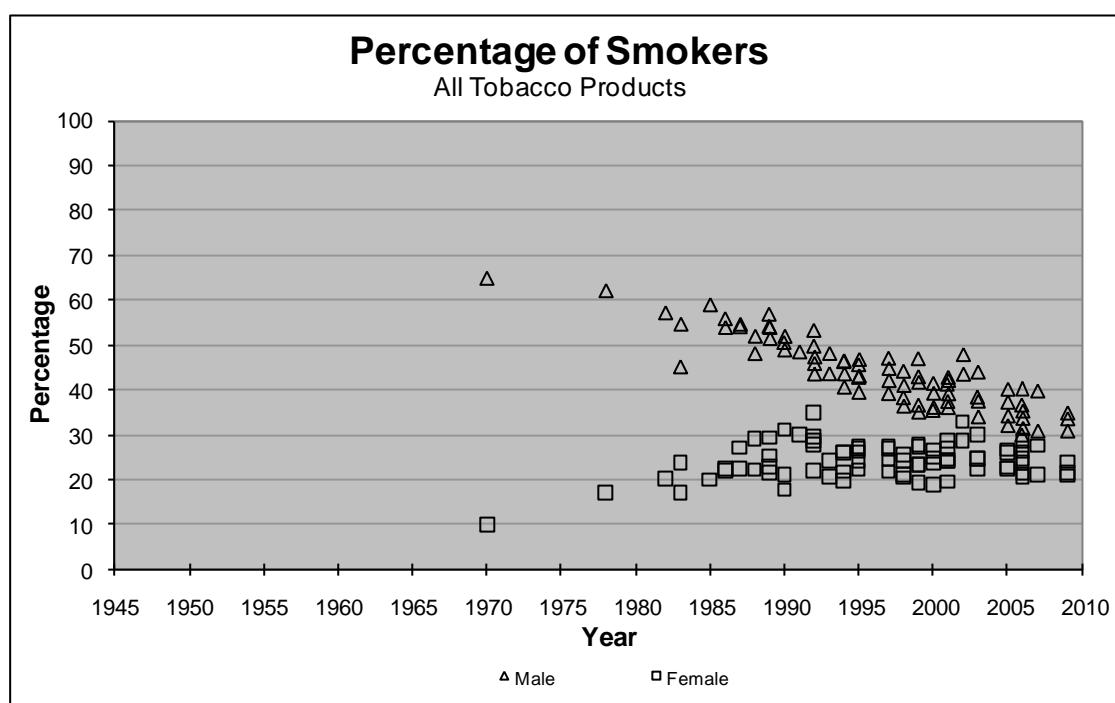
8 From Table 7, except data in parentheses, which are derived from the prevalence of smoking from Table 4 as described in *Summary of adult smoking*, Methods p. 13.

9 Number of cigarettes classified as UC = cigarettes (type unspecified) has been adjusted to total cigarette sales and included in this column.

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

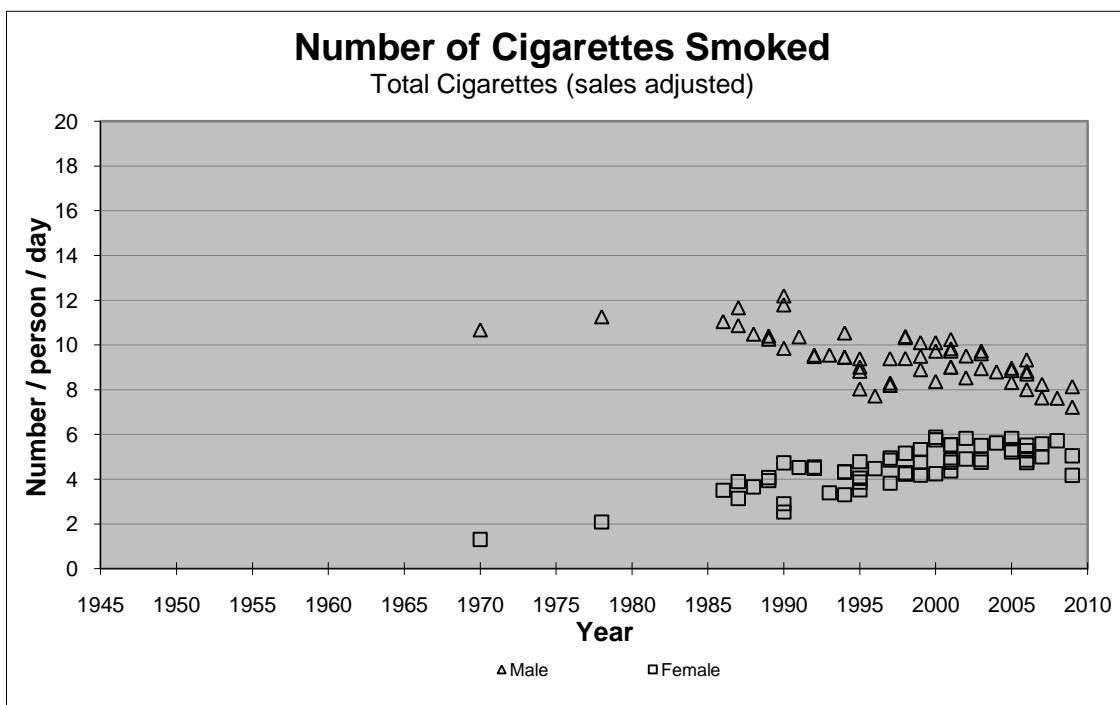


**Figure 3** (continued)



Source: Table 8.

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



Source: Table 8.

Estimates of manufactured cigarettes smoked per person per day are not presented due to sparseness of data.

## 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. 57 under *References*.

#### *Sales data before 1920*

1730-1798: Grupo de Estudios del Tabaco (GRETA) (2002) quoting data from the Archivo General de Simancas (Valladolid)

Data are available for each year: we give every fifth year only.

Data were originally given by weight in "libras" (pounds). We have converted the values to tonnes assuming that these are "libras castellanas" ( $\approx 460$  g) rather than avoirdupois pounds (453.59 g).

#### *Sales data for 1920-1973*

1920-1926: Hutson (1937)

Data by weight, originally given to nearest 1 000 pounds, have been converted to tonnes and given to the nearest tonne. Data by weight have been converted to millions assuming 1.0 grams/cigarette and 6.8 grams/cigar. These are effectively the same conversion factors as used in RP6 (see below).

1927-1973: RP6 (Lee (1975))

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

Notes as given in RP6:

(a) For the years 1927-1955 details of the weight of cigarettes, cigars, and smoking tobacco consumed were obtained from Anuario Estadístico de España, 1957. Figures for the years 1956-1973 were provided by the National Institute of Statistics, Madrid.

(b) The number of cigarettes consumed have been estimated from the cigarette consumption in pounds weight by using a conversion factor of 2.205 lbs per 1 000. The conversion factor used for cigars was 15 lbs per 1 000.

According to Hutson (1937), an average of 2 000 pounds (0.9 tonnes) of snuff was used annually from 1926-1934. No more detail is given so snuff data are not shown in the tables and are not counted in the total.

Note that comparison between data from RP6 and alternative data (not shown) from Tabacalera (1989) for the years 1957-1973 suggests an average weight of about 23 g per packet of smoking tobacco up to 1970 and 25 g thereafter. There are minor discrepancies between the two sources for the other products: data for 1965 from Tabacalera (1989) are shown in Table 1.3 as an example (for comparison with Table 1.2).

#### *Sales data for 1974 onwards*

1974-1988: Tabacalera (1989)

1989-2010: Comisionado para el Mercado de Tabacos (2011)

Data for manufactured cigarettes were given as numbers of packets, and have been converted to numbers of cigarettes assuming that 1 packet = 20 cigarettes. The data on manufactured cigarette consumption have been further converted to weight assuming an average weight of 1 g per cigarette.

Data on cigars were given as numbers and have been converted to weight assuming an average weight of 6.8 g per cigar (based on values used in RP6).

For 1974-1988, data on smoking tobacco (picadura) were given as numbers of packets, and have been converted to weight assuming an average weight of 25 g per packet (based on comparisons with RP6: see the previous section). For 1991-2010, data for hand-rolling tobacco (picadura liar) and pipe tobacco (picadura pipa) are available separately. These are given by numbers of packets

for 1991-2008 and by weight for 2008-2010. Data by number of packets have been converted to weight assuming average weights of 47 g per packet of rolling tobacco and 57 g per packet of pipe tobacco, based on the data for 2008 which are given both by number and by weight. Given that these conversion factors are considerably different from those used for earlier years, it is surprising that there is no apparent jump in the resulting sales figures.

No data are available for sales of smoking tobacco for the years 1989-1990. The values shown for these years (Table 1.3) are estimates by linear interpolation using the adjacent values and are included in the totals.

Data for 1965 are included in Table 1.3 as an example for comparison with the RP6 data (Table 1.2): see the previous section.

#### *Estimates of smuggling*

See Table 1.5.

1869: Bonilla Penvela (2003) quoting the Commission of the Spanish Parliament (la Comisión de las Cortes).

1993-2002: Bonilla Penvela (2003) quoting quarterly surveys by the tobacco industry.

Although several sources agree that smuggling peaked in 1993, estimates of the amount smuggled in that year differ widely:

10 000 million cigarettes (around 13%) (Barford (1994)),

1 300 million cigarettes (around 2%) (Crescenti (1995)),

29.6%, which amounts to one pack in three (González García (2000)) and

16% (ASPECT (Analysis of the Science and Policy for European Control of Tobacco) Consortium (2004) quoting the World Bank).

Crescenti (1995) states that most of the anti-smuggling measures which helped the market return to normal were introduced at the end of 1993. In addition, there was concerted action in 1997 to reduce the supply of contraband cigarettes from Andorra. This involved close collaboration between national authorities in several countries and the European Anti-Fraud Office (OLAF) (Joossens and Raw (2000)).

2003: El País (2004)

2005: Expansión (2005)

Estimate based on data for the first quarter of the year.

2006: Joossens *et al* (2010)

2010: Agence France Presse (2011)

This source (quoting Altadis) also suggests that smuggling rates began to rise again in 2011, estimating that smuggled cigarettes accounted for around 6% of the market in the first three months of 2011.

#### *Estimates of numbers of hand-rolled cigarettes*

1957-1988: Based on sales of all smoking tobacco (picadura), assuming 1g per cigarette. This method is based on Tabacalera (1989) where picadura sales are shown in the table headed 'cigarillos negros' (dark cigarettes). However, these estimates may be too high as they ignore usage in pipes: 20-24% of picadura sales were of pipe tobacco in the early 1990s (Comisionado para el Mercado de Tabacos (2011)).

The values for 1957-1974 have been corrected from those in earlier editions of this report.

1989-1990: No data available for smoking tobacco sales.

Numbers of hand-rolled cigarettes were estimated by linear interpolation using the adjacent values.

1991-2010: Based on sales of hand-rolling tobacco, assuming 1 g per cigarette. Separate data for hand-rolling and pipe tobacco are available for these years.

#### *Plain/Filter cigarette sales*

Sales:

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

1997-1998: Maxwell, Jr. (1998)

Production:  
US Department of Agriculture (Accessed March 2011)

*Blond/Dark tobacco cigarette sales*

- 1957-1988: Tabacalera (1989)
- 1989-1998: Tabacalera (1999)
- 1999-2001: US Department of Agriculture (2002)
- 2002: US Department of Agriculture (2003)

*Tar and nicotine machine yields of cigarettes*

No data are available on the sales-weighted machine yields of cigarettes. The tar yield per cigarette was limited by EC directive (Directive 90/239/EEC) to 15 mg by the end of 1992, and to 12 mg by the end of 1997. Limits of 10 mg tar, 1 mg nicotine and 10 mg carbon monoxide per cigarette came into force from the beginning of 2004 as a result of EC directive 2001/37/EC (ASPECT (Analysis of the Science and Policy for European Control of Tobacco) Consortium (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. 57 under *References*.

**Source  
number**

- 1 Benjamin (1978)**
  - a. Age and year not stated. Year 1970 and age group 16+ assumed.
  - b. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.
- 2 Pardell *et al* (1997), Fernandez *et al* (1999), Jané *et al* (2002)**
  - a. Series of surveys for the Departamento de Sanidad y Seguridad Social de la Generalitat de Cataluña. Cross-sectional representative surveys of the non-institutionalized adult population of Cataluña (Catalonia). The 1994 survey formed part of the Catalan Health Interview Survey.

Year	Sample size			Response rate (%)
	Total	Males	Females	
1982	1 487	695	791	93
1986	1 500			94
1990	1 556			97
1994	9 941			95
1998	2 281			

  - b. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.
- 3 Vioque and Bolumar (1987), Regidor *et al* (2010)**
  - a. Survey in 1978 by INE (National Institute for Statistics). Sample size 5 107, representative of the general Spanish population. Lowest age group 6-13.
  - b. There was a high level of non-response for cigarettes/smoker/day at ages <15 and 65+.
  - c. Consumption category estimation based on two categories, 0-20 (assumed 1-19) and 20+ cigarettes/smoker/day, and resulting figures should be regarded with caution. Alternative allocation of smokers of 20 cigarettes/day could have a large effect.
  - d. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.
- 4 Tomás-Abadal *et al* (1994)**
  - a. Survey in 1968 of healthy male workers in a factory in Manresa, Catalonia. Sample size 1 059.

**5 Adriaanse *et al* (1986), quoting World Health Organisation (1985)**

- a. Survey in 1985. Age group not stated.

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

- a. Surveys using face-to-face interviews in a single region (Catalonia) carried out in three phases, forming part of the WHO MONICA Project:

Year	Region	Phase	Participation rate (%) <sup>*</sup>		Sample used		Survey Dates
			Males	Females	Males	Females	
1987	Catalonia	1	79	79	1 252	1 271	Apr 1986-Jul 1988
1991	Catalonia	2	70	75	1 720	1 192	Oct 1990-May 1992
1995	Catalonia	3	74	78	1 801	1 631	Jun 1994-May 1996

\* : for ages 35-64 only

- b. Results by age are given for ages 25-64. The *All ages* column relates only to ages 35-64 and is standardized to the 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 phase 1, 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.

**7 De Onis and Villar (1991), Cordoba Garcia *et al* (1992), Ministerio de Sanidad y Consumo (1996, 2008, 2011a, 2011b, 2011c), Guallar-Castillón *et al* (2001), European Commission (2003), Nebot Adell *et al* (2009)**

- a. Encuesta Nacional de Salud de España (ENSE) (National Health Survey of Spain) carried out for the Ministerio de Sanidad y Consumo (Ministry of Health and Consumer Affairs). Nationally representative samples.

Year	Sample size		Response rate (%)
	Males	Females	
1987	13 311	14 445	90
1989		4 136	
1993		19 573	99
1995	3 136	3 344	
1997		6 396	
2001		21 120	
2003		21 650	
2006		29 478	

- b. In future, surveys in this series will be carried out every five years (instead of every two and a half years), and will alternate with the EESE surveys (source 33) (Instituto Nacional de Estadística (2010)).  
 c. Results from Regidor and Gutiérrez-Fisac (1999) for the WHO European Region Health for All Programme (source 13 in the previous edition) are no longer presented because they relate to data from this series of surveys. That report gives considerably lower estimates of prevalence than those presented here.  
 d. Regular smoker: smoked daily. Smokers: smoked habitually, any quantity.  
 e. Results adjusted for non-response are given when available. Unadjusted results (2001) are marked \* against Source in Tables 4-8 – these results may underestimate.  
 f. In Tables 5-7, for 1997 and 2006 the *All Ages* values refer to ages 15+ and 16+ respectively. Age-specific data are not available for the age groups marked \*; for males in 1997 this refers to aged 85+.  
 g. For 2001, prevalence of cigarette smoking was calculated by summing categories for intensity of cigarette smoking. As this excludes cigarette smokers who failed to answer this question, the resulting values may underestimate. This will also affect the estimates of cigarettes/person/day. These results are marked \* against Source in Tables 4, 6-8.  
 h. For 1993, consumption category estimation based on 1-10, 11-20 and 21+ cigarettes/smoker/day. Estimates of cigarettes/person/day based on percentage of smokers (any product) and number of cigarettes per cigarette smoker per day and so may over-estimate.  
 i. For 1995, consumption category estimation based on 1-10, 11-20, 21-40 and 41+ cigarettes/smoker/day.  
 j. For 1997, consumption category estimation based on two categories derived from percentage of smokers (all products, all frequencies) and percentage of smokers of more than 20 cigarettes per day. Results should be regarded with caution.  
 k. For 2001, consumption category estimation based on 1-10, 11-20, 21-40 and 41+ cigarettes/smoker/day.  
 l. For 2003 and 2006, consumption category estimation based on 1-9, 10-19 and 20+ cigarettes/smoker/day.  
 m. For 2006 estimates of cigarettes/person/day based on percentage of smoking (any product) and number of cigarettes/cigarette smoker/day, so may overestimate.

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

**8 Nutbeam and Aarø (1990), King and Coles (1992), King et al (1996), Mendoza Berjano et al (1998), Moreno Rodríguez et al (2002), Currie et al (2008)**

- a. Part of the HBSC (Health Behaviour in School-Aged Children) Study, a collaborative cross-national research study sponsored by the WHO. School classes or schools were randomly selected. Up to 1994, the targeted age groups were 11 (not presented here), 13 and 15. The target sample size was 1 300 in each age group. The 1994 survey also included 17- and 18-year-olds, for whom schooling is not compulsory. Sample sizes, 1986-1987: (boys) 619, (girls) 554; 1990: 3 372; 1994:

Target age	Sample size
13	1 576
15	1 487
17	1 405
18	726

For 1990 and 1994, the mean ages of the samples were:

Target age	Mean age	
	1990	1994
13	13.8	13.5
15	15.8	15.6

For 2002 the age range 11-18 years was reported, with sample sizes:

Age group	Sample size	
	Boys	Girls
11-12	1 710	1 563
13-14	1 615	1 561
15-16	1 785	1 947
17-18	1 611	1 760

For 2006 the sample sizes were (boys) 4 368, (girls) 4 523; split by age as follows:

Age group	Sample size	Mean age
11-12	2 985	11.5
13-14	2 841	13.5
15-16	3 065	15.6

- b. Smokers marked as frequency \*: smoked daily. Regular smokers: smoked once a week or more. All smokers: includes those smoking less than once a week.  
c. For 2002 the values given have been adjusted for non-response.

**9 van Reek et al (1992), van Reek and Adriaanse (1995)**

- a. A series of surveys of Young Europeans. Carried out in Spain in 1990. About 800 children aged 11-15 years interviewed in each EC country except Luxembourg (where only 250 interviewed). Lowest age group 11-12. Interviews conducted at home, with parents absent.  
b. Regular smokers: smoked daily. All smokers: smoked at least once a week.

**10-11 Banegas et al (1993)**

- a. A nationwide cross-sectional study of cardiovascular risk factors, carried out in 1989. Sample size 2 021. Participation rate 73%. Results shown as source **10** represent the rural population, those shown as source **11** the urban population.  
b. Smokers: includes those who had given up less than six months before interview and those who smoked occasionally, including special occasion only smokers.  
c. Consumption category estimation based on 1-9, 10-19 and 20+ cigarettes/smoker/day.

**12 Organisation for Economic Co-operation and Development (1993)**

- a. OECD report. No original source. Data reported for surveys carried out in 1986 and 1989.

**13-14 Berrino et al (1988)**

- a. International study of smoking habits in the general population as part of a project on the etiology of laryngeal cancer. Surveys carried out between 1978 and 1984 (shown against 1981 in Table 4). Upper age limit 85.

	Region	Sample size			
		Males	Females		
15	15 Zaragoza	341	362		
	16 Navarra	525	135		
b. Regular smokers: smoked more than a gram of tobacco per day for at least the last six months.					
<b>15</b>	<b>Nebot <i>et al</i> (1996), Villalbí <i>et al</i> (2004, 2009), Borrell <i>et al</i>, Agència de Salut Pública de Barcelona (2008), Agència de Salut Pública de Barcelona (accessed June 2011), Rodríguez-Sanz <i>et al</i> (2008)</b>				
a.	Encuesta de Salud de Barcelona (ESBA) (Health Survey of Barcelona). Interview surveys of non-institutionalised people resident in the city.				
	Year	Sample size			
	1983	3 134			
	1992	5 004			
	2000	10 030			
	2006	6 050			
b. Smokers: smoked any amount of cigarettes, cigars or pipes at the time of the interview.					
<b>16</b>	<b>Comín Beltran <i>et al</i> (1989), Aubà and Villalbí (1993), Villalbi <i>et al</i> (1999), Ariza <i>et al</i> (2003), Nebot <i>et al</i> (2009a, 2009b, 2010, 2010a, 2010b), Pérez <i>et al</i> (2010)</b>				
a.	FRISC/FRESC surveys for the Institut Municipal de la Salut de Barcelona using representative samples of schoolchildren in the city. Sample stratified by socio-economic level of the district, school type and school size. Self-completed anonymous questionnaire. Approximate age groups corresponding to school year groups – see the note on the Education system in Spain in <i>Additional information</i> . In the years 1987-2004, response rate was over 84% for each survey (Nebot <i>et al</i> (2006)).				
	Year	Sample size	Response rate (%)	Age groups studied	
	1987	1 113	94	13-14	
	1990	1 002	92	13-14	
	1992	1 011	85	13-14	
	1994	840	99	13-14	
	1996	1 059*		13-14, 15-16	
	1999	990		13-14	
	2001			15-16	
	2004	2 727		13-14, 15-16, 17-18	
	2008	3 089		13-14, 15-16, 17-18	

\* refers to ages 13-14 only.

- b. The surveys from 1996 onwards are representative of the general population up to age 16 because education had become compulsory up to age 16 (Villalbi *et al* (1999)).
- c. Smokers marked as frequency \*: smoked daily. Regular smokers: smoked at least weekly ("habitually"). Smokers: smoked at least monthly.
- d. Results presented for 2004 and 2008 have been adjusted for non-response to the smoking questions.
- e. The results presented relate to the subject's choice of the category that best describes their smoking habits. For 2004 and 2008 alternative results are available (data not shown) relating to the subject's smoking in the previous 30 days.

#### **17 Cordoba Garcia *et al* (1992)**

- a. Various cross-sectional surveys of the adult population of Aragon.

Year	Sample size
1986	1 800
1989	906
1990	2 781

- b. Consumption category estimation based on 1-9, 10-19 and 20+ cigarettes/smoker/day.
- c. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

- 18 Bueno Cavanillas *et al* (1993)**
- Survey of the province of Granada. Sample size 1 537 adults.
  - Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.
- 19 del Río and Alvarez (1994)**
- Survey representative of the population of the region of Castille and Leon. Sample size 2 500.
  - Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.
- 20 Segura *et al* (2000)**
- Survey representative of school pupils in Gran Canaria. Year not stated (reported in Table 4 as 1995). Sample size 1 369, response rate 99%.
- 21 Delegación del Gobierno para el Plan Nacional sobre Drogas (2000, 2002, 2004, 2008, 2010), Ministerio de Sanidad y Consumo and Delegación del Gobierno para el Plan Nacional sobre Drogas (2009), Nebot Adell *et al* (2009)**
- Encuesta Domiciliaria sobre Alcohol y Drogas en España (EDADES) (Household survey on alcohol and drugs in Spain). A series of national surveys relating to the Plan Nacional sobre Drogas (National plan on drugs). Ages surveyed: (1995) 15+ years; (1997 onwards) 15-64 years.
- |      | Sample size | Survey dates        |
|------|-------------|---------------------|
| 1995 | 8 888       |                     |
| 1997 | 12 445      |                     |
| 1999 | 12 488      |                     |
| 2001 | 14 113      |                     |
| 2003 | 12 033      | Nov 2003 – Mar 2004 |
| 2005 | 27 934      | Nov 2005 – Apr 2006 |
| 2007 | 23 715      | Nov 2007 – Mar 2008 |
| 2009 | 20 109      |                     |
- No interviews were carried out in January, so that answers relating to consumption in the previous 30 days would not be affected by the Christmas period.
  - Results adjusted for non-response are given when available. Unadjusted results are included for 1995 (marked \* against Source in Table 4) – these results may underestimate.
  - Smokers: smoked during the last 30 days.
  - Calculation of cigarettes per person per day based on percentage smokers of all products and number of cigarettes per cigarette smoker, so may overestimate.
  - Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook
- 22 Delegación del Gobierno para el Plan Nacional sobre Drogas (2001, 2009)**
- Encuesta Estatal sobre Uso de Drogas en Estudiantes de Enseñanzas Secundarias (ESTUDES) (State survey on the use of drugs among secondary school students). A series of national surveys in students aged 14-18 years. These surveys complement the EDADES surveys (source 21) among adults. 75-82% of 14-18 year olds were in this type of education during the years 1994-2008 (Ministerio de Sanidad y Consumo and Delegación del Gobierno para el Plan Nacional sobre Drogas (2009)). Results were weighted for region and school type.
- |      | Sample size | Survey dates             |
|------|-------------|--------------------------|
| 1994 | 20 931      | Nov – Dec                |
| 1996 | 18 966      | Nov – Dec                |
| 1998 | 18 085      | Nov – Dec                |
| 2000 | 20 450      | Nov                      |
| 2002 | 26 576      | Nov                      |
| 2004 | 25 521      | May – June               |
| 2006 | 26 454      | Nov – Dec 2006, Feb 2007 |
| 2008 | 30 183      | Nov – Dec                |
- This survey series is comparable with the ESPAD surveys in other European countries and with the Monitoring the Future surveys in the United States (Hibell *et al* (2009)). The questions asked were modified in 2006 to be more similar to the international surveys.

- c. Results adjusted for non-response are presented when available. The detailed breakdown of prevalence by age in 2000 (Table 4) used data that were not adjusted for non-response (marked \* against Source): these results may underestimate.
  - d. Smokers marked as frequency \*: smoked daily. Smokers: smoked during the last 30 days.
- 23, 24 Rabier *et al* (1989), Reif and Melich (1990, 1991a, 1991b, 1992, 1995, 1998a, 1998b, 2000), Reif and Marlier (1998), Melich (2006), Christensen (2004), Papacostas (2008, 2009)**
- a. Eurobarometer Surveys commissioned by the European Commission to monitor public opinion in the European Union. Some Eurobarometer surveys include questions on smoking habits. Sample size around 1 000.
  - b. These surveys provide results that are comparable across countries. However, they have been criticised for having small sample sizes and for generating “estimates that are in some cases widely discrepant from more substantive national sources” (Bogdanovica *et al* (2011)).
  - c. For surveys before 1994 the sample consisted of people aged 15 and over who were resident in the country and had the country’s nationality (source 23). For surveys after 1994 the sample consisted of people aged 15 and over who were resident in the country and had the nationality of any of the member states (source 24). For 1994 itself (Eurobarometer survey 41.0) results were available according to both sample definitions and both are presented.
  - d. Two waves of the survey were carried out in each of 1988 and 1989. Prevalence data from both waves are presented in Table 4 but data on cigarettes per smoker and per person are available only from the first.
  - e. Frequency U represents positive answers to questions such as “Do you smoke cigarettes?” or “You smoke packeted cigarettes”. From 2002 an additional question made it possible to identify regular smokers also.
  - f. Consumption category estimation based on <5, 5-9, 10-14, 15-19, 20-24, 25-30, 31-34, 35-40 and 41+ cigarettes/smoker/day (1987 only) and <5, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39 and 40+ cigarettes/smoker/day (all other years).
  - g. Before 2002 the calculation of cigarettes per person was based on prevalence of smoking (daily and non-daily) and number of cigarettes per daily smoker, so may overestimate.
- 25 Agudo *et al* (2004)**
- a. Baseline values from the EPIC study (European Prospective Investigation into Cancer and Nutrition), collected from healthy volunteers during 1992-1996 in five regions of Spain (Asturias, Granada, Guipúzcoa, Murcia and Navarra). Sample size 41 446 aged 29-69. Participation rate 50-60%.
  - b. Consumption category estimation based on 1-10, 11-20, 21-30 and 31+ cigarettes/smoker/day.
- 26 Álvarez Gutiérrez *et al* (1999, 2000)**
- a. Baseline values from a smoking prevention campaign in schools in Seville (city and surrounding villages) in 1998-99. The sample was 3 385 subjects aged 10-19 years.
  - b. Smokers marked as frequency \*: smoked daily.
  - c. The *All ages* values for smoking prevalence (Table 4) refer to ages 10-19. The values for cigarettes per smoker and per person (Tables 5-6) relate to a pilot study of 879 subjects aged 12-19, so the *All ages* values refer to ages 12-19; age-specific data are not available for the age groups marked \*.
- 27, 28 Nebot *et al* (2002), de Vries *et al* (2003)**
- a. ESFA (European Smoking prevention Framework Approach) surveys in Barcelona and Madrid. Survey of schoolchildren in the first year of secondary school (1° ESO, ages 12-13 years – see the note on the Education system in Spain in *Additional information* below).
- |    | Survey area | Year | Sample size |
|----|-------------|------|-------------|
| 27 | Barcelona   | 1998 | 1 041       |
| 28 | Madrid      | 1998 | 3 192       |
- b. Smokers marked as frequency \*: smoked daily. Regular smokers: smoked at least weekly.

**29 Eurostat (2005, accessed August 2007)**

- a. European Community Household Panel (ECHP), a longitudinal survey, centrally designed and co-ordinated by the Statistical Office of the European Communities (Eurostat). The survey started in 1994 and smoking was first included in 1998. Participants were age 15+ and living in private households. In each wave the original participants are contacted again (unless they previously refused or were incapacitated) and new respondents are also added.

Year	Number of respondents	Original respondents remaining (%)
1998	13 779	59
1999	13 104	53
2000	12 317	48

(Sample size not available for 2001.)

- b. The *All ages* values (Tables 4-7) refer to age 15+. The highest age group is 85+.  
 c. Consumption category estimation based on percentage of smokers (all products, all frequencies) and percentage of smokers of 20+ cigarettes per day. Results should be regarded with caution.

**30 Dirección General de Salud Pública (2001b), Instituto de Salud Pública (2003), Galán *et al* (2005), SaludMadrid (2006a, 2007, 2008a, 2009a, 2010b)**

- a. Sistema de Vigilancia de Factores de Riesgo asociados a Enfermedades No Transmisibles (SIVFRENT) (system of vigilance of risk factors for non-transmissible illnesses), adult surveys (SIVFRENT-A). Annual surveys in the Community of Madrid of adults aged 18-64. Telephone interviewing (88.5% of households in Madrid have a telephone).

Year	Sample size	Response rate
1995	≈2 000	
1996	≈2 000	
1997	≈2 000	
1998	≈2 000	
1999	≈2 000	
2000	2 003	64%
2001	≈2 000	
2002	2 010	67%
2003	≈2 000	
2004	≈2 000	
2005	2 009	61%
2006	2 004	64%
2007	2 007	65%
2008	2 010	69%
2009	2 005	69%

- b. Regular smokers: smoked daily. Smokers: had smoked more than 100 cigarettes in their lifetime and smoked currently (daily or occasionally).  
 c. Consumption category estimation based on two categories derived from prevalence of daily smoking and prevalence of smoking 20+ cigarettes per day, and resulting figures should be regarded with caution.  
 d. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

**31 Dirección General de Salud Pública (2001a), SaludMadrid (2006b, 2008b, 2009b, 2010a)**

- a. Sistema de Vigilancia de Factores de Riesgo asociados a Enfermedades No Transmisibles (SIVFRENT) (system of vigilance of risk factors for non-transmissible illnesses), surveys of children (SIVFRENT-J). Annual surveys in the Community of Madrid of children in school year 4° ESO (approximate age 15-16 – see the note on the Education system in Spain in *Additional information* below). Sample stratified by region and school type. Surveys were carried out in class.

Year	Sample size	Response rate
1996	≈2 000	
1997	≈2 000	
1998	≈2 000	
1999	≈2 000	
2000	≈2 000	
2001	2 111	76%
2002	≈2 000	
2003	≈2 000	
2004	≈2 000	
2005	≈2 000	
2006	1 954	86%
2007	1 839	74%
2008	2 170	84%
2009	2 040	66%

(Sample size and response rate not available for 1995.)

- b. Smokers marked as frequency \*: smoked daily.

**32 Mendoza and López (2007)**

- a. Estilos de Vida de los Adolescentes Escolarizados (EVAE) (Lifestyles of adolescent school children). Nationally-representative study in 2002. Comparable with HBSC (see source 8). Sample size 8 429 students aged 10-18 (results for ages 12-18 are shown in the tables).
- b. Smokers marked as frequency \*: smoked daily. Regular smokers: smoked at least weekly.

**33 Instituto Nacional de Estadística (2010)**

- a. Encuesta Europea de Salud en España (EESE) (European Health Interview Survey in Spain). Nationally representative survey carried out from April 2009 to March 2010. While most questions were answered via Computer Assisted Personal Interviewing (CAPI), the questions on personal expenditure and tobacco, alcohol and drug habits used a self-completion method.
- b. The EESE survey series (the first of which is reported here) will alternate with the ENSE surveys (see source 7). There are some small differences in the questions asked and in the methods used, for example CAPI was not used in ENSE.
- c. Consumption category estimation based on 1-9, 10-19 and 20+ cigarettes/cigarette smoker/day; calculation of cigarettes per person per day used prevalence of daily smoking (all products) and so may over-estimate.
- d. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

*Additional information***Education system in Spain**

The education system has been changed several times over recent decades. The table below shows, primarily, the descriptions used currently, which were defined in the education law of 1990. It also shows (in the last two columns) the classifications used previously. Note that the age ranges are approximate: students in a school year may be older or younger than the age range stated.

<b>Level name (current system)</b>	<b>Sub-level name (current system)</b>	<b>Year of education</b>	<b>Age</b>	<b>Year name (current system)</b>	<b>Year name (law of 1970)</b>	<b>Year name (law of 1953)</b>
Educación primaria obligatoria	Primer ciclo (ciclo inicial)	1	6 – 7	1º primaria	1º EGB	1º grado
		2	7 – 8	2º primaria	2º EGB	2º grado
	Segundo ciclo (ciclo medio)	3	8 – 9	3º primaria	3º EGB	3º grado
		4	9 – 10	4º primaria	4º EGB	4º grado
	Tercer ciclo (ciclo superior)	5	10 – 11	5º primaria	5º EGB	1º bachillerato (elemental)
		6	11 – 12	6º primaria	6º EGB	2º bachillerato (elemental)
	Primer ciclo	7	12 – 13	1º ESO	7º EGB	3º bachillerato (elemental)
		8	13 – 14	2º ESO	8º EGB	4º bachillerato (elemental)
	Segundo ciclo	9	14 – 15	3º ESO	1º BUP/FP	5º bachillerato (superior)
		10	15 – 16	4º ESO	2º BUP/FP	6º bachillerato (superior)
Bachillerato / Formación profesional		11	16 – 17	1º bachillerato/FP	3º BUP/FP	Preu
		12	17 – 18	2º bachillerato/FP	COU/FP	-

**Abbreviations (and translations):**

EGB = Enseñanza General Básica (basic general education)

ESO = Educación Secundaria Obligatoria (compulsory secondary education)

BUP = Bachillerato Unificado Polivalente (unified multipurpose baccalaureate)

FP = Formación Profesional (vocational training)

Preu = Preuniversitario (pre-university)

COU = Curso de Orientación Universitaria (preparation for university)

## References

- Adriaanse H., van Reek J. and van Zutphen W.M. (1986). Rookgewoonten van artsen wereldwijd; een overzicht van 100 onderzoeken naar tabaksgebruik onder artsen in 31 landen in de periode 1951-1985 (Worldwide physicians' smoking habits; a review of 100 surveys into physicians' tobacco consumption in 31 countries in the period 1951-1985. *Ned Tijdschr Geneeskde*, **130**, 2224-9.
- Agence France Presse, Anonymous (2011, Apr 4). Cigarette smuggling soars in Spain after tax hike - Altadis.
- Agència de Salut Pública de Barcelona (2008, accessed May 2011). *Enquesta de salut de Barcelona 2006: resultats detallats a Barcelona ciutat*. Consorci Sanitari de Barcelona, Barcelona.  
<http://www.asp.es/quefem/docs/EnquestaSalutBCN%202006%20Resultat%20detallats.pdf>.
- Agència de Salut Pública de Barcelona (accessed June 2011). *Enquesta de salut de Barcelona, 2000-01: resultats detallats: Barcelona ciutat*. Consorci Sanitari de Barcelona, Barcelona.  
[http://www.asp.es/quefem/documents\\_enqueses.htm](http://www.asp.es/quefem/documents_enqueses.htm); <http://www.asp.es/quefem/docs/bcn.pdf>.
- Agudo A., Pera G., Rodriguez M., Quiros J.R., et al (2004). Changes in smoking habits in adults: results from a prospective study in Spain. *Ann Epidemiol*, **14**, 235-43.
- Álvarez Gutiérrez F.J., Soto Campos G., Vellisco García A., Pérez Petit M., et al (1999). Tabaquismo escolar en la provincia de Sevilla: resultados de la primera fase de una campaña de prevención del tabaquismo. (School-age smoking in the province of Seville: results from the first phase of an anti-smoking campaign). *Arch Bronconeumol*, **35**, 317-23.
- Álvarez Gutiérrez F.J., Vellisco García A., Calderón Osuna E., Sánchez Gómez J., et al (2000). Tabaquismo escolar en la provincia de Sevilla. Epidemiología e influencia del entorno personal y social (campaña de prevención del tabaquismo 1998-1999). (School-age smokers in the province of Seville. Epidemiology and influence of the personal and social environment (1998-1999 anti-smoking campaign). *Arch Bronconeumol*, **36**, 118-23.
- Ariza C., Nebot M., Villalbí J.R., Díez E., Tomás Z. and Valmayor S. (2003). Tendencias en el consumo de tabaco, alcohol y cannabis de los escolares de Barcelona (1987-1999). (Trends in tobacco, alcohol and cannabis consumption among secondary school pupils in Barcelona, Spain [1987-1999]). *Gac Sanit*, **17**, 190-5.  
[http://apps.elsevier.es/watermark/ctl\\_servlet? f=10&pident\\_articulo=13049279&pident\\_usuario=0&pcontactid=&pident\\_revista=138&ty=98&accion=L&origen=elsevier&web=www.elsevier.es&an=es&fichero=138v17n03a13049279pdf001.pdf](http://apps.elsevier.es/watermark/ctl_servlet? f=10&pident_articulo=13049279&pident_usuario=0&pcontactid=&pident_revista=138&ty=98&accion=L&origen=elsevier&web=www.elsevier.es&an=es&fichero=138v17n03a13049279pdf001.pdf)
- ASPECT (Analysis of the Science and Policy for European Control of Tobacco) Consortium (2004). *Tobacco or health in the European Union. Past, present and future*. European Commission.  
[http://ec.europa.eu/health/ph\\_determinants/life\\_style/Tobacco/Documents/tobacco\\_fr\\_en.pdf](http://ec.europa.eu/health/ph_determinants/life_style/Tobacco/Documents/tobacco_fr_en.pdf).
- Aubà J. and Villalbí J.R. (1993). Tabaco y adolescentes: influencia del entorno personal (Smoking and teens: influence of the personal environment). *Med Clin*, **100**, 506-9.
- Banegas J.R.B., Villar F.V., Pérez de Andrés C., García-Pascual R.J., et al (1993). Estudio epidemiológico de los factores de riesgo cardiovascular en la población española de 35 a 64 años. (Epidemiological study on cardiovascular risk factors in 35-64 years old population in Spain). *Rev Sanid Hig Publica*, **67**, 419-45.
- Barford M.F. (1994). Targeting the cigarette smugglers. *Tobacco Journal International*, **5**, 54-6.
- Benjamin B. (1978). *Tobacco smoking in the world. Report of the WHO Expert Committee on Smoking Control, Geneva 23-28 October 1978*

## References (continued)

- Berrino F., Merletti F., Zubiri A., Del Moral A., *et al* (1988). A comparative study of smoking, drinking and dietary habits in population samples in France, Italy, Spain and Switzerland. II. Tobacco smoking. *Rev Epidemiol Sante Publique*, **36**, 166-76.
- Bogdanovica I., Godfrey F., McNeill A. and Britton J. (2011). Smoking prevalence in the European Union: a comparison of national and transnational prevalence survey methods and results. *Tob Control*, **20**, e4.
- Bonilla Penvela N.J. (2003). Evolución del contrabando de tabaco en España (Development of tobacco smoking in Spain). *Prevencion del Tabaquismo*, **5**, 127-35.
- Borrell C., Baranda L. and Rodríguez M. *Manual de l'enquesta de salut de Barcelona 2000-2001*. Barcelona. [http://www.asp.es/quefem/docs/manual\\_2000.pdf](http://www.asp.es/quefem/docs/manual_2000.pdf).
- Bueno Cavanillas A., Ramos Cuadra A.M., Rodríguez Tapiolas R., Pérez Huertas M.A. and Gálvez Vargas R. (1993). Hábito tabáquico de la población de la provincia de Granada (The tobacco habit of the population of the province of Granada). *Gac Sanit*, **7**, 221-7.
- Christensen T. (2004, accessed Oct 2010). *Euro-barometer 58.2: Health and developing countries, October-December 2002 [Computer file]*. Inter-university Consortium for Political and Social Research, Ann Arbor, Michigan. <http://www.esds.ac.uk/findingData/snDescription.asp?sn=4810>.
- Comín Beltran E., Nebot Adell M. and Villalbi Hereter J.R. (1989). Exercici i consum de tabac i alcohol dels escolars de Barcelona (Physical exercise and tobacco and alcohol consumption of the schoolchildren in Barcelona). *Gac Sanit*, **3**, 355-65.
- Comisionado para el Mercado de Tabacos (2011, (accessed February 2011)). *El mercado de tabacos: estadísticas (Tobacco market information: statistics)*. <http://www.cmtabacos.es/wwwcmt/paginas/ES/mercadoEstadisticas.tml>; <http://www.cmtabacos.es/wwwcmt/paginas/EN/mercadoEstadisticas.tml>.
- Cordoba Garcia R., Sanz Andres C., Martinez Rodes P., Martinez-Berganza Asensio A. and Cia Gomez P. (1992). Estudio del hábito tabáquico en población adulta aragonesa (Study of smoking habit among the adult population of Aragon). *An Med Interna*, **9**, 433-8.
- Crescenti M.G. (1995). Setback for smugglers gives room for optimism in Spain. *Tobacco Journal International*, **3**, 30-2 + 34.
- Currie C., Gabhainn S.N., Godeau E., Roberts C., Smith R., Currie D., Picket W., Richter M., Morgan A. and Barnekow V. (eds) (2008). *Inequalities in young people's health. Health behaviour in school-aged children: international report from the 2005/2006 survey*. World Health Organization. Health policy for children and adolescents, No. 5. [http://www.euro.who.int/\\_data/assets/pdf\\_file/0005/53852/E91416.pdf](http://www.euro.who.int/_data/assets/pdf_file/0005/53852/E91416.pdf).
- De Onis M. and Villar J. (1991). La consommation de tabac chez la femme espagnole. *World Health Stat Q*, **44**, 80-8.
- de Vries H., Mudde A., Leijls I., Charlton A., *et al* (2003). The European smoking prevention framework approach (EFSA): an example of integral prevention. *Health Educ Res*, **18**, 611-26. <http://her.oxfordjournals.org/content/18/5/611.full.pdf+html>
- del Río M.C. and Alvarez F.J. (1994). Patterns of smoking in Spain. Results from a regional general population survey. *Eur J Epidemiol*, **10**, 595-8.
- Delegación del Gobierno para el Plan Nacional sobre Drogas (2000). *Encuesta domiciliaria sobre consumo de drogas, 1999*. Ministerio de Sanidad Política Social e Igualdad. <http://www.pnsd.msc.es/Categoría2/observa/estudios/home.htm>; <http://www.pnsd.msc.es/Categoría2/observa/pdf/encu.pdf>.

## References (continued)

- Delegación del Gobierno para el Plan Nacional sobre Drogas (2001). *Encuesta sobre drogas a la población escolar, 2000*. Ministerio de Sanidad Política Social e Igualdad.  
<http://www.pnsd.msc.es/Categoria2/observa/estudios/home.htm>; <http://www.pnsd.msc.es/Categoria2/observa/pdf/escolar2000.pdf>.
- Delegación del Gobierno para el Plan Nacional sobre Drogas (2002). *Encuesta domiciliaria sobre consumo de drogas, 1995-2001*. Ministerio de Sanidad Política Social e Igualdad.  
<http://www.pnsd.msc.es/Categoria2/observa/estudios/home.htm>; <http://www.pnsd.msc.es/Categoria2/observa/pdf/domiciliaria2001.pdf>.
- Delegación del Gobierno para el Plan Nacional sobre Drogas (2004). *Encuesta sobre drogas en población general*. Ministerio de Sanidad Política Social e Igualdad.  
<http://www.pnsd.msc.es/Categoria2/observa/estudios/home.htm>; <http://www.pnsd.msc.es/Categoria2/observa/pdf/domiciliaria2003.pdf>.
- Delegación del Gobierno para el Plan Nacional sobre Drogas (2008). *Encuesta domiciliaria sobre alcohol y drogas en España (EDADES), 1995-2007*. Ministerio de Sanidad Política Social e Igualdad.  
<http://www.pnsd.msc.es/Categoria2/observa/estudios/home.htm>; <http://www.pnsd.msc.es/Categoria2/observa/pdf/Domiciliaria2007.pdf>.
- Delegación del Gobierno para el Plan Nacional sobre Drogas (2009). *Encuesta estatal sobre uso de drogas en estudiantes de enseñanzas secundarias (ESTUDES), 1994-2008*. Ministerio de Sanidad Política Social e Igualdad.  
<http://www.pnsd.msc.es/Categoria2/observa/estudios/home.htm>; <http://www.pnsd.msc.es/Categoria2/observa/pdf/Estudes2008.pdf>.
- Delegación del Gobierno para el Plan Nacional sobre Drogas (2010). *Encuesta domiciliaria sobre alcohol y drogas en España (EDADES) 2009/2010*.  
<http://www.pnsd.msc.es/Categoria2/observa/estudios/home.htm>; <http://www.mspsi.es/gabinetePrensa/notaPrensa/pdf/presentacionEdades200910.ppt>.
- Dirección General de Salud Pública (2001a, (accessed April 2011)). Informe: hábitos de salud en población juvenil de la Comunidad de Madrid, 2001. *Boletín Epidemiológico de la Comunidad de Madrid*, 7, 1-54.  
[http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017)
- Dirección General de Salud Pública (2001b, (accessed April 2011)). Informes: hábitos de salud en adultos, 2000. *Boletín Epidemiológico de la Comunidad de Madrid*, 7, 1-64.  
[http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017)
- El País, Anonymous (2004, Mar 22). Tax losses in Spain due to smuggling tobacco fall to 79 million euro in 2003.
- European Commission (2003). *Health in Europe: results from 1997-2000 surveys*. Office for Official Publications of the European Communities, 2003, Luxembourg.  
[http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-57-03-184/EN/KS-57-03-184-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-57-03-184/EN/KS-57-03-184-EN.PDF).
- Eurostat ((accessed August 2007)). *Percentage of population by attitude towards smoking - details - by sex, age, education and working status (Source: ECHP UDB, Eurostat, 06/2003)*.  
[http://epp.eurostat.ec.europa.eu/portal/page/portal/health/public\\_health/data\\_public\\_health/databases](http://epp.eurostat.ec.europa.eu/portal/page/portal/health/public_health/data_public_health/databases).
- Eurostat (2005). *Statistical analysis on health-related longitudinal data from the ECHP*. Office for Official Publications of the European Communities, 2005, Luxembourg. Population and Social Conditions, Catalogue No. KS-CC-05-004-EN-N.  
[http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-CC-05-004/EN/KS-CC-05-004-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-CC-05-004/EN/KS-CC-05-004-EN.PDF).

## References (continued)

- Expansión, Anonymous (2005, April 15). Spanish tobacco sales down 6.2%.
- Fernandez E., Schiaffino A., La Vecchia C., Borràs J.M., *et al* (1999). Age at starting smoking and number of cigarettes smoked in Catalonia, Spain. *Prev Med*, **28**, 361-6.
- Galán I., Rodríguez-Artalejo F., Tobias A., Gandarillas A. and Zorrilla B. (2005). Vigilancia de los factores de riesgo de las enfermedades no transmisibles mediante encuesta telefónica: resultados de la Comunidad de Madrid en el período 1995-2003 (Risk factors surveillance for non-communicable disease through telephone survey. Results in the Autonomous Community of Madrid from 1995-2003). *Gac Sanit*, **19**, 193-205.
- González García I.M. (2000, accessed March 2011). *Medidas anti-fraude en España y logros alcanzados en el control del contrabando* (Anti-fraud measures in Spain and achievements reached in the control of the contraband). Madrid. (Ministerio de Sanidad y Consumo (ed) GLOBALink The International Tobacco-Control Network.) <http://www.globalink.org/tobacco/docs/eu-docs/0004maroto.shtml>.
- Grupo de Estudios del Tabaco (GRETA) (2002). El consumo de tabaco en España en el siglo XVIII (Tobacco consumption in Spain in the 18th century). *Cuad Invest Hist*, **19**, 313-45.
- Guallar-Castillón P., Rodríguez-Artalejo F., Díez Gañán L., Ramón Banegas Banegas J., Lafuente Urdinguio P. and del Rey Calero J. (2001). Consumo de tabaco y salud subjetiva en España. (Smoking and subjective health in Spain). *Med Clin*, **116**, 451-3.
- Hibell B., Guttormsson U., Ahlström S., Balakireva O., *et al* (2009). *The 2007 ESPAD report. Substance use among students in 35 European countries*. The Swedish Council for Information on Alcohol and Other Drugs (CAN), European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) and Council of Europe, Co-operation Group to Combat Drug Abuse and Illicit Trafficking in Drugs (Pompidou Group), Stockholm.  
[http://www.espad.org/documents/Espad/ESPAD\\_reports/2007/The\\_2007\\_ESPAD\\_Report-FULL\\_091006.pdf](http://www.espad.org/documents/Espad/ESPAD_reports/2007/The_2007_ESPAD_Report-FULL_091006.pdf).
- Hutson J.B. (1937). *Consumption and production of tobacco in Europe*. USDA, Washington DC. Technical bulletin No. 587.
- Instituto de Salud Pública (2003, (accessed April 2011)). Informes: hábitos de salud en la población adulta de la Comunidad de Madrid, 2002. *Boletín Epidemiológico de la Comunidad de Madrid*, **9**, 1-46.  
[http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017)
- Instituto Nacional de Estadística (2010, (accessed May 2011)). *Encuesta europea de salud en España 2009 (European health survey in Spain 2009)*, EES-2009.  
<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft15/p420&file=inebase&L=0;http://www.ine.es/metodologia/t15/t153042009.pdf>.
- Jané M., Saltó E., Pardell H., Tresserras R., *et al* (2002). Prevalencia del tabaquismo en Cataluña, 1982-1998: una perspectiva de género (Smoking prevalence in Catalonia (Spain), 1982-1998: a gender perspective). *Med Clin*, **118**, 81-5.
- Joossens L., Merriman D., Ross H. and Raw M. (2010). The impact of eliminating the global illicit cigarette trade on health and revenue. *Addiction*, **105**, 1640-9.
- Joossens L. and Raw M. (2000). How can cigarette smuggling be reduced? *BMJ*, **321**, 947-50.
- King A., Wold B., Tudor-Smith C. and Harel Y. (1996). *The health of youth, a cross-national survey*. WHO Regional Publications, Europe, Copenhagen. European Series No. 69.  
<http://www.hbsc.org/publications/reports.html>.

## References (continued)

- King A.J.C. and Coles B. (1992). *The health of Canada's youth. Views and behaviours of 11-, 13- and 15-year-olds from 11 countries*. Health and Welfare Canada, Ottawa. Catalogue No. H39-239/1992E.
- Kuulasmaa K., Tolonen H., Ferrario M. and Ruokokoski E. (1998). *Age, date of examination and survey periods in the MONICA surveys*. World Health Organization.  
[www.ctl.fi/publications/monica/age/ageqa.htm](http://www.ctl.fi/publications/monica/age/ageqa.htm).
- Lee P.N. (ed) (1975). *Tobacco consumption in various countries*, 4th edition. Tobacco Research Council, London. Research Paper 6.
- Maxwell J.C., Jr. (Successive years). How the brands ranked. Maxwell International Estimates. *World Tob*,
- Maxwell J.C., Jr. (1998). *The Maxwell report*. John C. Maxwell Jr., Richmond, Virginia.
- Melich A. (2006). *Euro-barometer 52.1: Modern biotechnology, quality of life, and consumers' access to justice, November-December 1999 [Computer file]*. Zentralarchiv für Empirische Sozialforschung, Cologne, and Inter-university Consortium for Political and Social Research, Ann Arbor, Michigan.  
<http://www.esds.ac.uk/findingData/snDescription.asp?sn=4203>.
- Mendoza Berjano R., Batista Foguet J.M., Sanchez Garcia M. and Carrasco Gonzalez A.M. (1998). El consumo de tabaco, alcohol y otras drogas en los adolescentes escolarizados españoles (The consumption of tobacco, alcohol and other drugs by adolescent Spanish students). *Gac Sanit*, **12**, 263-71.
- Mendoza R. and López P.P. (2007). El consumo de tabaco en el alumnado español pre-adolescente y adolescente: diferencias de género (Tobacco consumption in pre-adolescent and adolescent school children in Spain: gender differences). *Adicciones*, **19**, 341-55.
- Ministerio de Sanidad y Consumo (2011a, accessed February 2011). *Encuesta Nacional de Salud de España*. Madrid.  
<http://www.msc.es/estadEstudios/estadisticas/encuestaNacional/home.htm>; [http://www.msc.es/estadEstudios/estadisticas/docs/Estilos\\_de\\_vida\\_Nacional.XLS](http://www.msc.es/estadEstudios/estadisticas/docs/Estilos_de_vida_Nacional.XLS).
- Ministerio de Sanidad y Consumo *Encuesta nacional de salud de España*. <http://www.msc.es/>.
- Ministerio de Sanidad y Consumo (2011b, accessed February 2011). *Encuesta Nacional de Salud de España 2001*. Madrid.  
<http://www.msc.es/estadEstudios/estadisticas/encuestaNacional/encuestaNac2001/home.htm>; [http://www.msc.es/estadEstudios/estadisticas/docs/para\\_imprimir.pdf](http://www.msc.es/estadEstudios/estadisticas/docs/para_imprimir.pdf); <http://www.msc.es/estadEstudios/estadisticas/docs/cuestionario-adultos.pdf>.
- Ministerio de Sanidad y Consumo (2008, accessed January 2008). *Encuesta Nacional de Salud de España 2003*. Madrid.  
<http://www.msc.es/estadEstudios/estadisticas/encuestaNacional/encuestaNac2003/home.htm>; [http://www.msc.es/estadEstudios/estadisticas/docs/ENSE2003\\_SN.pdf](http://www.msc.es/estadEstudios/estadisticas/docs/ENSE2003_SN.pdf); [http://www.msc.es/estadEstudio/estadisticas/docs/Estilos\\_de\\_vida\\_Nacional.XLS](http://www.msc.es/estadEstudio/estadisticas/docs/Estilos_de_vida_Nacional.XLS).
- Ministerio de Sanidad y Consumo (2011c, accessed February 2011). *Encuesta Nacional de Salud de España 2006*. Madrid.  
<http://www.msc.es/estadEstudios/estadisticas/encuestaNacional/encuesta2006.htm>; <http://www.msc.es/estadEstudios/estadisticas/encuestaNacional/encuestaNac2006/encuestaNacionalSalud2006.pdf>; <http://www.msc.es/estadEstudios/estadisticas/encuestaNacional/encuestaNac2006/EstilosVidaPorcentaje.xls>.
- Ministerio de Sanidad y Consumo (1996). *Encuesta nacional de salud de España 1995*. Centro de publicaciones, Madrid.

## References (continued)

- Ministerio de Sanidad y Consumo and Delegación del Gobierno para el Plan Nacional sobre Drogas (2009, accessed June 2011). *Observatorio español sobre drogas: informe 2009*.  
<http://www.pnsd.msc.es/Categoría2/observa/pdf/oed-2009.pdf>.
- Molarius A., Kuulasmaa K., Evans A., McCrum E. and Tolonen H. (1999). *Quality assessment of data on smoking behaviour in the WHO MONICA project*. World Health Organization.  
<http://www.ktl.fi/publications/monica/smoking/qa30.htm>.
- Moreno Rodríguez C., Muñoz Tinoco V., Pérez Moreno P.J. and Sánchez Queija I. (2002). *Los adolescentes españoles y su salud. Un análisis en chicos y chicas de 11 a 17 años*. Ministerio de Sanidad y Consumo.  
[http://www.msc.es/ciudadanos/proteccionSalud/adolescencia/docs/adolesEsp\\_2002.pdf](http://www.msc.es/ciudadanos/proteccionSalud/adolescencia/docs/adolesEsp_2002.pdf).
- Nebot Adell M., Fernández Muñoz E. and Grupo de Trabajo en Tabaquismo de la Sociedad Española de Epidemiología (2009). *Evaluación del impacto de la Ley de medidas sanitarias frente al tabaquismo*. Ministerio de Sanidad y Política Social, Barcelona.  
<http://www.msc.es/ciudadanos/proteccionSalud/tabcaco/docs/monografiaEvaluacionLey282005.pdf>
- Nebot M. (2010, accessed May 2011). *FRESC 2008: factors de risc en escolars de secundària: taules exhaustives de 4t d'ESO*. Agència de Salut Pública de Barcelona, Barcelona.  
[http://www.asp.es/quefem/docs/fresc\\_4t\\_eso.pdf](http://www.asp.es/quefem/docs/fresc_4t_eso.pdf).
- Nebot M., Ariza C., Díez E., Giménez E. and Juárez O. (2009a, accessed May 2011). *Factors de risc en estudiants de secundària de Barcelona. Resultats principals de l'informe FRESC 2004*, 2. Agència de Salut Pública de Barcelona, Barcelona.  
[http://www.asp.es/quefem/docs/Informe\\_FRESC\\_2004.pdf](http://www.asp.es/quefem/docs/Informe_FRESC_2004.pdf).
- Nebot M., Ariza C., Díez E., Giménez E. and Juárez O. (2009b, accessed May 2011). *Factors de risc en estudiants de secundària de Barcelona. Taules exhaustives de l'informe FRESC 2004*, 2. Agència de Salut Pública de Barcelona, Barcelona.  
[http://www.asp.es/quefem/docs/Taules\\_FRESC\\_04.pdf](http://www.asp.es/quefem/docs/Taules_FRESC_04.pdf).
- Nebot M., Borrell C., Ballestín M. and Villalbí J.R. (1996). Prevalencia y características asociadas al consumo de tabaco en población general en Barcelona entre 1983 y 1992 (Prevalence and features associated with smoking in the general population in Barcelona from 1983 to 1992). *Rev Clin Esp*, **196**, 359-64.
- Nebot M., Continente X.G., Pérez A., Ariza C., et al (2010a, accessed May 2011). *FRESC 2008: factors de risc en escolars de secundària: taules exhaustives de 2n d'ESO*. Agència de Salut Pública de Barcelona, Barcelona. [http://www.asp.es/quefem/docs/fresc\\_2n\\_eso.pdf](http://www.asp.es/quefem/docs/fresc_2n_eso.pdf).
- Nebot M., Continente X.G., Pérez A., Ariza C., et al (2010b, accessed May 2011). *FRESC 2008: factors de risc en escolars de secundària: taules exhaustives de 2n de batxillerat i CFGM*. Agència de Salut Pública de Barcelona, Barcelona. [http://www.asp.es/quefem/docs/fresc\\_2n\\_batx.pdf](http://www.asp.es/quefem/docs/fresc_2n_batx.pdf).
- Nebot M., Giménez E., Ariza C. and Tomás Z. (2006, accessed May 2011). Tendencias en el consumo de tabaco, alcohol y cannabis en los adolescentes de Barcelona entre 1987 y 2004 [Letter]. *Med Clin*, **126**, 159.  
[http://apps.elsevier.es/watermark/ctl\\_servlet? f=10&pident\\_articulo=13084030&pident\\_usuario=0&pcontactid=&pident\\_revista=2&ty=136&accion=L&origen=elsevier&web=www.elsevier.es&ln=es&fichero=2v126n04a13084030pdf001.pdf](http://apps.elsevier.es/watermark/ctl_servlet? f=10&pident_articulo=13084030&pident_usuario=0&pcontactid=&pident_revista=2&ty=136&accion=L&origen=elsevier&web=www.elsevier.es&ln=es&fichero=2v126n04a13084030pdf001.pdf)
- Nebot M., Tomás Z., Ariza C., Valmayor S. and Mudde A. (2002). Factores asociados con la intención de fumar y el inicio del hábito tabáquico en escolares: resultados del estudio ESFA en Barcelona (Factors associated with smoking and the intention to smoke in secondary school pupils: results of the ESFA project in Barcelona, Spain). *Gac Sanit*, **16**, 131-8.  
<http://www.elsevier.es/sites/default/files/elsevier/pdf/138/138v16n02a13029317pdf001.pdf>

- Nutbeam D. and Aarø L.E. (1990). Smoking and alienation from school: the implications for health education with young people. Results from the WHO study of health behaviour in schoolchildren. In: Durston B. and Jamrozik K. (eds) *Tobacco & health 1990. The global war, Seventh World Conference on Tobacco and Health, Perth, Western Australia, 1-5 April 1990*. Organising Committee of the Seventh World Conference on Tobacco and Health, 189 Royal Street, East Perth, Western Australia 6004; 539-44.
- Organisation for Economic Co-operation and Development (1993). *OECD health systems. Facts and trends 1960-1991. Health policy studies no 3*. OECD, Paris. (Health policy studies, Volume 1.)
- Papacostas A. (2008, accessed April 2008). *Euro-barometer 64.1: Mobility, food risk, smoking, AIDS prevention, and medical errors, September-October 2005 [Computer file]*, 1st GESIS-ZA edition as of March 12, 2008. Zentralarchiv für Empirische Sozialforschung an der Universität zu Köln (ZA). ZA4413. <http://zacad.gesis.org/webview/index.jsp>.
- Papacostas A. (2009, accessed November 2010). *Eurobarometer 66.2: Nuclear Energy and Safety, and Public Health Issues, October-November 2006 [Computer file]*, GESIS 1.0.0 (2009-05-27). Zentralarchiv für Empirische Sozialforschung an der Universität zu Köln (ZA). ZA4527. <http://zacad.gesis.org/webview/index.jsp>.
- Pardell H., Saltó E., Tresserras R., Juncà S., et al (1997). La evolución del hábito tabáquico en Cataluña. (Smoking prevalence trends in Catalonia (Spain), 1982-1994). *Med Clin*, **109**, 125-9.
- Pérez A., Garcia X., Nebot M. and grup de treball FRESC 2008 (2010). *Consum de tabac, alcohol i cànnabis entre els joves de Barcelona: l'enquesta FRESC 2008*. Agència de Salut Pública, Barcelona. [http://www.asp.es/quefem/docs/fresc\\_presentacio\\_rdp%5B1%5D.pdf](http://www.asp.es/quefem/docs/fresc_presentacio_rdp%5B1%5D.pdf).
- Rabier J.-R., Riffault H. and Inglehart R. (1989). *Euro-barometer 27: The common agricultural policy and cancer, March-May 1987 [Computer file]*. Inter-university Consortium for Political and Social Research, Ann Arbor, Michigan. <http://www.esds.ac.uk/findingData/snDescription.asp?sn=2695>.
- Regidor E. and Gutiérrez-Fisac J.L. (1999). *Health indicators. Fourth evaluation in Spain of the European regional health for all programme*. Ministerio de Sanidad y Consumo, Madrid.
- Regidor E., Gutiérrez-Fisac J.L., de los Santos Ichaso M. and Fernández E. (2010). Trends in principal cancer risk factors in Spain. *Ann Oncol*, **21(Suppl 3)**, iii37-iii42.
- Reif K. and Marlier E. (1998). *Euro-barometer 43.0: Cross-border purchases, smoking habits and cancer risks, March-April 1995 [Computer file]*. Zentralarchiv für Empirische Sozialforschung, Cologne. <http://www.esds.ac.uk/findingData/snDescription.asp?sn=3810>.
- Reif K. and Melich A. (1990). *Euro-barometer 29: Environmental problems and cancer, March-April 1988 [Computer file]*. Inter-university Consortium for Political and Social Research, Ann Arbor, Michigan. <http://www.esds.ac.uk/findingData/snDescription.asp?sn=2745>.
- Reif K. and Melich A. (1991a). *Euro-barometer 30: Immigrants and out-groups in Western Europe, October-November 1988 [Computer file]*. Inter-university Consortium for Political and Social Research, Ann Arbor, Michigan. <http://www.esds.ac.uk/findingData/snDescription.asp?sn=2857>.
- Reif K. and Melich A. (1991b). *Euro-barometer 31: European elections, 1989: Pre-election survey, March-April 1989 [Computer file]*. Inter-university Consortium for Political and Social Research, Ann Arbor, Michigan, and Zentralarchiv für Empirische Sozialforschung, Cologne. <http://www.esds.ac.uk/findingData/snDescription.asp?sn=2729>.
- Reif K. and Melich A. (1992). *Euro-barometer 32: The single european market, drugs, alcohol, and cancer, November 1989 [Computer file]*, Second edition. Inter-university Consortium for Political Ann Arbor, Michigan, and Social Research, and Zentralarchiv für Empirische Soziolforschung, Cologne. <http://www.esds.ac.uk/findingData/snDescription.asp?sn=2977>.

- Reif K. and Melich A. (1995). *Euro-barometer 38: European court of justice, passive smoking, and consumer issues, September-October 1992 [Computer file]*, Second edition. Zentralarchiv für Empirische Sozialforschung, Cologne, and Inter-university Consortium for Political and Social Research, Ann Arbor, Michigan. <http://www.esds.ac.uk/findingData/snDescription.asp?sn=3216>.
- Reif K. and Melich A. (1998a). *Euro-barometer 36: Regional identity and perceptions of the third world, Fall 1991 [Computer file]*. Inter-university Consortium for Political and Social Research, Ann Arbor, Michigan, and Zentralarchiv für Empirische Sozialforschung, Cologne. <http://www.esds.ac.uk/findingData/snDescription.asp?sn=3228>.
- Reif K. and Melich A. (1998b). *Euro-barometer 41: Trade issues, blood donation, aids, and smoking, April-May 1994 [Computer file]*, Fourth edition. Inter-university Consortium for Political Ann Arbor, Michigan, and Social Research, and Zentralarchiv für Empirische Sozialforschung, Cologne. <http://www.esds.ac.uk/findingData/snDescription.asp?sn=3525>.
- Reif K. and Melich A. (2000). *Euro-barometer 34.1: Health problems, Fall 1990 [Computer file]*, Second edition. Zentralarchiv für Empirische Sozialforschung, Cologne, and Inter-university Consortium for Political and Social Research, Ann Arbor, Michigan. <http://www.esds.ac.uk/findingData/snDescription.asp?sn=2968>.
- Rodríguez-Sanz M., Morales E., Pasarín M.I. and Borrell C. (2008, accessed May 2011). *Enquesta de salut de Barcelona 2006: results principals*. Agència de Salut Pública de Barcelona, Barcelona. <http://www.asp.es/quefem/docs/Enquesta%20Salut%20Barcelona%202006.pdf>.
- SaludMadrid (2006a, accessed April 2011). Informes: hábitos de salud en la población adulta de la Comunidad de Madrid, 2005. *Boletín Epidemiológico de la Comunidad de Madrid*, **12**, 1-70. [http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017)
- SaludMadrid (2006b, accessed April 2011). Informes: hábitos de salud en la población juvenil de la Comunidad de Madrid, 2006. *Boletín Epidemiológico de la Comunidad de Madrid*, **12**, 1-53. [http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017)
- SaludMadrid (2007, accessed April 2011). Informes: hábitos de salud en la población adulta de la Comunidad de Madrid, 2006. *Boletín Epidemiológico de la Comunidad de Madrid*, **13**, 1-49. [http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017)
- SaludMadrid (2008a, accessed April 2011). Informes: hábitos de salud en la población adulta de la Comunidad de Madrid. Año 2007. *Boletín Epidemiológico de la Comunidad de Madrid*, **14**, 1-46. [http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017)
- SaludMadrid (2008b, accessed April 2011). Informes: hábitos de salud en la población juvenil de la Comunidad de Madrid. Año 2007. *Boletín Epidemiológico de la Comunidad de Madrid*, **14**, 1-60. [http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017)
- SaludMadrid (2009a, accessed April 2011). *Informe: hábitos de salud en la población adulta de la Comunidad de Madrid, 2008*. [http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017)

## References (continued)

- SaludMadrid (2009b, accessed April 2011). Informes: hábitos de salud en la población juvenil de la Comunidad de Madrid. Año 2008. *Boletín Epidemiológico de la Comunidad de Madrid*, **15**, 1-48. [http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017)
- SaludMadrid (2010a, accessed April 2011). *Hábitos de salud en la población juvenil de la comunidad de Madrid 2009*. [http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017).
- SaludMadrid (2010b, accessed August 2011). *Informe: hábitos de salud en la población adulta de la Comunidad de Madrid, 2009*. [http://www.madrid.org/cs/Satellite?c=PTSA\\_Generico\\_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA\\_Generico\\_FA%2FPTSA\\_pintarGenericoIndice&pv=1142331146422&vest=1156329914017](http://www.madrid.org/cs/Satellite?c=PTSA_Generico_FA&cid=1142352860738&language=es&pageid=1142331181236&pagename=PortalSalud%2FPTSA_Generico_FA%2FPTSA_pintarGenericoIndice&pv=1142331146422&vest=1156329914017).
- Segura J.M., Calvo J.R., Navarro M.C., Torres M., et al (2000). Tobacco use among adolescents aged 10-16 in Gran Canaria, Canary Islands, Spain. In: Lu R., Mackay J., Niu S. and Peto R. (eds) *Tobacco: the growing epidemic, Proceedings of the Tenth World Conference on Tobacco or Health, 24-28 August 1997, Beijing, China*. Springer-Verlag, London, Berlin, Heidleberg; 263-4.
- Tabacalera (1989). *Series historicas de consumo de tabaco elaborado, 1957-1988*. Ediciones Tabapress,S.A., Madrid.
- Tabacalera (1999). *Annual report 1998*. Tabapress, S.A., Madrid.
- Tolonen H., Kuulasmaa K. and Ruokokoski E. (2000, revised November 2005). *MONICA population survey data book*. World Health Organization. <http://www.ctl.fi/publications/monica/surveydb/title.htm>.
- Tomás-Abadal L., Varas-Lorenzo C., Bernades-Bernat E. and Balaguer-Vintró I. (1994). Coronary risk factors and a 20-year incidence of coronary heart disease and mortality in a Mediterranean industrial population. The Manresa study, Spain. *Eur Heart J*, **15**, 1028-36.
- US Department of Agriculture (Accessed March 2011). *PSD online dataset for Tobacco, Mfg., Cigarettes*. <http://www.fas.usda.gov/psdonline/psdHome.aspx>.
- US Department of Agriculture (2003, 29 April). *Spain tobacco and products annual 2003*. (Foreign Agriculture Service GAIN Report (Global Agriculture Information Network) .) GAIN Report #SP3012. <http://www.fas.usda.gov/gainfiles/200304/145885452.pdf>.
- US Department of Agriculture (2002). *Spain tobacco and products annual 2002*. (Foreign Agriculture Service GAIN Report (Global Agriculture Information Network) .) GAIN Report #SP2015. <http://www.fas.usda.gov/gainfiles/200205/145683413.pdf>.
- van Reek J. and Adriaanse H. (1995). Daily smoking among adolescents in the European Community. *Rev Epidemiol Sante Publique*, **43**, 281-2.
- van Reek J., Adriaanse H. and Karaoglou A. (1992). Smoking among children in the European Community. *J Public Health Med*, **14**, 93-4.
- Villalbi J.R., Barniol J., Nebot M., Diez E. and Ballestin M. (1999). Tendencias en el tabaquismo de los escolares: Barcelona, 1987-1996 (Trends in smoking among school children: Barcelona, 1978-1996). *Aten Primaria*, **23**, 359-62.
- Villalbi J.R., Rodriguez-Sanz M., Villegas R. and Borrell C. (2009). Cambios en el patrón de tabaquismo de la población: Barcelona, 1983-2006 (Changes in the population smoking patterns: Barcelona, 1983-2006). *Med Clin*, **132**, 414-9.

## References (continued)

- Villalbí J.R., Tomás Z., López M.J., Rodríguez M. and Nebot M. (2004). La cambiante epidemiología del tabaquismo: Barcelona, 2000-2001. (Changing epidemiology of smoking: Barcelona, 2000-2001). *Rev Clin Esp*, **204**, 312-6.
- Vioque J. and Bolumar F. (1987). Trends in mortality from lung cancer in Spain, 1951-80. *J Epidemiol Community Health*, **41**, 74-8.
- Wolf H.K., Kuulasmaa K., Tolonen H. and Ruokokoski E. (1998). *Participation rates, quality of sampling frames and sampling fractions in the MONICA surveys*. World Health Organization. <http://www.ctl.fi/publications/monica/nonres/nonres.htm>.
- World Health Organisation (1985). Smoking survey among health professionals in Catalunya 1985. In: *Paper presented at WHO Meeting Southern European Action on Smoking, Barcelona*. WHO/Euro and Dept Sanitat i Seg Soc;
- World Health Organization (1989). The WHO MONICA project: a worldwide monitoring system for cardiovascular diseases. In: *World Health Statistics Annual 1989*. WHO, Geneva; 25-149.