

Smoking rates, diseases, secondhand smoke and costs

Smoking rates in Australia

Table 1: Percentage of adult smokers*¹

Year	Male	Female	Total
1945	72	26	-
1964	58	28	-
1969	45	28	-
1974	45	30	-
1976	43	33	-
1980	40	29	34
1983	40	29	34
1986	34	28	31
1989	30	27	28
1992	29	24	26
1995	29	23	26
1998	27	25	26
2001	25	21	23
2004	24	21	22
2007	21	18	19

*Includes cigarette, pipe and cigar smoker

1945–1969: age range not specified, 1974–1976: 16+ years, 1980–2007: 18+ years

Table 1 shows the changing pattern in smoking rates over the years, from the 1940s, when about 70% of men smoked, to 2007 when 21% of men and 18% of women smoked. The figures are taken from a few different surveys, which may not be based on the same definitions of smoking, age ranges or calculation methods, so earlier figures cannot be directly compared. However the smoking rates from 1980 to 2007 are subject to a standard method and can be directly compared.

Smoking by men has declined substantially since 1945. Smoking by women peaked in the 1970s, and then declined at a slower rate than men's smoking. Following a period of almost no change in smoking rates in the 1990s, smoking rates again declined over the turn of the century. Breakdowns by age groups show that in 2007, men and women between the ages of 25–29 had the highest smoking rates (28%).¹

Smoking rates in Victoria

Table 2: Percentage of adult smokers^{2*}

Year	Male	Female	Total
1983	36	28	32
1984	36	28	32
1985	35	28	31
1986	34	28	31
1987	33	28	31
1988	31	28	29
1989	31	27	29
1990	29	26	27
1991	29	25	27
1992	27	24	26
1993	28	24	26
1994	27	24	26
1995	28	23	25
1996	28	23	26
1997	28	23	25
1998	24	18	21
1999	24	19	21
2000	20	19	20
2001	22	19	20
2002	22	16	19
2003	17	16	16
2004	21	17	19
2005	20	17	18
2006	20	16	18
2007	18	16	17
2008	18	15	17
2009	18	16	17

*Sources include: Centre for Behavioural Research in Cancer, unpublished data, 2006.

Table 2 shows that the smoking rates for both men and women in Victoria have fallen over the past two decades. Due to the changes in the method of collecting data since 1998, comparisons between rates before and after this time cannot be directly compared. However, smoking rates have continued to fall since the new method was introduced, suggesting that the drop is not due solely to the change in method. Since 1999 there has been a marked decrease in male smoking rates, which dropped to 18% by 2009. Smoking rates in women also declined to 16% by 2009.²

Table 3: Percentage of current smokers* among Victorian secondary school students³

Year	12–15 years		16–17 years	
	Male	Female	Male	Female
1984	22	22	30	34
1987	15	17	29	34
1990	15	20	23	31
1993	16	20	32	33
1996	18	20	29	37
1999	16	17	30	33
2002	12	13	26	30
2005	8	8	18	20
2008	6	7	12	15

* Current smoking is defined as having smoked in the week before the survey.

Table 3 shows percentages of 12 to 15 year old and 16 to 17 year old secondary school children in Victoria who were current smokers, for the years 1984 to 2008. This data does not include 16 and 17 year olds who had left school. The smoking rates among both age groups in 2008 were at their lowest level since surveys began in 1984.³

Tobacco—a major cause of death

Tobacco causes more illness and death than any other drug. In the financial year 2004-05, 14,900 people died from smoking related diseases; around 89% of all drug caused deaths.⁴ Research estimates that one in two lifetime smokers will die from a disease caused by their smoking.⁵

Every year around 3,940 Victorians die from diseases caused by smoking.⁶ If we compare this to other causes of death, on average:⁶

- illicit drugs killed two Victorians every week
- road accidents killed eight Victorians every week
- alcohol killed 15 Victorians every week
- tobacco killed 76 Victorians every week, around 11 per day.

Diseases and health conditions caused by smoking

Cancers of the lung, throat, mouth, tongue, nose, nasal sinus, voice box, oesophagus, pancreas, stomach, liver, kidney, bladder, ureter, bowel, ovary, cervix, and bone marrow (myeloid leukaemia).^{7,8,37} Smoking related cancers accounted for nearly 21% of all cancer deaths in 2005.⁹ Eighty-eight percent of all cases of lung cancer in men and 74% in women are due to smoking.¹⁰

Heart disease. Smoking causes heart disease⁸ with around a third of all cases of heart disease in those under 65 due to smoking.¹¹

Chronic obstructive pulmonary disease (COPD) includes chronic bronchitis, emphysema, and small airways disease. Around one in four smoking-related deaths are due to COPD.¹² Sixty-eight percent of cases of COPD in men and 58% in women are due to smoking.¹¹

Emphysema. Almost all long term smokers will develop some form of emphysema. This disease worsens with increasing numbers of cigarettes smoked per day and the number of years a person has smoked. This disease is rare in non-smokers.¹³

Stroke resulting from smoking is most evident in younger age groups. Smokers under 65 years old are around three times more likely to have a stroke than non-smokers of the same age.^{14,15}

Peripheral vascular disease is a narrowing of the leg arteries that can lead to blockage and, in some cases, amputation. Cigarette smoking is the main risk factor for this disease.¹⁶

Abdominal aortic aneurysm (AAA) is the bursting of the lower part of the aorta leading from the heart. It often leads to sudden death.⁸ Cigarette smoking is the main risk factor for this disease.¹⁷

Peptic ulcer disease in persons who are *Helicobacter pylori* positive.⁸

Eye diseases, such as macular degeneration and cataracts.^{8,18}

Lower fertility in women.⁸

Low bone density in older women and **hip fractures** in both sexes.⁸

Periodontitis, a dental disease that affects the gum and bone that supports the teeth.⁸

Respiratory symptoms including shortness of breath, coughing, phlegm and wheezing. These symptoms occur in both child and adult smokers.⁸

Faster decline in lung function, which means smokers cannot breathe in as deeply, or breathe out as hard as they would if they didn't smoke.⁸

Impaired lung growth among child and adolescent smokers and early onset of lung function decline in late adolescence and early adulthood.⁸

Problems during pregnancy and childbirth including restricted foetal growth and low birth weight, complications that can lead to bleeding in pregnancy and the need for caesarean section delivery, and shortened time in the womb and preterm delivery (the baby is carried for less than 37 weeks).⁸ Smoking during pregnancy also causes death in early infancy (particularly from Sudden Infant Death Syndrome) and reduced lung function in infants.^{8,19}

Childhood cancer (hepatoblastoma) where the father and/or mother smoked before and/or during pregnancy³⁷

Worsening asthma. Smokers with asthma have poorer asthma control, faster decline in lung function, more airway inflammation, and get less benefit from some asthma medications, compared to non-smokers with asthma.^{8,20,21} Among children and adolescents, smoking causes asthma-related symptoms.⁸

Complications during and after surgery, including delayed wound healing and increased risk of infection, drug interactions, lung complications and breathing difficulties.^{8,22,23}

Smoking as a risk factor

Cigarette smoking is also a risk factor associated with a number of health problems including:

- **Breast cancer** in women.³⁷
- **Crohn's disease** (a chronic bowel disease).^{11,19}
- **Back pain.**²⁴

- **Erectile dysfunction.** Men who smoke increase their risk of impotence, and may have reduced semen volume, sperm count and sperm quality.⁸
- **Other complications during pregnancy and childbirth** including ectopic pregnancy, miscarriage, and oral clefts.⁸
- **Period pain and early menopause** in women. Smoking may increase the risk for painful periods, missed periods and irregular periods. They may also experience more menopausal symptoms.¹⁹
- **Facial skin wrinkling** tends to occur earlier.^{12, 19}
- **Skin diseases**, such as psoriasis and hidradenitis suppurativa (painful boils or abscesses in the groin and underarm).¹²
- **Increased susceptibility to bacterial and viral infections**, ranging from the common cold through to influenza, legionnaire's disease, meningococcal disease and tuberculosis.^{12, 25}
- **Type 2 diabetes.**¹²
- **Motor vehicle crashes** and death from injury in accidents.¹²
- **Dementia**, including Alzheimer's disease and vascular dementia, and cognitive (brain function) decline.¹²
- **Autoimmune diseases**, including rheumatoid arthritis, systemic lupus erythematosus, and multiple sclerosis, among others.^{26, 27}
- **Hearing loss.**²⁸

In combination with the contraceptive pill, smoking increases a woman's risk of heart attack and stroke. This risk increases dramatically with age, particularly over the age of 35 years.¹⁹

Nicotine also interacts with a range of drugs, affecting how well they work and how they are processed by the body.^{22, 25}

Secondhand smoke

In the financial year 2004-05, an estimated 141 people died from diseases caused by secondhand smoke in the home, which includes 28 infants and 113 adults.⁴ The majority of the adult deaths are from heart disease due to secondhand smoke. This figure does not include deaths from all diseases now considered by some agencies to be caused by exposure to secondhand smoke nor does it include adult deaths due to secondhand smoke at work.⁴

What is secondhand smoke ?

Secondhand smoke (SHS) is the smoke from other people's cigarettes. This is mainly the smoke that is released from the burning end of a cigarette called sidestream smoke. Smoke breathed in by the smoker of a cigarette is called mainstream smoke. Secondhand smoke is the combination of mainstream smoke breathed out by the smoker and sidestream smoke. Secondhand smoke is also called environmental tobacco smoke (ETS). Breathing in secondhand smoke is also referred to as passive smoking or involuntary smoking.²⁹

Secondhand smoke is diluted by being mixed with air, so people breathing it in inhale less smoke than active smokers.²⁹ This means active smoking is more dangerous to health than breathing in secondhand smoke.

Health effects of secondhand smoke

A summary of the literature concludes that secondhand smoke causes the following diseases and conditions:²⁹

In adults

- Heart disease
- Lung cancer
- Irritation of the eyes and nose^{30, 31}

In children

- Sudden infant death syndrome (SIDS or cot death)
- Lower birth-weight (where the pregnant mother was exposed to SHS)
- Bronchitis, pneumonia and other lung/airways infections
- Higher rates and worsening of asthma
- Wheeze illnesses in early childhood
- Middle ear disease (otitis media or 'glue ear'), a common cause of hearing loss
- Respiratory symptoms including cough, wheeze, phlegm, and breathlessness
- Lower level of lung function during childhood (i.e. they cannot breathe in as deeply or breathe out as hard as they would otherwise)

Exposure to secondhand smoke has also been linked to other diseases and conditions. They include:²⁹

In adults

- Cancers of the nasal sinus, throat and voice box^{29,37}
- Stroke
- Breast cancer
- Atherosclerosis (disease of the blood vessels)
- Acute (short term) respiratory symptoms including cough, wheeze, chest tightness and difficulty breathing among both healthy persons and persons with asthma
- Chronic (long term) respiratory symptoms
- Acute (short term) decline in lung function in persons with asthma
- Small loss of lung function
- Development of asthma and worsening of asthma control
- Chronic obstructive pulmonary disease (COPD)

In children

- Development of asthma
- Preterm delivery (where the pregnant mother was exposed to SHS)
- Childhood cancers: leukemias, brain cancer and lymphomas (where both the pregnant mother and the child after birth were exposed to SHS)^{29,37}
- Meningococcal disease, which can sometimes cause death, mental disability, hearing loss, or loss of a limb^{28, 32-36}
- Lung complications during and after surgery^{22, 23}
- Worsening of cystic fibrosis³¹

A person's risk of these diseases increases with higher levels of secondhand smoke and longer time of exposure.^{29, 30}

For more information refer to *Background Brief: Secondhand smoke*.

Social costs of smoking

In the financial year 2004/05, the total social costs of tobacco use in Australia were \$31.5 billion. This accounted for 56.2% of the total social costs of all drugs, including alcohol and illicit drugs.⁴ Social costs include costs to government, business, smokers and their families.

The above figure includes some costs of involuntary smoking (secondhand smoke exposure in the home and exposure of unborn children to the effects of their mother's smoking). These costs are mostly imposed upon the young. Children under 15 years account for 25% of deaths, 96% of hospital bed days and 91% of hospital costs attributable to involuntary smoking.⁴

For more information refer to *The costs of tobacco, alcohol and illicit drug abuse to Australian society in 2004–05*/ Collins D, Lapsley H. Available from [http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/mono64/\\$File/mono64.pdf](http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/mono64/$File/mono64.pdf)

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