Smoking and Tobacco Control

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ISSUES IN SOCIETY

The Spinney Press
# CONTENTS

## CHAPTER 1  SMOKING PREVALENCE AND HEALTH IMPACTS
- Smoking rates in Australia  
- Fewer Australian adults smoking  
- Tobacco smoking trends  
- Tobacco indicators: measuring midpoint progress  
- The numbers are in: 1.8 million Australian smokers will die from their habit  
- Health risks of smoking  
- What’s in a cigarette?  
- Nicotine dependence and withdrawal  
- Methods for quitting smoking  
- Quit smoking – stop making excuses  

## CHAPTER 2  UNDERSTANDING ELECTRONIC CIGARETTES
- E-cigarettes  
- NHMRC statement: electronic cigarettes (e-cigarettes)  
- Ban on e-cigarettes remains  
- Twelve myths about e-cigarettes that failed to impress the TGA  
- Australia’s looming e-cigarette ban robs smokers of a chance to quit  
- Tobacco smoking and e-cigarettes  
- E-cigs: a help or a harm?  

## CHAPTER 3  TOBACCO CONTROL AND PROMOTION
- Tobacco control: key facts and figures  
- Tobacco control: effective interventions  
- Tobacco tax helps take the puff out of smoking  
- Tobacco excise  
- Winning the fight against Big Tobacco  
- Young Australians being exposed to online tobacco advertising and branding  
- A third of young adults exposed to online tobacco ads  
- Plain packaging will work  
- Progress of plain packaging  
- Goodbye glamour-puss and rugged hero: smokers lose brand identity with plain cigarette packaging  

**Exploring issues – worksheets and activities**  
**Fast facts**  
**Glossary**  
**Web links**  
**Index**
INTRODUCTION

Smoking and Tobacco Control is Volume 425 in the ‘Issues in Society’ series of educational resource books. The aim of this series is to offer current, diverse information about important issues in our world, from an Australian perspective.

KEY ISSUES IN THIS TOPIC

Tobacco smoking is one of the largest preventable causes of death and disease in Australia. It is associated with an increased risk of a wide range of serious health conditions and is responsible for around 15,000 deaths each year. Although smoking rates have decreased over the past 15 years, 2.6 million adult Australians still smoke daily. Why do so many people persist with such an addictive and deadly habit; what are the ways in which they can quit smoking?

The increasing uptake of e-cigarettes is seen by some to help people quit smoking and reduce harm, and by others (including the government) to be an inducement to take up and normalise smoking, particularly by young people. How safe is ‘vaping’ and what are the arguments for and against e-cigarettes?

Australia is a world leader in tobacco control, having introduced initiatives such as the banning of advertising, imposing a tobacco excise, and mandating smoke-free environments and plain packaging. Is the fight against Big Tobacco being won? Despite these interventions, why do so many Australians continue to let their health go up in smoke?

SOURCES OF INFORMATION

Titles in the ‘Issues in Society’ series are individual resource books which provide an overview on a specific subject comprised of facts and opinions.

The information in this resource book is not from any single author, publication or organisation. The unique value of the ‘Issues in Society’ series lies in its diversity of content and perspectives.

The content comes from a wide variety of sources and includes:

- Newspaper reports and opinion pieces
- Website fact sheets
- Magazine and journal articles
- Statistics and surveys
- Government reports
- Literature from special interest groups

CRITICAL EVALUATION

As the information reproduced in this book is from a number of different sources, readers should always be aware of the origin of the text and whether or not the source is likely to be expressing a particular bias or agenda.

It is hoped that, as you read about the many aspects of the issues explored in this book, you will critically evaluate the information presented. In some cases, it is important that you decide whether you are being presented with facts or opinions. Does the writer give a biased or an unbiased report? If an opinion is being expressed, do you agree with the writer?

EXPLORING ISSUES

The ‘Exploring issues’ section at the back of this book features a range of ready-to-use worksheets relating to the articles and issues raised in this book. The activities and exercises in these worksheets are suitable for use by students at middle secondary school level and beyond.

FURTHER RESEARCH

This title offers a useful starting point for those who need convenient access to information about the issues involved. However, it is only a starting point. The ‘Web links’ section at the back of this book contains a list of useful websites which you can access for more reading on the topic.
CHAPTER 1
Smoking prevalence and health impacts

SMOKING RATES IN AUSTRALIA

National Health Survey results on tobacco smoking rates, reproduced courtesy of the Australian Bureau of Statistics

Tobacco smoking is one of the largest preventable causes of death and disease in Australia1. It is associated with an increased risk of a wide range of health conditions, including heart disease, diabetes, stroke, cancer, renal disease, eye disease and respiratory conditions such as asthma, emphysema and bronchitis.

Tobacco was responsible for 7.8% of the total burden of disease and injury in Australia in 2003, equivalent to around 15,000 deaths per year2, and was estimated to cost Australia $31.5 billion in social (including health) and economic costs in 2004-053.

ADULTS 18 YEARS AND OVER

In 2014-15, 14.5% of adults aged 18 years and over were daily smokers (2.6 million adults), down from 16.1% in 2011-12. This decrease is a continuation of the trend over the past two decades. In 2001, 22.4% of adults smoked daily while 23.8% of adults smoked daily in 1995.

PERSONS AGED 18 YEARS AND OVER – PROPORTION WHO WERE CURRENT DAILY SMOKERS, 1995 TO 2014-15

Men have been consistently more likely to smoke daily than women. In 2014-15, 16.9% of males and 12.1% of females smoked daily, with a similar but higher pattern in 1995 (27.3% of men compared with 20.3% of women).

The following graph shows daily smoking rates across age and sex in 2014-15 (see graph below).

Rates of daily smoking have decreased considerably amongst younger adults since 2001, while rates for older adults have also decreased but to a lesser extent. In 2001, 28.2% of 18-44 year olds smoked daily, decreasing to 16.3% in 2014-15. Of adults aged 45 years and over, 15.9% smoked daily in 2001, decreasing to 12.7% in 2014-15.
A further 1.5% of adults smoked less often than daily in 2014-15, while nearly one third (31.4%) were ex-smokers and just over half (52.6%) had never smoked.

Similar to 2011-12, the Northern Territory had the highest rate of daily smokers (20.9%) in 2014-15, followed by Tasmania (17.9%). The Australian Capital Territory had the lowest rate of daily smokers in 2014-15 (12.4%).

In 2014-15, people living in Outer Regional and Remote areas of Australia had higher rates of daily smoking (20.9%) than people in Inner Regional areas (16.7%) or Major Cities (13.0%). While rates of daily smoking have decreased across all remoteness areas over the past 10-15 years, the rate for Outer Regional and Remote areas is only now similar to that of Major Cities a decade ago (19.9% in 2004-05). Rates of smoking are also considerably higher among people living in areas of Australia with the most disadvantage. In 2014-15, 21.4% of people living in areas of most disadvantage (first quintile) smoked daily, compared with 8.0% of people living in areas of the least disadvantage (fifth quintile). Rates of smoking have decreased over the past decade in all quintiles of disadvantage. However, the daily smoking rate for people living in areas of most disadvantage (first quintile; 21.4%) remains considerably higher than the rate for people living in areas of least disadvantage (fifth quintile) a decade ago (13.5% in 2004-05).

In 2014-15, 2.7% of 15-17 year olds were daily smokers, similar to 2011-12 (4.2%). A further 0.5% smoked less often than daily, 1.8% were ex-smokers, and 94.2% reported that they had never smoked.

Some under-reporting of persons identifying as current smokers may have occurred due to social pressures, particularly in cases where other household members were present at the interview.
TOBACCO SMOKING TRENDS

The latest smoking trends data from the Australian Institute of Health and Welfare

CURRENT USE AND TRENDS

The long-term decline in the daily smoking rate among people aged 14 or older slowed in 2016, only declining slightly from 12.8% in 2013 to 12.2% (this fall was not statistically significant) (Table 1). The daily smoking rate has nearly halved since 1991 (24.3%).

Across all age groups, males were more likely to smoke daily than females (13.8% of males aged 14 or older smoked daily compared with 10.7% for females) (Table 2).

Between 2013 and 2016, the proportion of people who have never smoked (never smoked 100 cigarettes) increased from 60% to 62% (Figure 1).

The rate of improvement varies by age group

Considerable progress towards reducing the smoking rate in the general population has been made over the last 15 years with the daily smoking rate declining by over 40% for people in their 20s and 30s and by over 20% for people in their 40s and 50s (Table 3). However, little improvement has been made for people aged 60 or older over the same period (Figure 2).

Despite this change over the longer term, little or no improvement was made among people aged 30 or older between 2013 and 2016. People aged 40-49 continued to be the age group most likely to smoke daily (16.0%) and no improvements were seen amongst this group in 2016 (daily smoking was 16.2% among this age group in 2013).

There were more people in their 50s and 60s reporting that they never smoked 100 cigarettes in their lifetime in 2016 than in 2013. There was also a significant increase in the proportion of people in their mid- to late-20s reporting they had never smoked.

More smokers are smoking roll-your-own cigarettes

Among adult smokers, smoking manufactured cigarettes has been gradually declining since 2007 and significantly declined between 2013 and 2016 (from 89% to 86%). In contrast, smoking roll-your-own cigarettes has been steadily increasing – from 26% in 2007, to 33% in 2013 and to 36% in 2016 (Table 5).

The increase in roll-your-own cigarettes since 2007 was most noticeable among smokers aged under 40 (increase of 82% for young adults and 70% for smokers in their 30s between 2007 and 2016). There was also a significant increase in the proportion of smokers in their 30s smoking roll-your-own cigarettes between 2013 and 2016 (from 29% to 37%).

Young adult smokers (50%) were the age group most likely to smoke roll-your-own cigarettes in 2016; use of roll-your-own cigarettes then declined as age increased.
Younger people are delaying the take up of smoking

The average age at which 14-24-year-olds smoked their first full cigarette increased from 14.3 in 2001 to 16.3 years in 2016 (significantly increased from 15.9 years in 2013) (Table 6). The age of initiation increased for males from 16 years in 2013 to 16.6 years in 2016.

No change in the average number of cigarettes smoked per week

There was a slight but non-significant decline in the average number of cigarettes smoked per week by smokers in 2016 – decreasing from 96 in 2013 to 94 cigarettes in 2016 (Table 7) – but this was considerably fewer than in 2010 (average of 111 cigarettes per week).

The average number of cigarettes smoked per week increased with age until the 60-69 age group and smokers in their 60s continued to smoke the largest number of cigarettes per week on average – 118 in 2016. While there was some improvement among people in their 50s between 2013 and 2016 (from 118 to 109 cigarettes per week) the decline was not significant.

Smokers aged 18-24 made a significant improvement in 2016 and smoked 16 fewer cigarettes per week (down from 84 in 2013 to 68 in 2016).

ELECTRONIC CIGARETTES

Electronic cigarettes (also known as e-cigarettes, e-cigs or electronic nicotine delivery systems) are devices for creating aerosols, which contain nicotine and/or flavouring agents. The aerosols are then inhaled. The visual, physiosensory and behavioural aspects of electronic cigarettes simulate the act of tobacco smoking.

The 2013 survey was the first time respondents were asked about their use of electronic cigarettes. In 2016, a number of changes were made to the questionnaire to better capture the use of electronic cigarettes, including adding questions about frequency and duration of use, and modifying the question about lifetime use and current use of electronic cigarettes (see questionnaire changes for more information).

These changes mean that 2016 and 2013 data are not fully comparable. However, data may still be used to give an indication of the change in use of electronic cigarettes between 2013 and 2016.

Lifetime use of e-cigarettes

Lifetime use of electronic cigarettes significantly increased across all age groups between 2013 and 2016 apart from the oldest age group (70 years or older). Electronic cigarettes were most commonly tried by smokers aged under 25 years with 1 in 2 trying e-cigarettes in their lifetime. Lifetime use then generally decreased with age (Table 8).

Most e-cigarette users only try them and no longer use them

Nearly one third of smokers (31%) had tried e-cigarettes in their lifetime, but the majority had only tried them once or twice (20%) and only 4.4% currently use them (the remaining 6.8% no longer use them) (Table 9).

EXPOSURE TO SECOND-HAND SMOKE

Dependent children were less likely to be exposed to tobacco smoke inside the home

Only 2.8% of households with dependent children had a household member that smoked daily inside the home in 2016 (Figure 3), a significant decline from 3.7% in 2013 – and a dramatic fall from 31% in 1995.

ILLICIT TOBACCO

No change in the use of illicit unbranded tobacco

About 1 in 6 smokers had smoked unbranded tobacco in their lifetime and 1 in 26 currently smoke it – similar proportions to 2013 (Table 11).
Fewer smokers had seen and purchased tobacco products without plain packaging

The proportion of smokers reporting that they had seen tobacco products without plain packaging in the last 3 months declined in 2016 (from 18.5% in 2013 to 13.0%). There were also fewer smokers purchasing these products in 2016 (from 9.6% in 2013 to 5.5%) (Table 12). Revisions were made in 2016 to add ‘in Australia’ to the wording of the question which specifically asks about whether people have seen tobacco products which do not have the plain packaging/graphic health warnings (see questionnaire changes for further information). This change may have had an impact on these results but the extent of the impact is unclear as it is not known how many people surveyed in 2013 may have been thinking of cigarette packets they saw or purchased overseas rather than in Australia.

POLICY SUPPORT

Support for policies aimed at reducing harm caused by tobacco remained high, but there were small declines in reported support for the following policies between 2013 and 2016:

- Stricter penalties for sale or supply to minors (from 86% to 84%)
- Banning all additives (e.g. flavouring) in cigarettes and other tobacco products, to make them less attractive to young people (from 79% to 76%)
- Raising the legal age for sale or supply of tobacco, and making it harder to buy tobacco in shops (both declined from 65% to 64%) (Table 13).

Stricter enforcement of the law and penalties for supplying to minors continued to receive the highest level of support, but has been gradually declining since 2007 (from 90% to 86% in 2016).

Three new policy support measures about electronic cigarettes were added to the questionnaire in 2016. These new measures received relatively high support with about two-thirds supporting restrictions on the use of e-cigarettes in public places and on where and when they can be advertised. More than 3 in 4 supported prohibiting the sale of e-cigarettes to people under the age of 18 (Table 13).

PERCEPTIONS

Tobacco contributes to more drug-related hospitalisations and deaths than alcohol and illicit drug use combined. However the proportion of people who perceive tobacco as the drug that causes the most deaths fell from 2013 to 2016 as did the proportion of people who perceive tobacco to be the drug of most concern (Figure 4). This change in perception is most likely driven by the substantial shift in people’s attitudes towards meth/amphetamines.

Tobacco Indicators: Measuring Midpoint Progress

Summary from a report by the Australian Institute of Health and Welfare

This report presents progress against the outcome indicators (indicators 1-8ii) listed under Part Seven of the National Tobacco Strategy 2012-2018 (NTS) and an additional six indicators (indicators 9-14) agreed to during the development of the reporting framework.

The indicators are organised across five smoking phases: exposure, uptake, transition, established smoker and cessation. This report will assist the Australian Government, States and Territories in monitoring progress towards achieving the objectives and targets of the NTS and the National Healthcare Agreement (NHA) benchmarks.

Most Indicators Show Favourable Progress

- Fewer adults and secondary students reported established patterns of smoking at the midpoint than at baseline:
  - Regular smoking among secondary students (weekly smoking) and adults (daily smoking) declined by almost a quarter.
- The trends for cessation were less clear, with difficulty in assessing progress between baseline and midpoint for quit attempts or average age at cessation, but a significant increase in the proportion of ever-smokers quitting for 12 months or more. A longer time series is necessary to monitor progress for cessation.

Some Population Groups Achieved Greater Progress Than Others

There are two different measures to evaluate the gap between two population groups: the rate ratio and the rate difference. In this report, the rate ratio has been used as the main measure to analyse the gap between population groups. When drawing conclusions about changes in smoking related measures between population groups over time, both rate differences and rate ratios are important considerations.

- Findings in this report show people living in Inner regional areas and students living in Outer regional areas made significant progress across numerous indicators.
- Findings in this report also show that inequalities within particular population groups increased for some indicators.
- Daily smoking rates significantly improved across all socioeconomic areas but the improvement was proportionally greater for those living in the highest two socioeconomic areas.

Summary data for the indicators is provided in the table on the next page. Different data sources and varying time points are used in this table. Trends across indicators and smoking phases should therefore be treated with caution.

Indicators 3 and 8i in the table also relate to the NHA (of 2008 and updated in 2012) benchmark: 'By 2018, reduce the national smoking rate to 10 per cent of the population and halve the indigenous smoking rate, over the 2009 baseline'.

## TRENDS IN TOBACCO SMOKING INDICATORS

<table>
<thead>
<tr>
<th>SMOKING PHASE AND INDICATOR</th>
<th>Baseline(^{(a)})</th>
<th>Midpoint(^{(b)})</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXPOSURE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicator 5.1: Fewer women smoking while pregnant (any time)</td>
<td>13.2%</td>
<td>11.7%</td>
<td>✓</td>
</tr>
<tr>
<td>Indicator 5.2: Fewer women smoking while pregnant (first 20 weeks)</td>
<td>12.9%</td>
<td>11.3%</td>
<td>✓</td>
</tr>
<tr>
<td>Indicator 6: Fewer children exposed to second-hand smoke at home</td>
<td>6.1%</td>
<td>3.7%</td>
<td>✓</td>
</tr>
<tr>
<td>Indicator 7: Fewer adults exposed to second-hand smoke at home</td>
<td>4.0%</td>
<td>2.4%</td>
<td>✓</td>
</tr>
<tr>
<td><strong>UPTAKE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicator 9: People are delaying the onset of tobacco smoking</td>
<td>15.4 years</td>
<td>15.9 years</td>
<td>✓</td>
</tr>
<tr>
<td>Indicator 10: Fewer people trying cigarettes (secondary school students)</td>
<td>23.3%</td>
<td>19.1%</td>
<td>✓</td>
</tr>
<tr>
<td>Indicator 10: Fewer people trying cigarettes (adults)</td>
<td>62.5%</td>
<td>57.0%</td>
<td>✓</td>
</tr>
<tr>
<td><strong>TRANSITION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicator 2: Fewer young people making the transition to established patterns of smoking (secondary school students)</td>
<td>3.5%</td>
<td>2.7%</td>
<td>✓</td>
</tr>
<tr>
<td>Indicator 2: Fewer young people making the transition to established patterns of smoking (young adults)</td>
<td>29.4%</td>
<td>23.2%</td>
<td>✓</td>
</tr>
<tr>
<td><strong>ESTABLISHED SMOKER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicator 1: Fewer young people smoking regularly</td>
<td>6.7%</td>
<td>5.1%</td>
<td>✓</td>
</tr>
<tr>
<td>Indicator 13: Fewer young people smoking</td>
<td>8.9%</td>
<td>7.5%</td>
<td>✓</td>
</tr>
<tr>
<td>Indicator 3: Fewer adults smoking regularly</td>
<td>18.9%</td>
<td>14.5%</td>
<td>✓</td>
</tr>
<tr>
<td>Indicator 14: Current adult smokers smoking occasionally (weekly or less than weekly)</td>
<td>9.0%</td>
<td>9.6%</td>
<td>≃</td>
</tr>
<tr>
<td>Indicator 8ii: Fewer adults smoking regularly among Aboriginal and Torres Strait Islander people</td>
<td>47.7%</td>
<td>43.8%</td>
<td>✓</td>
</tr>
<tr>
<td>Indicator 8ii: Fewer adults smoking regularly among people of low socioeconomic status(^{(c)})</td>
<td>28.5%(^{(d)})</td>
<td>22.1%(^{(d)})</td>
<td>✓</td>
</tr>
<tr>
<td>Indicator 8ii: Fewer adults smoking regularly among people of second-lowest socioeconomic quintile</td>
<td>21.4%(^{(d)})</td>
<td>17.4%(^{(e)})</td>
<td>✓</td>
</tr>
<tr>
<td><strong>CESSATION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicator 4: More smokers attempting to quit</td>
<td>44.8%</td>
<td>46.7%</td>
<td>≃</td>
</tr>
<tr>
<td>Indicator 11: Adult ever-smokers are quitting at a younger age</td>
<td>35.3 years</td>
<td>35.4 years</td>
<td>≃</td>
</tr>
<tr>
<td>Indicator 12: More adult ever-smokers no longer smoking</td>
<td>47.4%</td>
<td>51.8%</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Key**

✓ = Significant and favourable trend

≃ = No significant change

(a) Baseline data collection year ranges from 2007-08 to 2011.
(b) Midpoint data collection year ranges from 2013 to 2014-15.
(c) Index of Relative Socio-Economic Advantage and Disadvantage 2011.
(d) Lowest socioeconomic quintile.
(e) Second-lowest socioeconomic quintile.

More about smoking indicators:

- Tobacco Indicators Baseline Data: Reporting under the National Tobacco Strategy 2012-2018.
- Access tobacco smoking data.
The numbers are in: 1.8 million Australian smokers will die from their habit

The first large-scale, direct evidence on smoking and mortality in Australia shows up to 1.8 million of our 2.7 million smokers will die from their habit if they continue to smoke, according to a report from the Sax Institute.

The research, just published in the international journal BMC Medicine, is an important reminder that the war on tobacco is not yet won, and our world-leading efforts in tobacco control must go on.

“Australia can be proud of its remarkable success in cutting population smoking to just 13% but even with this world-leading result, 2.7 million of us still smoke,” said Professor Emily Banks, Scientific Director of the Sax Institute’s 45 and Up Study and an Australian National University researcher.

“Our findings show that up to two in every three of these smokers can be expected to die from their habit if they don’t quit and this highlights the importance of staying the course on tobacco control.”

The research is the result of a four-year analysis of health outcomes from more than 200,000 people from the general population participating in the Sax Institute’s 45 and Up Study.

“These findings are a huge wake-up call for Australia,” Professor Banks said. “We knew smoking was bad but we now have direct evidence from Australia that shows it is worse than previously thought. Even 10 cigarettes a day will double your risk of dying prematurely.”

The research was supported by the National Heart Foundation in collaboration with major 45 and Up Study partner Cancer Council NSW and conducted by a national and international team.

The NSW Heart Foundation’s CEO, Kerry Doyle, said the Government was on the right path in driving down smoking rates through initiatives like tax increases and plain packaging.

“Higher tobacco prices have been shown to be the most effective intervention available to governments to reduce demand for tobacco. With smoking being a major cause of cardiovascular disease, including heart attack, stroke and peripheral vascular disease the more deterrents people have between them and smoking, the better,” Ms Doyle said.

Scott Walsberger, Tobacco Control Manager at Cancer Council NSW, said the research results highlighted an important message for smokers: “It’s never too late to quit – no matter what your age, or how much you smoke.”

SMOKING STATISTICS

- 200,000 smokers over 45 surveyed
- 2.7 million smokers in Australia
- 1.8 million of them will die from their habit
- Smoking reduces life expectancy by 10 years
- Smoking 10 cigarettes a day doubles the risk of death
- Smoking 25 cigarettes a day increases the risk of death by four to fivefold.

Source: Sax Institute

“These findings are a huge wake-up call for Australia. We knew smoking was bad but we now have direct evidence from Australia that shows it is worse than previously thought. Even 10 cigarettes a day will double your risk of dying prematurely.”

“People often underestimate the urgency for quitting and many are not aware of how damaging even light smoking is for cancer and other preventable illnesses,” he said.

“Smokers can call the Quitline on 13 78 48, visit www.icanquit.com.au or speak to their GP or medical practitioner about how they can stop smoking before it’s too late.”

HEALTH RISKS OF SMOKING

Quitting smoking offers immediate and long-term benefits. Quitting reduces the risk of developing smoking-related diseases and improves your health in multiple ways. The following advice is from Quit Victoria.

Tobacco smoke is made up of thousands of chemicals and many of them are very harmful. Around 70 of them cause cancer.

Poisons in tobacco smoke include:
- **Carbon monoxide**
  - Fatal in large doses, this poisonous gas is also found in car exhaust fumes. It takes the place of oxygen in your blood, starving your lungs, heart, and other organs of the oxygen they need to function properly.
- **Tar**
  - This sticky brown substance coats your lungs like soot in a chimney. Tar and smoke irritate your lungs, increasing the amount of mucus in your chest and restricting your breathing.

Long-term smokers are at a higher risk of developing a range of potentially deadly diseases including:
- Cancer of the lungs, mouth, nose, throat, oesophagus, pancreas, kidney, liver, bladder, bowel, ovary, cervix, bone marrow, and stomach.
- Lung diseases such as Chronic Obstructive Pulmonary Disease (COPD) which includes chronic bronchitis and emphysema.
- Heart disease, heart attack and stroke.
- Poor blood circulation in feet and hands, which can lead to pain and, in severe cases, gangrene and amputation.

**How does smoking affect your body?**

Remember that your body begins to repair itself as soon as you quit smoking, no matter what your age.

**Lungs**

80% of cases of lung cancer are due to smoking. Lung cancer is the most common form of cancer caused by smoking.

The earlier you quit, the smaller your risk of dying from lung cancer. For example, quitting at 50 years old more than halves your risk over 25 years compared to continued smoking. Cigarette smoke contains many chemicals that interfere with the body’s method of filtering air and cleaning out the lungs.

**Child’s ears**

Children of smokers are more likely to contract ‘glue ear’, which is an infection and swelling of the ear.

‘Glue ear’ is the most common cause of hearing loss in children, and may lead to speech problems.

**Skin**

Smokers appear to develop face wrinkles earlier than non-smokers.

Smoking reduces blood flow to the skin and may damage tissues (collagen and elastin) that help keep skin looking young.

Smoking is also linked to a range of skin problems, such as psoriasis and hidradentitis suppurativa (inflammation of sweat glands in the groin and underarm regions, producing painful boils or abscesses).

**Ears**

Smokers are more likely to suffer hearing loss than non-smokers, including hearing loss due to loud noises.

**Brain**

30% of all strokes in individuals under 65 years of age are caused by smoking.

Cigarette smoking is a cause of stroke – damage to the brain due to problems with blood flow or the escape of blood into the brain tissue.
After you quit, your risk of stroke decreases steadily. After fifteen years your risk is close to that of someone who has never smoked.

**Heart and blood**

30% of heart disease in those under 65 years of age is caused by smoking. Smokers have two to three times the risk of suffering sudden cardiac death than non-smokers.

Smoking temporarily raises heart rate and blood pressure, while reducing the ability of blood to carry oxygen. Smoking makes the walls of the blood vessels sticky, causing a build up of dangerous fatty deposits.

**Cancer**

80% of cases of lung cancer are due to smoking. Approximately one fifth of all cancer deaths in Australia can be attributed to smoking.

Smoking also causes cancer of the tongue, mouth, throat, nose, voice box, oesophagus, pancreas, stomach, liver, kidney, bladder, ureter, bowel, ovary, cervix and bone marrow (myeloid leukemia).

**Back**

Smoking is among the risk factors for back pain for both adolescents and adults.

**Stomach and gut**

Smoking causes cancer of the stomach, bowel, and other organs involved in digesting food.

After quitting, your risk of cancer of the stomach, pancreas, and oesophagus goes down compared to a continuing smoker, and continues to decrease the longer you stay stopped.

Smoking causes peptic ulcer disease in people who also are infected with *H. pylori*, a common bacterial infection. It increases the risk of developing Crohn’s disease, a chronic inflammatory bowel condition.

Smoking has a number of damaging effects on your stomach and gut, such as increasing acidity and reflux, which stop shortly after you quit smoking.

**Penis**

Smoking causes problems with getting or maintaining an erection. This may be due to the effects of smoking on blood flow and damage to the blood vessels of the penis. The earlier men quit smoking, the greater their chances of preventing or recovering from this problem.

**Surgery**

Doctors strongly recommend stopping smoking before surgery.

If you smoke, you will have a much higher risk of serious complications during and after surgery. The earlier you quit, the greater your chances of an easy recovery. Quitting completely is the only way to stop and reverse the damage done by cigarettes.

**Breastfeeding**

If you are a breastfeeding mother and you smoke it is not ideal, but better than not breastfeeding.

Some of the nicotine and other poisons in cigarettes are passed from a mother who smokes, to the baby, through breast milk. However, breast milk provides all the baby’s food needs for the first six months of its life and helps protects the baby against infection.

\[\text{Tobacco smoke is made up of thousands of chemicals and many of them are very harmful. Around 70 of them cause cancer.}\]

If you are having trouble quitting try not to smoke just before or during feeds – if you can, go outdoors to smoke.

**Fingers**

The tar in cigarette smoke collects on the fingers and fingernails, staining them yellowish-brown.

Smoking can damage blood vessel walls, making it more difficult for the heart to pump blood to the hands and feet. Over time, this can lead to peripheral vascular disease (PVD). In serious cases, this may result in severe pain, and can also lead to gangrene and amputation.

Quitting reduces your risk of developing PVD, compared to a continuing smoker. Quitting slows down the worsening of PVD in those who have the disease: they live longer, have less pain and are more likely to avoid amputation.

**Diabetes**

Smoking is a cause of type 2 (non-insulin dependent) diabetes.

Smoking can bring on illness associated with diabetes earlier,
causing disability and death. Smokers with diabetes have a greater risk of heart disease, stroke and disease of the blood vessels than non-smokers with diabetes. Smokers with type 1 (insulin-dependent) diabetes may also have higher risk for kidney disease and nerve damage.

People with type 1 diabetes who smoke tend to have less control over their blood sugar levels and are more likely to suffer from levels that are too high or too low.

If you have diabetes and smoke, quitting smoking is one of the best things you can do to manage your diabetes and stay healthier for longer.

**Women's health**

Women who smoke face extra problems. This includes:

- Increased risk of heart attack if you smoke and take the pill – this risk increases significantly as you get older
- Difficulty becoming pregnant
- Missed periods and more painful periods
- Increased risk of cancer of the cervix and ovary
- Loss of bone density in older women, and increased risk of hip fractures
- Early menopause.

Quitting stops further damage caused by smoking and many of these problems appear to reverse.

**Legs**

Smoking can damage blood vessel walls, making it more difficult for the heart to pump blood to the hands and feet.

Over time, this can lead to peripheral vascular disease (PVD). PVD most commonly occurs in the legs and feet, but it can also develop in the arms and hands.

In serious cases, this may result in severe pain, especially when exercising. It can also lead to gangrene and amputation.

Quitting reduces your risk of developing PVD, compared to a continuing smoker. Quitting slows down the worsening of PVD in those who have the disease: they live longer, have less pain and are more likely to avoid amputation.

**SIDS**

Smoking during pregnancy, and exposing the infant to tobacco smoke in the first year of life, is a cause of sudden infant death syndrome (SIDS or cot death).

Infants exposed to their mother’s secondhand smoke after birth have nearly two and a half times the risk of dying from SIDS compared with unexposed infants.

**Child’s lungs**

Secondhand smoke is more dangerous for young children than adults because they have smaller and more delicate lungs, which are still developing.

The children of parents who smoke have higher rates of lung or airways infections such as bronchitis, bronchiolitis and pneumonia during their first two years of life, compared to children of non-smokers.

The best way to protect children from secondhand smoke is to quit smoking. The next best way is by parents ensuring a total ban on smoking inside the home or car.

**Mouth**

Smoking is a major cause of cancers of the mouth and throat.

Provided cancer is not already present, the risk of mouth and throat cancer rapidly decreases over the first 10 years after stopping smoking. After 20 years your risk of mouth cancer is similar to someone who has never smoked.

Smoking causes dental disease that affects both the gums and bones that support the teeth. Quitting reduces your risk of this disease compared to a continuing smoker.

**Muscles and bones**

Carbon monoxide replaces some of the oxygen in your blood, and makes it harder for oxygen to transfer into muscle cells.

As there is less oxygen available for your muscles, they tire more quickly. After you quit for 24 hours, the level of carbon monoxide in your blood drops dramatically.

Smoking gradually decreases your bone density in your middle and later years. This leads to low bone density, especially for older women. Smoking increases the risk of hip fractures in both men and women.

**Poisoning**

Nicotine on its own can be a poisonous substance. During the 1920s and 1930s, when large quantities of nicotine were used in insecticides, poisonings were common.

Despite nicotine poisoning being uncommon these days, a child who accidently eats a cigarette, or cigarette butt, can become sick.

**Eyes**

Smoking causes macular degeneration, which is the leading cause of blindness in Australians over 40 years old.

Stopping smoking is the most important way to help prevent this condition.

**Nose**

Smoking causes cancer of the nose, the nasal sinus and cavity behind the nose.

Smoking also affects your ability to smell. Some people may notice that their sense of smell improves soon after they stop smoking. After you quit, your sense of smell recovers slowly over time.

WHAT’S IN A CIGARETTE?

Cigarette smoke contains over 7,000 chemicals and many of them cause cancer, according to these facts from the Smoke Free Generation collaboration.

Cigarettes are made from the dried leaves of the tobacco plant which are grown mainly in China, USA, Brazil and India. The leaves of the tobacco plant are dried by burning trees in ovens. Nearly 5 million hectares of forest are lost each year to produce cigarettes.

When a person smokes they damage the environment as well as their health. After the leaves of the tobacco plant have been dried they are treated with many different chemicals.

When someone smokes a cigarette they breathe in:

Tar – a black, sticky substance that contains many poisonous chemicals such as ammonia (found in floor and window cleaner), toluene (found in industrial solvents) and acetone (found in paint stripper and nail polish remover). Tar is the main cause of throat and lung cancer. Tar also causes the yellowish brown stains on smokers’ fingers, teeth and on the surfaces of rooms and furniture where people smoke heavily.

Nicotine – the drug in tobacco which is addictive. Nicotine is poisonous and has a number of effects on the body. These include increasing heart rate, raising blood pressure and making the small blood vessels under the skin shrink, which can cause wrinkles.

Carbon monoxide – a poisonous gas that reduces the amount of oxygen a person’s red blood cells can carry. This means less oxygen goes to organs of the body, blood gets thicker and the heart has to work harder.

Hydrogen cyanide – the poison used in gas chambers during World War II which can kill a person very quickly. Even in low doses it has harmful health effects.

 Metals – lead, nickel, arsenic (white ant poison) and cadmium (used in car batteries) are among the many metals found in tobacco smoke.

Insect killers – such as DDT and Methoprene (found in flea powder) are used in growing tobacco. Other chemicals such as benzene (found in petrol) and naphthalene (found in mothballs) are added when cigarettes are being made.

Radioactive compounds – are found in cigarettes and cause cancer.

The more cigarettes a person smokes, the greater risk of harm to their body. Nearly 6 million people across the world die every year from smoking. Even if you don’t smoke you can still be harmed by being around other people’s smoke.
NICOTINE DEPENDENCE AND WITHDRAWAL
A TOBACCO CESSATION FACT SHEET REPRODUCED COURTESY OF NSW HEALTH

Tobacco contains more than 7,000 chemicals that are harmful to people including 70 chemicals that are known to cause cancer. Nicotine is the addictive chemical in tobacco. Knowing if you are dependent on nicotine and knowing about the symptoms of nicotine withdrawal can help you to manage better while quitting.

Are you nicotine dependent?

These three questions can help you decide if you are dependent on nicotine:

1. Do you smoke within 30 minutes of waking?
2. Do you smoke 10 or more cigarettes each day?
3. Did you experience cravings and withdrawals last time you tried to quit?

If you answered yes to any of these questions then you are dependent on nicotine. There are things you can do to help you prepare for quitting and assist you on your quit journey such as:

- Read the Getting ready to quit smoking fact sheet available on www.health.nsw.gov.au (Search: getting ready to quit smoking).
- Talk to your doctor.
- Call the Quitline on 13 7848 (13 QUIT).

The good news about quitting

Quitting smoking has immediate and long-term health benefits. From your first day of quitting your body begins to repair itself. Within days your smell and taste improves and your breathing improves making exercise easier. Within one to nine months, coughing and shortness of breath also decrease.

Nicotine withdrawal

People experience nicotine withdrawal differently. Some people find it more challenging than others. Many people find nicotine withdrawal is worst in the first 24-48 hours of quitting.

Most people experience some of the symptoms of nicotine withdrawal and they usually don’t all happen at once. Withdrawal occurs over time as your body begins to get rid of its dependence on nicotine. It helps to think of the nicotine withdrawal symptoms as ‘recovery symptoms.’ After about two weeks, recovery symptoms are usually less severe.
Using nicotine replacement therapy (NRT) products (patch, gum, lozenge, inhalator, oral strips and mouth spray) can dramatically reduce symptoms of nicotine withdrawal, provided you use enough NRT each day to control withdrawal symptoms and cravings and consistently use NRT for 8-12 weeks.

For more information on NRT products and prescription medications to assist quitting:

- Talk to your doctor, pharmacist or smoking cessation advisor.
- Contact Quitline on 13 7848 (13 QUIT).

**Symptoms of nicotine withdrawal**

**Irritability and anxiety**

You might feel irritable or anxious. These feelings can be made worse by caffeine. Smoking reduces the effect of caffeine and when you quit you become more sensitive to the effects of caffeine.

Try to halve your usual caffeine intake by drinking half as much coffee, tea, energy drinks and cola.

Relaxing activities, such as taking a short break from work or going for a walk, can also help.

**Difficulty concentrating**

The changes that are happening in your body and cravings for cigarettes may make it more difficult to concentrate. This can start to improve after a few days as your brain adjusts to getting more oxygen.

It might help to do tasks in small ‘bite-size’ chunks. Take regular breaks and do something active to clear your mind. Concentration levels will improve over time.

**Restlessness and insomnia**

Some people feel as though they can’t sit still and need to move about or do something with their hands. You can use this in a positive way by doing some physical activity that you enjoy. Some people also find it harder to sleep when they’re quitting (insomnia). Restlessness and insomnia are made worse by caffeine. Halving caffeine intake helps.

**Cravings**

Cravings are a normal part of quitting. They last usually no more than a few minutes. Some people experience a series of cravings and this can be very challenging. As time passes, your cravings will usually be less strong, be shorter and happen less often.

Some people keep a diary to record how they feel, including how often and strong their cravings are. This can help to show that things are improving. Talking to Quitline (13 7848) can help you with ideas on how to manage your cravings.

**Dizziness**

Smoking raises your blood pressure over time. When you stop smoking, your blood pressure can drop quite quickly in the first few days of a quit attempt, so that if you stand up too quickly, you may feel dizzy for a short time. This usually passes in a few days.

**Appetite changes**

Some people start to feel hungrier when they quit smoking. This is because nicotine can suppress your appetite. Drink plenty of water and make sure that you eat a healthy diet with plenty of fresh fruit and vegetables.

As you start feeling more energetic and breathing becomes easier, gradually increase your physical activity. This will help you to maintain a healthy weight.
Methods for quitting smoking

There are a number of methods and strategies available. If one method does not work for you, there are other options for you to try. A combination of different methods may even be required to help you quit. It can take time and sometimes more than one strategy to find the most effective method for you to quit smoking.

Smoking cessation methods and strategies include:
- Willpower.
- Cutting down to quit.
- Going ‘cold turkey’, using just your mental strength.
- Nicotine Replacement Therapy (NRT).
- Prescribed quit smoking medications, such as Varenicline (Champix®) and Bupropion (Zyban).
- Professional support and advice can make a difference, especially in combination with other strategies.
- Alternative quit smoking methods such as electronic cigarettes and vaping devices.

For more information, go to: Methods to Quit Smoking by Cancer Institute NSW at www.icanquit.com.au/quitting-methods

Remember
- If you are concerned about any of these symptoms talk to your doctor or phone Quitline on 13 7848 (13 QUIT).
- Nicotine withdrawal can be a challenge, especially in the first few days or weeks of quitting.
- Most withdrawal symptoms will have gone or be more manageable within the first few weeks of quitting.
- Long-term benefits of quitting outweigh the short-term discomfort of nicotine withdrawal symptoms.
- Stay positive and be kind to yourself while you’re experiencing ‘recovery symptoms’.
- Use of NRT (patches, gum, lozenges, inhalator, oral strips and mouth spray) can dramatically reduce your symptoms of nicotine withdrawal.
- Most people undertake a number of quit attempts before succeeding. Keep this in mind and keep going and you will succeed.

For help with quitting smoking contact the Quitline 13 7848 (13 QUIT) or speak with your health professional.


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Quit smoking – stop making excuses

Seven excuses that smokers use to delay quitting, and how to overcome them, courtesy of healthdirect

**Excuse 1: The damage is done**

You might feel that because you smoke, you’ve already increased your chance of getting cancer or another smoking-related disease, so quitting now won’t make any difference.

In fact, as soon as you quit, your body starts to repair itself. You’ll notice improvements in your breathing and sense of taste and smell just a few days after stopping. You’ll also improve the health of your family and friends by not exposing them to passive smoking.

**Excuse 2: I’ll gain weight**

Medical evidence shows that nicotine doesn’t stop you getting hungry. Nicotine makes you burn calories faster, but as long as you remember that you need less food energy, quitting won’t actually make you gain weight.

Try eating low-calorie options and take up an activity instead of replacing cigarettes with food.

**Excuse 3: I’ll get stressed**

Despite what you may think, nicotine doesn’t calm you down.

Nicotine cravings between cigarettes make you feel stressed and anxious, so when you smoke the cigarette you feel calmer. But you’ll feel less stressed once you quit and don’t have cravings any more.

If you want a cigarette, wait for 10 minutes and the craving will usually pass. Take some deep breaths or go for a walk to relieve the stress and distract you from those cravings.

**Excuse 4: It’s not the right time to quit smoking**

Although it’s true that you shouldn’t try to quit during particularly stressful times, don’t use this as an excuse to never try quitting.

Pick a particular date, such as the beginning of a holiday or the beginning of a working week. Work out what makes you want a cigarette, such as having a cup of tea or going to the pub, and pick a day when you can avoid these triggers.

Telling lots of people that you’re giving up will make you more likely to quit. You won’t want to let them down, and you can ask smokers not to offer you cigarettes.

**Excuse 5: Quitting will ruin my social life**

For many smokers, cigarettes are an important part of their social life. You may class yourself as a social smoker, who only has a cigarette when you’re with friends who smoke or during nights out. You may also have bonded with colleagues during cigarette breaks.

Although social smoking may seem better than smoking 40 a day, any cigarette smoking damages your health.

**Excuse 6: Smoking looks good**

For some people, holding a stick of tobacco wrapped in paper seems attractive and fashionable. Teenagers may think it makes them look older or cooler.

But many people find the sight of a smoker unattractive. Yellow fingernails, blackened fingers and a stained tongue are not a pretty sight.

Smoking also makes your complexion dull and prematurely ages your skin. So if you don’t want to look old before your time, it’s a good idea to quit.

There’s also the smell – cigarette smoke sticks to your hair and clothes long after you’ve had your last cigarette of the day. Some people think kissing a smoker is like “kissing an ashtray”. If you’d prefer to smell fresher, now’s the time to quit.

**Excuse 7: I can’t quit because I’m addicted**

There is some truth in this. Smoking is an addiction that’s undeniably tough to quit. But it’s not impossible. With a lot of determination, you can do it.

To quit successfully, you need to deal with your chemical addiction to nicotine and the fact that smoking has become part of your daily routine.

The chemical addiction causes physical symptoms when you quit, such as tiredness, irritability and poor concentration. Your doctor can prescribe medication to replace the nicotine. There are counselling and support groups that can give you extra motivation to help you ignore your cravings.

Change your routine so that you replace smoking a cigarette with an alternative, such as a drink of water or another activity.

**HELPFUL TOOLS**

A great place to start is to check out the Quit Now website and its variety of information and tools to support you in quitting smoking.

**Quit Now:** My QuitBuddy is a personalised interactive app with quit tips, daily motivational messages and countdown to quitting reminders. You can set your own goals, the reasons you’re quitting, include photos and recordings of loved ones, and share tips and success stories in a community forum. If you’re pregnant, there is a specialised Quit for You Quit for Two app. Or use the Quit Now Calculator to work out how much money you’re going to save.

**SOURCES**

- Quitnow: www.quitnow.gov.au
- Make smoking history: www.makesmokinghistory.org.au

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The information is not a substitute for independent professional advice and should not be used as an alternative to professional health care. If you have a particular medical problem, please consult a healthcare professional.

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CHAPTER 2
Understanding electronic cigarettes

E-CIGARETTES
AN OVERVIEW FROM THE ALCOHOL AND DRUG FOUNDATION

What are e-cigarettes?
E-cigarettes are battery-operated devices that resemble tobacco cigarettes, cigars or pipes except that they do not contain tobacco. The device allows users to inhale nicotine and other chemicals in a vapour form rather than smoke. There are also a number of non-nicotine devices that contain a variety of ingredients and flavours like fruit, sweets, coffee or alcohol flavours.

Some devices resemble conventional cigarettes, cigars or pipes where others look like everyday items such as pens, USB memory sticks, and larger cylindrical or rectangular devices.

E-cigarette products can be bought online from overseas, which raises safety concerns about the lack of regulation governing their manufacture and distribution. Most countries have no regulations governing e-cigarette design and product approval. There have been frequent reports about nicotine poisonings as well as injuries and property damage arising from product malfunctions.

E-cigarettes are sometimes mistaken for approved nicotine replacement therapy as some manufacturers market them as devices designed to help people overcome tobacco dependency. E-cigarettes may be used as a quitting aid in the future, but at the moment there is no conclusive evidence about its effectiveness. There is also very little known about the other chemicals found in e-cigarettes, and how it affects the smoker as well as bystanders.

Other names
Electronic cigarettes, electronic nicotine delivery systems (ENDS), e-cigs, ecigaro, electro-smoke, green cig and smartsmoker.

How are they used?
E-cigarettes contain nicotine solution, flavour and other chemicals in a disposable cartridge that can be replaced or refilled. E-cigarettes use heat to transform nicotine solution into vapour which is inhaled.

People may use e-cigarettes for various reasons including:
- To avoid disturbing other people with smoke
- In smoke-free places
- To cough less, improve their breathing or physical fitness
- For the flavour or sensation of inhalation.

Do they help people quit smoking?
For now, we don’t know if e-cigarettes can help people quit smoking. The results of studies on individual brands vary. So far, the Therapeutic Goods Administration (TGA) has not assessed e-cigarettes as a quitting aid. E-cigarettes may offer a safer alternative to smoking, but they may increase smoking rates by re-normalising smoking. This could reduce someone’s motivation to quit or indirectly encouraging non-smokers to take up the habit.

Are they safer than traditional cigarettes?
Research into health risks associated with smoking e-cigarettes is extremely limited. However, there are known risks associated with nicotine exposure on brain development meaning that pregnant women and adolescents should avoid smoking them. They should also not be smoked around children. There are also risks linked to nicotine poisoning via ingestion and skin contact.

It is thought that e-cigarettes may pose less harm than conventional cigarettes because they do not contain tobacco. However, significant differences in product designs and individual smoking patterns make it difficult to determine the potential level of nicotine toxicity in e-cigarettes.
The limited research to date does not differentiate between the many brands and models containing different e-liquids, batteries, heating elements, nicotine concentrations and flavourings. It also doesn’t differentiate between the chemical compositions of e-liquid and aerosols.6

There is also insufficient research examining significant public health issues such as:

- The chemicals used in them
- Their health effects on smokers or bystanders
- Their marketing as safe alternatives to tobacco products
- Their appearance making them attractive to non-smokers, including children.1

There are safety concerns from prolonged exposure if smokers inhale vapour many times a day for many months.

E-cigarettes contain chemicals that may be acceptable for use in foods and cosmetics but it is unclear if the vapours are safe when inhaled into the lungs.1 Some e-cigarettes contain propylene glycol and glycerol (purified vegetable glycerine) that are potentially toxic6 and may cause throat irritation.7 Some e-cigarette manufacturers now use distilled water and glycerine instead of propylene glycol vapour in an attempt to address such safety concerns.7

While e-cigarettes may spare bystanders from second-hand smoke that typically comes from traditional cigarette tips, known as the sidestream, the limited research into passive exposure to e-cigarette chemicals suggests pollutant levels are lower than normal cigarettes.1,6

E-cigarettes and the law

Currently, it is illegal to sell, use or possess electronic cigarettes that contain nicotine. The laws could change if the Therapeutic Goods Administration (TGA) approves individual e-cigarette brands in the future. In the meantime, it might be possible to import nicotine for use in an e-cigarette if people are able to comply with the Therapeutic Goods Personal Importation Scheme that, among other things, requires a medical prescription. Some doctors, however, might not be willing to prescribe a product that remains unapproved in Australia.1

Also, consumers should always double check with relevant government departments before ordering nicotine products online to see if there are any legal restrictions prohibiting the importation, or use, of nicotine products in their State or Territory.1

In most cases it is legal to sell electronic cigarettes that do not contain nicotine provided the products are not promoted with ‘therapeutic’ claims stating they can assist people to quit smoking tobacco cigarettes.1

As it is illegal to sell a product that resembles a tobacco product in South Australia and Western Australia, many e-cigarette brands are likely to fall in this category.1

Queensland and New South Wales, the only States with laws specifically targeting the sale and use of e-cigarettes, prohibit the sale of e-cigarettes to minors or displaying the products in retail stores. In Queensland, e-cigarettes are also banned in smoke-free places. The restrictions also extend to non-nicotine products and will also apply to any nicotine product approved by the TGA in the future.1

REFERENCES


NHMRC STATEMENT: ELECTRONIC CIGARETTES (E-CIGARETTES)

There is currently insufficient evidence to conclude whether e-cigarettes can benefit smokers in quitting, or about the extent of their potential harms, according to this CEO statement from the National Health and Medical Research Council.

SUMMARY

Electronic cigarettes (e-cigarettes, also known as electronic nicotine delivery systems (ENDS) or electronic non-nicotine delivery systems (ENNDS)) are often marketed as a method to assist smokers to quit, or as a ‘safe alternative’ to conventional tobacco cigarettes. However, there is currently insufficient evidence to support claims that e-cigarettes are safe and further research is needed to enable the long-term safety, quality and efficacy of e-cigarettes to be assessed.

KEY MESSAGES

- E-cigarettes may expose users to fewer toxic chemicals than conventional tobacco cigarettes; however the extent to which this reduces harm to the user has not been determined.
- E-cigarettes may expose users to chemicals and toxins such as formaldehyde, heavy metals, particulate matter and flavouring chemicals, at levels that have the potential to cause adverse health effects.
- There is currently insufficient evidence to conclude whether e-cigarettes can assist smokers to quit. Smokers wishing to quit should consult the Quitline or their general practitioner.
- There is some evidence from longitudinal studies to suggest that e-cigarette use in non-smokers is associated with future uptake of tobacco cigarette smoking.
- Health authorities and policymakers should act to minimise harm to users and bystanders, and to protect vulnerable groups such as young people, until evidence of safety, quality and efficacy can be produced.
- NHMRC is currently funding a number of studies into the safety and efficacy of e-cigarettes.
- Consumers should seek further information about e-cigarettes from reliable sources, such as the relevant State or Territory Health Department or quit smoking services.

E-cigarettes are battery-operated devices that heat a liquid (called ‘e-liquid’) to produce a vapour that users inhale. Although the composition of this liquid varies, it typically contains a range of chemicals, including solvents and flavouring agents, and may or may not contain nicotine. E-cigarettes have evolved as a product group since first entering the market, with products now ranging from early ‘first generation’ devices to resemble cigarettes, to second and third generation devices that enable users to modify characteristics of the device, such as adjusting the voltage.

This wide variation in products, and the ability of users to customise their vaping experience, makes it difficult to assess the safety and efficacy of e-cigarettes as a group, because the results from research involving one particular product may not be applicable to all e-cigarettes or all users. However, by examining the evidence to identify common findings across a range of different products, or results that are replicated in a number of studies, it is possible to gain some insight into the efficacy of e-cigarettes, their potential harms, and areas where further research is required.

NHMRC recognises the need for high-quality research in this area and is currently funding a number of studies investigating the effects of e-cigarettes.

The following information is provided to assist consumers and policy-makers in understanding the current evidence about the safety and...
HEALTH AND SAFETY

Potential health risks

It is widely believed that e-cigarettes are likely to be less harmful than tobacco cigarettes, because they expose users to fewer toxic chemicals. However, there is insufficient evidence to quantify the reduction in risk when e-cigarettes are used instead of tobacco cigarettes. Although a 2014 study reported that e-cigarettes are 95% less harmful than tobacco cigarettes, this finding was based on opinion rather than empirical evidence, and concerns have been raised about potential conflicts of interest. The World Health Organisation has stated that “no specific figure about how much ‘safer’ the use of these products is compared to smoking can be given any scientific credibility at this time.”

E-cigarettes are not likely to be risk-free, and may expose users to chemicals and toxins at levels that have the potential to cause health effects. These include solvents such as propylene glycol, glycerol or ethylene glycol, which may form toxic or cancer-causing compounds when vaporised. Although these chemicals are typically found in lower concentrations than in tobacco cigarettes, in some studies e-cigarettes and tobacco cigarettes were found to produce similar levels of formaldehyde, which is classified as a cancer-causing agent. E-cigarette liquids or vapour may also contain potentially harmful chemicals which are not present in smoke from tobacco cigarettes.

While some of the chemicals in e-liquid are also used in food production and are generally considered safe when eaten, this does not mean that these chemicals are safe when inhaled as a vapour directly into the lungs. A number of studies have reported harmful effects when certain flavourings that are approved for use in food production, including cherry, cinnamon and popcorn flavours, are inhaled. There is growing evidence to suggest that the long-term inhalation of flavourings used in most e-liquids is likely to pose a risk to health. 1

Studies also show that e-cigarettes expose both users and bystanders to particulate matter (very small particles) that may worsen existing illnesses or increase the risk of developing diseases such as cardiovascular or respiratory disease. The World Health Organisation has warned that exposure to any level of particulate matter may be harmful and that levels of exposure should be minimised.

E-cigarettes may also expose users to metals such as aluminium, arsenic, chromium, copper, lead, nickel and tin, with these elements having been detected in e-liquid and in the vapour produced during use. In some cases these metals have been detected at levels greater than, or similar to, those found in tobacco cigarettes.

Adverse events

Studies that have tested e-cigarettes for use as a smoking cessation tool found that users of e-cigarettes typically experience a low rate of adverse events in the short term, with mouth and throat irritation being the most commonly reported symptoms. However, more serious adverse events have also been reported, with over 200 incidents of e-cigarettes overheating, catching fire or exploding reported to date in the US and UK alone. In some cases, these events have resulted in life-threatening injury, permanent disfigurement or disability, and major property damage.

The rising popularity of e-cigarette use internationally has also corresponded with an increasing number of reported nicotine poisonings due to exposure to or ingestion of e-liquids. The effects of exposure range from relatively mild, including irritation of the eyes and skin, nausea and vomiting, to severe life-threatening illness, and in some cases, death.

Passive exposure

A recent systematic review of 16 studies concluded that e-cigarette vapour has the potential to pose a health risk to bystanders, although the risk is likely to be lower than that posed by conventional cigarette smoke. However, exposure to certain metals such as nickel and silver may be greater for e-cigarettes than tobacco cigarettes. A 2016 study found that the most common symptoms reported by those passively exposed to e-cigarettes included respiratory difficulties, eye irritation, headache, nausea and sore throat or throat irritation.

SMOKING CESSATION

Experts disagree about whether e-cigarettes may help smokers to quit, or whether they will become ‘dual users’ of both e-cigarettes and...
tobacco cigarettes. There is currently insufficient evidence to demonstrate that e-cigarettes are effective in assisting people to quit smoking and no brand of e-cigarette has been approved by the Therapeutic Goods Administration (TGA) for this purpose.

Although a 2016 systematic review conducted by the Cochrane Collaboration found some evidence that e-cigarettes with nicotine may assist smokers to quit, the review authors had a low level of confidence in these estimates and that further research is likely to change the estimate of effect. Smokers wishing to quit are advised to consult their general practitioner. First-line treatments include a range of TGA-approved nicotine replacement therapies and prescription medications that have been tested for safety and efficacy. Support and information are also available from the Quitline (13 78 48) or via the Quit Now website (www.quitnow.gov.au).

**E-CIGARETTES AND TOBACCO CONTROL POLICIES**

Concerns have been raised that the potential benefits of e-cigarettes in reducing harm to smokers may be outweighed by the risks that they may undermine tobacco control efforts. This includes the potential for e-cigarettes to provide a gateway to nicotine addiction or tobacco product use, or that they may re-normalise smoking. The appeal of flavoured e-cigarettes to children and adolescents is also of concern, with studies reporting rapid uptake of e-cigarettes among adolescents in many countries, where trend data are available. This provides some cause for concern given uncertainties about the long-term safety of e-cigarettes.

There is some evidence that e-cigarettes could act as a gateway into nicotine addiction or tobacco cigarette smoking. A number of longitudinal studies have reported an association between e-cigarette use in non-smokers and the uptake of tobacco cigarette smoking in the future. This association remained even when the studies controlled for other risk factors that might make people more likely to take up smoking.

In some studies, the effect of e-cigarettes on future smoking behaviour was greatest among those who were otherwise at low risk of taking up smoking. A number of studies have also reported an association between e-cigarette use in non-users and future use of marijuana or tobacco products such as hookahs, cigars or pipes.

In view of the above concerns, the World Health Organisation has recommended that policymakers act to prevent the initiation of e-cigarette use by non-smokers and youth, with special attention given to protecting vulnerable groups.

**MANUFACTURING QUALITY**

The manufacturing quality of e-cigarettes is highly variable, with a number of issues relating to quality control reported in the literature. Labelling of e-cigarettes and e-liquids has been found to be

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**Ban on e-cigarettes remains**

- **February 2017:** The Therapeutic Goods Administration rejected an application to exempt nicotine from the Schedule 7 dangerous poisons list, in a bid to reduce the harm caused by tobacco.
- **In an interim decision,** the TGA said the ban would remain, arguing that e-cigarettes could have a negative impact on tobacco control and may re-normalise smoking.
- The decision was viewed as disappointing by e-cigarette campaigners who advocate the devices as a safer alternative to tobacco.
- E-cigarette devices are legal in Australia but the sale and possession of the nicotine used in them is illegal.
- Dozens of academics and researchers had written to the regulator in support of the application by the New Nicotine Alliance, calling for the ban to be lifted.
- However, opponents argued ‘Big Tobacco’ would use the devices as another opportunity to get people hooked and normalise smoking again.
- The TGA claims the devices are associated with a risk of nicotine dependence, with United States evidence indicating it could encourage young people to take up smoking.

Source: SBS News/AAP (2 February 2017), Ban on nicotine e-cigarettes to remain.
incomplete or inaccurate. Products have been found to contain chemicals that were not listed on the label, or to state incorrectly that they did not contain potentially toxic chemicals, despite analyses confirming their presence.

There may also be wide variation between the levels of nicotine declared on packaging and the amount contained in e-liquid. One study that compared identical models of e-cigarettes found that nicotine content varied by up to 20% when the products came from different manufacturing batches, with variation of up to 12% reported for products manufactured in the same batch. Furthermore, some products that are labelled as nicotine-free have been found to contain nicotine.

WHERE CAN I GET MORE INFORMATION?

When seeking information about e-cigarettes online, it is important to look at websites that provide a reliable source of information, such as government websites or quit smoking services. Information on websites sponsored by retailers or manufacturers may reflect a commercial interest in promoting the sale of certain products.

Similarly, when reading published research on e-cigarettes it is important to consider whether the authors of the research held any conflicts of interest that could potentially bias their findings, or whether the research was funded by an organisation with a financial interest in the outcomes, such as e-cigarette manufacturers.

The following websites may provide further information of use to consumers:

Evidence-based reports

Information, fact sheets and FAQs from government departments


State and Territory Health Departments – Contact Details, www.health.gov.au/internet/main/publishing.nsf/Content/health-related.htm#state

Position statements


Twelve myths about e-cigarettes that failed to impress the TGA

It would be wonderful if e-cigarettes were finally a harm reduction holy grail. But there are many reasons to remain cautious, writes Simon Chapman

Australia’s Therapeutic Goods Administration (TGA) last week rejected an application to liberalise the scheduling of nicotine.

This prompted the predictable round of protests from proponents of e-cigarettes who have long touted them as the next public health wonder of the world, even as important as antibiotics.

But unlike antibiotics, which are heavily regulated, require a prescription, and must demonstrate both safety and efficacy to regulatory bodies, e-cigarettes and the liquids used in them are virtually unregulated.

Tobacco harm reduction has had a history of monumental failures. It started with the global multi-million dollar promotion of filters. One of these was the infamous asbestos-filtered ‘micronite filters’ in Kent cigarettes. More recently, we saw the now outlawed consumer deceptions of the light and mild cigarette fiasco. And on the way we even had ‘reduced carcinogen’ brands.

These were designed to keep people smoking and slow the mass exodus that began in the early 1960s. Millions did just that. Only quitting and the decreasing incidence of smoking (i.e. never starting) have dramatically decreased the tobacco disease epidemic.

It would be wonderful if e-cigarettes were finally a harm reduction holy grail. But there are many reasons to remain cautious.

Here I look at 12 mantras about e-cigarettes that seem to have failed to impress the TGA.

1. Vaping is ‘95% less harmful than smoking’

A hand-picked group of 12 produced this magic number when asked to rank the health risks of 12 nicotine delivery products, including cigarettes. Several of the group had no research record or expertise in tobacco control; some had histories of financial connections with manufacturers of e-cigarettes and tobacco companies. There were no toxicologists, cancer or cardiovascular specialists among the authors.

The “95%” number was uncritically repeated in a Public Health England report, which even described e-cigarettes as “around 95% safer [not less dangerous] than smoking” (my emphasis). Incredulous toxicologists have since pointed out “there is no evidence for the 95% estimate”.

Phillips may be unique in believing the number is closer to 1%. His supporters in the tobacco and vaping industries are probably very...
happy with the PR potential of that estimate.

2. Vaping is orders of magnitude less harmful than smoking

Because vapers don’t inhale smoke, with its toxic cocktail of carcinogens, irritants and carbon monoxide, this is almost certainly going to be the consensus when sufficient longitudinal data emerge, particularly when it comes to cancer.

However, the already mentioned “group of 12” has claimed that “The paucity of evidence for serious harm to users of e-cigarettes over the years since they were first marketed in 2006, with millions purchased, in itself is evidence” of vaping being all but benign.

Even perceptive vapers have seen through this nonsense. It took several decades for the full effects of smoking tobacco to emerge.

Worrying evidence about cardio-respiratory effects is already mounting. These highly respected researchers estimated the long-term effects of vaping may equate to 50% of the risk of cardio-respiratory harm that tobacco causes, what they call a “substantial” exposure.

Tobacco-caused cancers may well reduce in people who only vape. But cancer deaths represent only 37% of all tobacco deaths: cardio-respiratory deaths make up most of the rest.

3. Nicotine in vaping is benign

While some make facile comparisons of the risks of nicotine with drinking coffee, the International Agency for Research on Cancer recently noted “evidence has indicated the potential for nicotine to cause DNA damage” and “inhibit apoptosis, and stimulate cell proliferation and angiogenesis…”, declaring that evaluation of electronic cigarettes and nicotine is a “high priority”.

The recent US Surgeon General Report highlighted the adverse effects of nicotine on brain development in young people and in pregnancy. A recent study has further revealed previously unrecognised negative effects of nicotine, and vaping, on the heart.

4. Vaping has caused 6.1 million European smokers to quit

This factoid was megaphoned from a paper authored by a researcher with a history of funding from e-cigarette manufacturers. It was a secondary analysis of a cross-sectional survey since pilloried in the journal Addiction, where it was published. As any epidemiology student knows, causality can never be claimed from cross sectional studies. Among other criticisms, the critics asked:

How many of those who claim that they have stopped with the aid of e-cigarettes would have stopped anyway, and how many of those who used an e-cigarette but failed to stop would have stopped had they used another method.

They also noted the questions asked would have allowed those who quit for only a short period to say they had “stopped”.

Longitudinal studies with a minimum of 12 months follow-up of randomly selected cohorts have shown sobering results, a long way from the hype of vaping having the equivalent efficacy of antibiotics. One such follow-up reported:

Daily use of e-cigarettes while smoking appears to be associated with subsequent increases in rates of attempting to stop smoking and reducing smoking, but not with smoking cessation.

A companion paper reported daily use of tank-system (refillable) e-cigarettes were the only type of e-cigarette to show a significant improvement in smoking cessation. The very latest data from England show about half of daily e-cigarette users are also smoking and the rate at which English smokers have tried to stop is the lowest in 2016 (30.9%) than it has been since 2007 (42.5%) when the study began.

This raises important questions about whether e-cigarettes may be keeping many smokers smoking, while helping others to quit.

5. Just cutting back smoking (rather than quitting) significantly reduces risk

It’s obvious, surely, if you don’t quit but only cut down the amount you smoke, the reduced smoking is going to reduce the harm you are doing? Obvious that is, until you actually look at very large studies that have looked at the death rates
down the track in those who reduce but don’t quit.

First, two examples followed 479,156 men for 11 years and found no association between smoking reduction and all cancer risk but a significant decrease in risk of lung cancer, with the size of risk reduction “disproportionately smaller than expected”. Second, a study of 51,210 people followed from the 1970s until 2003 found no evidence smokers who cut down their daily cigarette consumption by more than 50% reduced their risk of premature death significantly.

Vaping advocate and *Addiction* editor Professor Robert West puts it succinctly:

*I think as far as using an e-cigarette to reduce your harm while continuing to smoke is concerned there really isn’t good evidence that it has any benefit.*

And as we saw earlier, a large proportion of people who vape, continue to smoke.

6. **Vape is just like water vapour and (often) nicotine**

But let’s not forget some 8,000 beguiling often kiddie-friendly flavours in e-juice that help the nicotine go down (with apologies to Mary Poppins) have mostly been approved as food additives but have never been approved for inhalation. Here’s what the US flavouring industry said:

*The manufacturers and marketers of ENDS [electronic nicotine delivery systems], and all other flavored tobacco products, and flavor manufacturers and marketers, should not represent or suggest that the flavor ingredients used in these products are safe because they have ... status for use in food because such statements are false and misleading.*

And then there’s the liquid propylene glycol in which the nicotine and flavour chemicals are vapourised. Dow Chemical, which manufactures it, says unambiguously, reflecting human data:

*... breathing spray mists of these materials should be avoided. In general, Dow does not support or recommend the use of Dow’s glycols in applications where breathing or human eye contact with the spray mists of these materials is likely ...*

Vapers average about 200 inhalations a day, with this study finding a range of 6 to 611 puffs. That’s an average 73,050 deep lung bastings a year, and right up to 223,168. Like cigarette smoke, vape mist contains fine, ultra-fine and nanoparticles, including metals and silicate. It is anything but just like inhaling steam in a shower.

Put simply, we have no data on what happens to people’s long-term respiratory or cardiovascular health when they pull these nanoparticles deep into their lungs daily, over many years, at the above rates.

7. **Nicotine-free cigarettes contain no nicotine**

E-cigarette advocates were excited about a recent study reporting many US teens did not vape for nicotine, but for the flavours. In NSW, it is illegal to sell vape liquid containing nicotine. But a NSW Health random check found many samples contained it. Other examples in the US, and elsewhere, of alleged “non-nicotine” refills turned out to contain nicotine exist, hence the headline “‘Nicotine-Free’ E-Cigs Still Deliver the Juice”.

The US Food and Drug Administration (FDA) summed up:

*Testing also suggested that quality control processes used to manufacture these products are inconsistent or non-existent.*

8. **Second-hand vape is harmless, so it should not be restricted**

I’d rather sit next to a vaper than a smoker. But those vape clouds we see and then don’t see don’t just vanish. They can be measured. This study of a vapers’ meeting where 59-86 people were vaping found counts of PM2.5 airborne particles (fine particulate matter,
2.5 micrometres or less in diameter) 125-330 times higher than in the same room when empty. This is higher than particle concentrations recorded in bars where cigarette or waterpipe smoking are allowed. That will likely explain the other real-world experiences reported by vapers like this.

If vaping were allowed in bars, restaurants and planes, we all would face behaviour like this scene. Try imagining workable regulatory wording that would allow “discreet” vaping by a few, but prohibited exuberant “clouding” by a group of vapers drinking in a bar.

If vaping emissions were really benign, indoor vaping advocates should take courage and call for it to be allowed in classrooms, crèches, hospitals and neonatal wards. The fact they don’t rather suggests they know well such a position would be irresponsible.

9. There’s no good evidence for e-cigarettes being a gateway to smoking in young people

In England, this appears to be the case. But in the USA, there’s a rapidly growing body of evidence suggesting a possible effect. Centers for Disease Control data from 2015 demonstrate a concerning sudden cessation and plateau in the previous decline of US high school students smoking tobacco, while e-cigarette use is skyrocketing.

Smoking was plummeting in young people in the USA and UK long before e-cigarettes appeared. Today, more young people in the US are using nicotine than ever, which may signal health and brain developmental problems down the track.

10. E-cigarette explosions are overrated

E-cigarette advocates point out other lithium battery-powered items like mobile phones and laptops have exploded, so we should all calm down about dramatic explosions.

However, vapers have noted explosions tend to take place, not just during re-charging, but during use, leading to mounting reports from hospitals of terrible burns and injuries.

When mobile phones explode, we see global recalls as happened with the Samsung Galaxy Note 7. The lack of regulatory standards for e-cigarettes and their components stands in stark contrast to these other products. I’m very pleased e-cigarettes are banned on airlines, but wonder about what would happen if one exploded in stowed luggage.

11. Big Tobacco really wants its smoking customers to switch to e-cigarettes

If this was true, how do we then explain the companies continue to do all they can to wreck effective tobacco control policies like plain packaging, graphic health warnings and significant tobacco tax hikes?

In Hong Kong in December 2016 British American Tobacco was still lobbying against graphic health warnings. And Philip Morris was threatening Uruguay over its advanced tobacco control policies, until it lost its case at the World Bank’s International Centre for Settlement of Investment Disputes in 2016.

Surely, if they were sincere here, they should be pleased governments are trying to get smokers to quit? Philip Morris has been running targeted advertising campaigns with major youth appeal. And new evidence collated from its own documents demonstrates its interest in e-cigarettes, as long ago as 1990, was only ever for them to be used as a complement to cigarettes.

Big Tobacco has heavily invested in e-cigarettes, with all major tobacco companies now having them in their portfolios. The big picture here is that Big Tobacco wants people to smoke and vape, not vape instead of smoking.

12. Leading public health agencies encourage ‘light touch’ regulation

This is mostly the case in England, but very much not the case in many other nations. Advocates constantly point to two e-cigarette “friendly” reports from the UK Royal College of Physicians and Public Health England, which had several common authors.

But 18 nations ban e-cigarettes outright, with more having various degrees of restrictions. Among leading agencies with strong concerns about e-cigarettes are the US Surgeon General, the World Health Organization, the FDA, 31 mostly major health agencies that petitioned the FDA to regulate e-cigarettes, Australia’s National Health and Medical Research Council and now the TGA.

E-cigarettes have been generating a huge wave of research interest over the past few years. The next decade promises to throw the light of much needed evidence on many of the issues above. In the meantime, the Australian TGA’s caution should be respected.

Simon Chapman is Emeritus Professor in Public Health, University of Sydney.

THE CONVERSATION

AUSTRALIA’S LOOMING E-CIGARETTE BAN ROBS SMOKERS OF A CHANCE TO QUIT

The effective ban on e-cigarettes in Australia forces people to access unregulated nicotine products to help them quit smoking, argues Dr Colin Mendelsohn

The Australian Therapeutic Goods Administration’s (TGA) recent interim decision to effectively ban nicotine-containing e-cigarettes is a harsh blow to smokers.

Australian smokers will be denied access to lifesaving technology estimated to have helped millions of smokers to quit overseas.

Those most affected will be from lower socioeconomic and disadvantaged groups, which have the highest smoking rates and are hardest hit by the cost of smoking.

Currently, nicotine-containing e-cigarettes are effectively prohibited in Australia. If the TGA’s interim decision is made final in March 2017, e-cigarette users (or vapers) in Australia will still not be able to buy or import nicotine for vaping without a prescription. Their only legal option would be to ask their doctor for a prescription, which doctors are generally reluctant to provide.

If the current ban remains, vapers will still be forced to source nicotine solutions (e-liquids) from an unregulated and illegal black market, placing them at even greater risk. Without regulation, the contents of nicotine refill bottles are a mystery, labels are inaccurate, childproof bottles are not mandated and there is no quality control or manufacturing standard.

Other users will buy large quantities of highly concentrated nicotine online and mix their e-liquid at home, with the risk of exposure to children and dosage errors.

Meanwhile, vapers who try to quit smoking are branded criminals. The fine for possessing nicotine for vaping in Queensland is up to A$9,108 and the government encourages the public to report any offenders. This fear will lead some vapers to return to smoking.

Out of step

The TGA’s decision also leaves Australia out of step with other similar countries. E-cigarettes with nicotine are legal and available, or are in the process of being legalised, in the United Kingdom, European Union, United States, Canada and New Zealand.
legalised, in the United Kingdom, European Union, United States, Canada and New Zealand.

Their approach to smoking cessation products is in sharp contrast to policy in Australia, which has missed the opportunity to welcome e-cigarettes as a harm reduction tool, and a safer alternative, for smokers. Meanwhile, the most lethal nicotine products, cigarettes, are freely available in Australia and do not need TGA approval.

In making its decision, the TGA focussed on unsubstantiated risks, for example, e-cigarettes will increase smoking in young people and re-normalise smoking in the community.

However, comprehensive independent reports have found no evidence for these claims. In fact, e-cigarettes may be diverting young people from smoking and helping smoking rates decline.

The TGA also says there is little evidence of the safety of long-term nicotine exposure via e-cigarettes. However, this ignores 50 years of experience with snus (moist, oral tobacco used in Sweden) and 30 years of nicotine replacement products.

The TGA also overlooks the huge potential public health gains from using e-cigarettes, or vaping. Based on overseas experience, vaping can save the lives of hundreds of thousands of Australian smokers, making the risk-benefit balance very favourable. Smoking kills up to two out of three Australian smokers prematurely. So, it seems reasonable to tolerate a small amount of risk and uncertainty when such devastating harm can be reduced.

**Same evidence, different conclusions**

How is it possible researchers and policymakers are using the same evidence to come to vastly differing conclusions?

The TGA assessment appears clouded by a long-standing commitment to prohibition. Many tobacco activists and policy makers have followed a total abstinence approach for decades. In their view, anything that looks like a cigarette, is used like a cigarette or delivers nicotine cannot possibly be a good thing.

Harm minimisation supporters takes a more pragmatic view and understand some people cannot quit smoking or nicotine. E-cigarettes are a safer alternative, providing smokers with the nicotine to which they are addicted and the “smoking ritual”, without the smoke, tar, carbon monoxide and other toxic chemicals that cause almost all the harm.

E-cigarettes are not completely safe. Nothing is. However, even the most ardent opponents admit e-cigarettes are substantially safer than smoking.

**Finding the regulatory sweetspot**

While there are still unknowns, the available evidence and risk-benefit balance support a role for e-cigarettes with nicotine to help smokers quit.

The ideal compromise is balanced, proportionate regulation of nicotine-containing e-cigarettes under the existing Australian Consumer Law with careful monitoring. This would allow and encourage smokers to switch to e-cigarettes by making products legally available and accessible. Such an approach would also allow responsible advertising to adult smokers and permit retail display to facilitate access and awareness. Vaping would also be approved in most public places.

Secondly, regulations should minimise any potential public health risks such as harm to children, for example by restricting sale to under 18-year-olds, mandating child resistant containers for nicotine liquid refills, restricting use in some confined spaces such as in cars with children under 16 years, and setting quality and safety standards.

According to the UK Royal College of Physicians: ‘... It is important to promote the use of e-cigarettes ... as widely as possible as a substitute for smoking.

Australia cannot afford to wait any longer.

Colin Mendelsohn is Associate Professor, UNSW.

Colin Mendelsohn is a full-time Tobacco Treatment Specialist. He is conjoint Associate Professor in the School of Public Health and Community Medicine at the University of New South Wales. He also teaches in the Nicotine Dependence and Smoking Cessation course at the University of Sydney and conducts training for health professionals around Australia.
Tobacco smoking and e-cigarettes

A position statement from the Australian Medical Association

1. The Australian Medical Association (AMA) recognises that tobacco is unique among consumer products in that it causes disease and premature death when used exactly as intended. There is no safe level of tobacco smoking.

2. The AMA believes that medical practitioners have a responsibility to encourage all smokers to quit smoking. Medical practitioners share a responsibility to advise their patients on the well-established risks associated with smoking, to assist patients in their attempts to quit smoking, and to co-operate with community education programs that aim to discourage smoking.

3. The AMA acknowledges that the highly addictive quality of nicotine makes it difficult for smokers to quit. For this reason, smokers must be encouraged and supported to give up smoking at every opportunity. Workplaces can play an important role in this regard. Pharmaceuticals that assist in quitting smoking, such as medications and nicotine replacement therapy, should be affordable and less expensive than cigarettes.

4. The AMA supports more targeted research into methods of smoking cessation. This is a particular priority for population groups who bear a greater burden of smoking and smoking-related disease, such as Aboriginal and Torres Strait Islander people, people with mental illness and those from lower socio-economic backgrounds.

5. The AMA believes it inappropriate for political parties to accept sponsorship from tobacco companies and calls upon all parties to refuse to enter into arrangements that clearly compromise government health policy.

6. The AMA supports efforts from medical organisations and anti-smoking organisations in approaching the Federal Government regarding a class action against tobacco companies on smoking-related diseases.

7. The AMA calls on all governments to make repeated real increases in the rate of tobacco taxation and to set aside the resulting revenue into health promotion activities.

8. The AMA recognises the risk associated with exposure to second-hand smoke, particularly among infants and young children who may be unable to avoid exposure. For this reason the AMA is supportive of measures that seek to reduce children’s exposure to second-hand smoke in confined spaces, including the home and in motor vehicles.

9. The AMA believes that product placement in television programs and movies should be acknowledged at the beginning of the program through a dedicated classification symbol that alerts viewers to the depiction of smoking during the broadcast. A warning message should also be aired to alert viewers to depictions of smoking, in the same way as viewers are alerted to other sensitive content such as drug use, violence and coarse language. The AMA also supports counter advertising to reduce the impact of smoking portrayals, particularly among young people.

10. The AMA believes that smoking by teachers, staff, pupils and visitors on, or in the immediate vicinity of, school premises should be banned because of the influence of such behaviour on the early development of smoking habits in children as well as the risk of second-hand smoke exposure.

11. The AMA believes that medical practitioners and other health professionals should not smoke in public when they are identifiable in their occupational role.

12. The AMA believes that all forms of public promotion and marketing of tobacco products should be banned. Tobacco products should not be promoted at the point of sale. Internal promotion by those in the tobacco trade should be strictly proscribed. Where it is required, it should be limited to the provision of information about price, availability and characteristics.

13. The AMA is committed to precluding minors from obtaining cigarettes. Any initiative that helps to increase the age at which people first experiment with tobacco products is likely to have an effect on the overall burden of smoking-related diseases in our community. Governments and police forces have a responsibility to enforce the law regarding the sale of tobacco products to minors. These efforts are enhanced though measures such as Controlled Purchasing Operations.

14. The AMA asserts that passive or environmental tobacco smoke is harmful to health. Smoking should be prohibited in all public areas without exception, including all workplaces, restaurants, gambling venues and public transport. All workers are entitled to a smoke-free workplace.

15. The AMA has significant concerns about e-cigarettes. E-cigarettes and the related products should only be available to those people aged 18 years and over and the marketing and advertising of e-cigarettes should be subject to the same restrictions as cigarettes. E-cigarettes must not be marketed as cessation aids as such claims are not supported by evidence at this time.

E-CIGS: A HELP OR A HARM?

In December 2015, the AMA issued a Position Statement on Tobacco Smoking and E-cigarettes in which it called for nationally consistent controls on the marketing and advertising of e-cigarettes, including a ban on sales to children. The AMA has raised concerns that e-cigarettes are appealing to young people, undermining tobacco control efforts, and says there is no evidence to support their use as an aid to quitting smoking. Below, AMA member Dr Colin Mendelsohn, a tobacco treatment specialist, raises objections to the AMA’s current position on e-cigarettes, and the AMA responds (see box).

Is the AMA statement on e-cigarettes consistent with evidence?

By Dr Colin Mendelsohn, tobacco treatment specialist, The Sydney Clinic*

The recent AMA statement on smoking takes a very negative position on electronic cigarettes (e-cigarettes). While there is still much to learn about e-cigarettes, there is growing evidence to support their effectiveness and safety for smoking cessation and harm reduction. Many experts feel that e-cigarettes are a potentially game-changing technology and could save millions of lives.¹

The AMA position statement does not reflect the current evidence in a number of areas. For example, there is currently no evidence for the AMA’s statement that ‘young people using e-cigarettes progress to tobacco smoking’ (the gateway effect). In the UK for example, regular use of e-cigarettes by children is rare and is confined almost entirely to current or past smokers.² Research in the US has found that increased access to e-cigarettes is associated with lower combustible cigarette use, rather than the opposite being true.³

Understandable concerns are raised that increasing the visibility of a behaviour that resembles smoking may ‘normalise’ smoking and lead to higher rates of tobacco use. However, since e-cigarettes have been available, smoking rates have continued to fall. In the US, daily smoking by adolescents has dropped to a historic low of 3.2%. Adult smoking rates in the US and UK are also at record lows.

A recent independent review of the evidence commissioned by the UK Public Health agency, Public Health England (PHE), concluded that e-cigarettes are around 95% less harmful than smoking.⁴ This assessment includes an estimate for unknown long-term risks, based on the toxicological, chemical and clinical studies so far. Any risk from e-cigarettes must be compared to the risk from combustible tobacco, which is still the largest preventable cause of death and illness in Australia.

Three meta-analyses and a systematic review⁵-⁸ suggest that e-cigarettes are effective for smoking cessation and reduction. The evidence indicates that using an e-cigarette in a quit attempt increases the probability of success on average by approximately 50% compared with using no aid or nicotine replacement therapy (NRT) purchased over-the-counter.

Most of the research to date has used now-obsolete models with low nicotine delivery. Newer devices deliver nicotine more effectively and have higher quit rates.

In the UK, e-cigarettes are now the most popular quitting method and are used in 40% of quit attempts.⁹ In the UK alone there are currently over one million smokers who have quit smoking and are using e-cigarettes instead, with considerable health benefit.¹⁰ It has been estimated that each year in England many thousands of smokers quit using e-cigarettes and would not otherwise have quit if e-cigarettes had not been available.¹¹

Many organisations disagree with the AMA’s view that ‘currently there is no medical reason to start using an e-cigarette’. The Australian Association of Smoking Cessation Professionals, Public Health England and the UK National Centre for Smoking Cessation and Training recommend e-cigarettes as a second-line intervention for smokers who are unable or unwilling to quit smoking using approved first-line therapies. In the healthcare setting there is...
Smoking and Tobacco Control

empirical evidence that combining e-cigarettes with counselling and other pharmacotherapies such as varenicline and NRT can improve outcomes further.12

The regulatory agency in the UK (MHRA) recently licensed an e-cigarette which will be available on the National Health Service in 2016. It can be prescribed by doctors to help smokers quit and will be provided free.

In Australia, we need to have an evidence-based debate on the potential benefits and risks of e-cigarettes. Careful, proportionate regulation of e-cigarettes could give Australian smokers access to the benefits of vaping while minimising potential risks to public health. The popularity and widespread uptake of e-cigarettes creates the potential for large-scale improvements in public health.

The AMA has made a major contribution to reducing smoking rates in the past. It is well placed to take a leadership role in this debate to ensure that the potential benefits from e-cigarettes are realised.

* Dr Colin Mendelsohn has received payments for teaching, consulting and conference expenses from Pfizer Australia, GlaxoSmithKline Australia and Johnson and Johnson Pacific. He declares to have no commercial or other relationship with any tobacco or electronic cigarette companies.

**REFERENCES**


Clarification on the AMA’s position

The recently updated AMA Position Statement Tobacco Smoking and E-Cigarettes – 2015 states:

that the AMA has significant concerns about e-cigarettes. E-Cigarettes and the related products should only be available to those people aged 18 years and over and the marketing and advertising of e-cigarettes should be subject to the same restrictions as cigarettes. E-cigarettes must not be marketed as cessation aids, as such claims are not supported by evidence.

As noted in the background to the Position Statement, the evidence supporting the role of e-cigarettes as cessation aids is mixed and low-level. The stance taken by the AMA on e-cigarettes is consistent with that of the World Health Organisation, Cancer Council Australia, the National Heart Foundation, the National Health and Medical Research Council (NHMRC) and the Therapeutic Goods Administration (TGA) – the latter two organisations being the key decision makers on whether or not e-cigarettes have a role in smoking cessation in Australia.

It is worth noting that a number of smoking cessation aids, backed by evidence, are already available through the Pharmaceutical Benefits Scheme. The assertion that there is no evidence that e-cigarettes are a potential gateway for young people to progress to tobacco smoking is incorrect.

The AMA’s Position Statement refers to international research1 showing that some young people who use e-cigarettes do in fact progress to tobacco smoking. Given the risk, the AMA supports a precautionary approach for children and young people.

E-cigarettes will continue to be topical. Research is being published regularly and the AMA will continue to monitor the issue.


NOTES

**Tobacco control: key facts and figures**

The latest tobacco control data compiled by the **Department of Health**

Tobacco remains the leading cause of preventable death and disability in Australia, with smoking estimated to kill almost 19,000 Australians a year.\(^1\)

In 2004-05, the social and economic costs of smoking (including health costs) to Australian society were estimated to be approximately $31.5 billion each year.\(^2\)

Over the last twenty years Australian Governments have implemented a broad range of tobacco control measures including:

- Staged excise increases on tobacco products
- Education programs
- National tobacco campaigns
- Plain packaging of tobacco products
- Labelling tobacco products with updated and larger graphic health warnings
- Prohibiting tobacco advertising, promotion and sponsorship, and
- Providing support for smokers to quit, including through nicotine replacement therapies on the Pharmaceutical Benefits Scheme.

**Council of Australian Governments (COAG) tobacco performance benchmark**

The COAG performance benchmark for tobacco uses the results from the National Health Survey (NHS) to monitor changes in smoking prevalence in the general population using age standardised rates.

Under the COAG National Healthcare Agreement\(^6\) by 2018, Australian governments have committed to:

- Reducing the daily national smoking rate among Australian adults (aged 18 years or older) from 19.1% (age-standardised) in 2007-08 to 10%, and
- Halving the daily national smoking rate among Aboriginal and Torres Strait Islander adults (aged 18 years or older) from 47.7%\(^4\) (44.8% age-standardised) in the same period.

**Tobacco sales**

In March 2017, the Australian Bureau of Statistics (ABS) released figures that show the total consumption of tobacco and cigarettes, as measured by estimated expenditure on tobacco products to be:

- $7.174 billion in September 1959
- $4.712 billion in December 2012, and
- $3.415 billion in March 2017.\(^5\)

Tobacco clearances data (including excise and customs duty) are an indicator of tobacco volumes in the Australian market, and provide a useful approximation of tobacco consumption over time.

Treasury has advised that tobacco clearances fell by 3.4% in the 2013 calendar year relative to the 2012 calendar year, and fell by a further 7.9% in 2014, 3.5% in 2015 and 2.8% in 2016. As at the end of 2016, tobacco clearances had fallen a total of 16.5% since 2012.

These tobacco clearance rates do not take into account refunds of excise equivalent customs duty made under Customs’ plain packaging related Tobacco Refund Scheme between December 2012 and May 2013. These refunds cannot be related to annual net clearances on a comparable basis to other data used to derive tobacco clearance rates.

**Tobacco excise**

Increasing tobacco prices, through taxation, is one of the most effective measures to reduce smoking. In April 2010, Australia introduced a 25% increase in the tobacco excise and excise-equivalent customs duty.

The Government began implementing staged annual 12.5% tobacco excise increases and excise-equivalent...
In addition, Australia is the only country in the world to index tobacco excise to wage inflation average weekly ordinary time earnings (AWOTE) to ensure that tobacco products do not become relatively more affordable over time.

These increases are expected to bring the percentage of excise tax in the retail price of cigarettes in Australia much closer to the World Health Organization (WHO) recommended benchmark of 70%. Whilst the Government has been active in raising the excise on tobacco products, the tobacco industry routinely increases its prices, which affects the Government’s ability to maintain this ratio.

As of 1 March 2017, the tobacco excise applied to five leading brands of manufactured cigarettes ranged from 52% to 60% of the total recommended retail price of these products, with total taxes (tobacco excise plus GST) ranging from 61% to 69% of the recommended total retail price.

The tobacco excise applied to four leading brands of roll-your-own tobacco ranged from 60% to 62% of the total recommended retail price of these products, with total taxes ranging from 70% to 72% of the total recommended retail price.

As part of the 2017-18 Federal Budget, ‘roll-your-own’ and other tobacco products such as cigars will be subject to the same tax treatment as manufactured cigarettes. It is intended that this measure will ensure fairness and efficiency in tobacco taxes by bringing the taxation of roll-your-own tobacco products in line with manufactured cigarettes.

Duty free tobacco allowance

As part of Health initiatives announced in the 2016-17 Federal Budget, the Australian Government is reducing the allowable amount of duty free tobacco for travellers arriving in Australia.

From 1 July 2017, travellers aged 18 years and over entering Australia can only bring 25 grams of duty free tobacco, plus one open packet. The tobacco can be in any form (cigarette, loose leaf and so on) and is equivalent to approximately 25 cigarettes. If you have more than this amount, you will be required to pay duty on all tobacco in your possession, unless you agree to dispose of the excess.

Please ensure you are familiar with duty free limits when travelling to Australia. For more information on duty free limits, as well as what you can and cannot bring to Australia visit the Duty free concession page on the Department of Immigration and Boarder Protection website.

Smoking prevalence rates

The Government relies on a number of sources to monitor smoking prevalence rates, including data from national surveys conducted by the Australian Bureau of Statistics (ABS), the Australian Institute of Health and Welfare (AIHW), and tobacco information collected nationally from secondary school students by the Cancer Council Victoria (CCV).

**National Health Survey: First Results, 2014-15**

On 8 December 2015, the ABS released the National Health Survey: First Results 2014-15. The survey was conducted nationally, across urban, rural and remote areas (other than very remote areas) from July 2014 to June 2015. Around 19,000 people in nearly 15,000 private dwellings undertook the survey. The report shows that in 2014-15:

- 14.5% (14.7% (age-standardised)) of adults aged 18 years and over smoked daily (approximately 2.6 million smokers), decreasing from 16.1% (16.3% age-standardised) in 2011-2012 and 22.4% (22.3% age-standardised) in 2001,11,12,13 and
- 16.0% of males and 12.1% of women smoked daily, decreasing from 18.3% and 14.1% respectively in 2014–15.

**TABLE 1: DECREASE IN THE DAILY SMOKING RATE FOR 18 YEARS AND OVER**

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>22.3%</td>
<td>21.3%</td>
<td>19.1%</td>
<td>16.3%</td>
<td>14.7%</td>
<td></td>
</tr>
</tbody>
</table>


**National Drug Strategy Household Survey 2016 key findings**

On 1 June 2017, the AIHW released the 2016 National Drug Strategy Household Survey key findings. The survey was conducted from 18 June to 29 November 2016, with nearly 24,000 people nationally. The report shows that:

- Daily smoking rates among people aged 14 years or older slowed in 2016, only declining slightly from 12.8% in 2013 to 12.2% (not statistically significant)

**TABLE 2: DECREASE IN AUSTRALIAN SMOKING PREVALENCE 1993 TO 2013**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>14+ yrs</td>
<td>25.0</td>
<td>23.8</td>
<td>21.8</td>
<td>19.4</td>
<td>17.5</td>
<td>16.6</td>
<td>15.1</td>
<td>12.8*</td>
<td>12.2</td>
</tr>
<tr>
<td>18+ yrs</td>
<td>26.1*</td>
<td>25.0</td>
<td>22.7</td>
<td>20.0</td>
<td>18.2</td>
<td>17.5</td>
<td>15.9</td>
<td>13.3*</td>
<td>12.8</td>
</tr>
</tbody>
</table>

*Age group 20+ for 1993.

# Statistically significant change between 2010 and 2013.

**NOTE:** Comparisons between the AIHW (NDSHS) and the ABS data cannot be made as they use different methodologies.
Across all age groups, males were more likely to smoke daily than females; 13.8% of males aged 14 years or older smoked compared with 10.7% for females.

Fewer teenagers smoked, the proportion who had never smoked more than 100 cigarettes significantly increased between 2013 and 2016, from 95% to 98%.

Younger people delayed the take-up of smoking, the average age at which 14 to 24 year olds smoked their first full cigarette increased from 14.2 years in 1995 to 16.3 years in 2016, significantly increasing from 15.9 years in 2013.

The average number of cigarettes smoked per week slightly reduced between 2013 (96 cigarettes) and in 2016 (94 cigarettes).

Roll-your-own cigarettes noticeably increased among smokers aged under 40 years, increasing by 82% for young adults and 70% for smokers in their 30s between 2007 and 2016.

Between 2013 and 2016, there was a significant increase in the proportion of smokers in their 30s smoking roll-your-own cigarettes, from 29% to 37%, respectively, and.

In 2016, young adults (50%) were the age group most likely to smoke roll-your-own cigarettes, use of roll-your-own cigarettes then declined as age increased.

### 2014-15 National Aboriginal and Torres Strait Islander Social Survey

On 28 April 2016, the ABS released the 2014-15 National Aboriginal and Torres Strait Islander Social Survey. The survey was conducted from September 2014 to June 2015 with a sample of 11,178 Aboriginal and Torres Strait Islander people living in private dwellings across Australia. The report shows that in 2014-15:

- The proportion of Aboriginal and Torres Strait Islander people daily smokers aged 15 years and over was 39% in 2014-15, down from 45% in 2008 and 49% in 2002.
- In 2002, 51% of Aboriginal and Torres Strait Islander males aged 15 years and over were daily smokers, the daily rate declined to 46% in 2008 and to 41% in 2014-15.
- In 2002, 47% of Aboriginal and Torres Strait Islander females aged 15 years and over were daily smokers, the daily rate declined to 43% in 2008 and to 36% in 2014-15.
Australia’s low smoking rate is the result of sustained, concerted and comprehensive public policy efforts from all levels of government and action from public health organisations.

- Fewer young people are starting to smoke with a significant decrease in daily smoking rates of those aged 15-24, down to 31% in 2014-15 from 39% in 2008, and
- The data indicates that the majority of the change in daily smoking rates has occurred in non-remote areas. In 2014-15, 47% of people aged 15 years and over in remote areas smoked daily (down from 50% in 2002) compared with 37% in non-remote locations (down from 48% in 2002).

**Australian secondary school students’ use of tobacco in 2014**

On 24 November 2015, the Cancer Council Victoria released the 2014 Australian secondary school students’ use of tobacco report.18

Over 23,000 secondary students aged between 12 and 17 years participated in the survey during June to December of the 2014 academic school year. The survey found that smoking among 12 to 15 years old is at its lowest level since 1984, when the survey began. Other key findings from the report were:

- Youth smoking (12 to 17 years old) significantly decreased and in 2014, 5% were current smokers which were significantly lower than the 7% found in both 2011 and 2008, and
- More youth have no experience with smoking in their lifetime: 94% of 12 year olds and 61% of 17 year olds.

**Specific population groups**

**Remoteness**
- People aged 14 years or older, living in remote and very remote areas, were twice as likely to have smoked daily in the previous 12 months as those in major cities: 22% compared with 11.0%
- The proportion of people aged 14 years or older smoking daily rose with increasing remoteness: 11.0% in major cities; 15.4% in inner regional; 19.4% in outer regional; and 22% in remote and very remote areas.

**Socioeconomic and employment status**
- People aged 14 years or older living in areas with the lowest socioeconomic status (SES) were three times more likely to smoke daily than people with the highest SES, 19.9% compared with 6.7%, but there were significant declines in daily smoking in both these groups between 2010 and 2013
- The declines in daily smoking seen nationally were also seen among employed people but there were no significant changes in the smoking behaviour
of unemployed people who were unable to work between 2010 and 2013.

- People aged 14 years or older, who were unemployed, were 1.7 times more likely to smoke daily and those who were unable to work were 2.4 times more likely to smoke daily.
- Compared to 2010, employed people aged 14 years or older were less likely to smoke daily in 2013, down from 16.1% to 13.5% respectively.

ENDNOTES


3. COAG National Healthcare Agreement.

4. Rate from ABS, 2008 National Aboriginal and Torres Strait Islander Social Survey, used as a baseline figure by the COAG Reform Council.


6. These estimates are subject to a number of limitations, particularly if used in isolation to monitor Australia’s progress in reducing the affordability of tobacco products. They do not necessarily reflect the variable price of a particular tobacco product paid by a consumer at the retail level.

7. Estimates based on market share (volume) data as at 2015 from Euromonitor International.

8. Estimates based on recommended retail price list of Winfield 25s, Longbeach 30s, Horizon 30s JPS 26s and Peter Jackson 25s.

9. Estimates based on the recommended retail price list for 50g packs of Champion Ruby, Winfield, Drum and White Ox.


11. These figures are reported as age-standardised rates, which are used to measure progress against the COAG benchmark for tobacco.

12. Findings from the 2013 NDSHS show that in Australia daily smokers aged 14 years and over declined from 24.3% in 1991 to 12.8% in 2013.

13. As the NHS and NDSHS are different surveys and have been conducted at different points in time, it is not appropriate to directly compare specific results from the two surveys.

However, when looking at trends over the last two decades, findings from both surveys clearly show a marked decline in daily smoking prevalence in the general population.


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**TABLE 3: COMPARISON OF 2010 AND 2013 STATE AND TERRITORY TOBACCO SMOKING STATUS, PEOPLE AGED 14 YEARS OR OLDER, BY SEX AND JURISDICTION (AGE-STANDARDISED)**

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
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<th></th>
<th></th>
<th>2013</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>NSW</td>
<td>Vic</td>
<td>QLD</td>
<td>WA</td>
<td>SA</td>
<td>Tas</td>
<td>ACT</td>
<td>NT</td>
<td>NSW</td>
<td>Vic</td>
<td>QLD</td>
<td>WA</td>
<td>SA</td>
<td>Tas</td>
<td>ACT</td>
<td>NT</td>
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<tr>
<td>Males</td>
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<td></td>
<td>15.6</td>
<td>15.0</td>
<td>18.4</td>
<td>17.5</td>
<td>17.1</td>
<td>16.1</td>
<td>12.0</td>
<td>27.5</td>
<td>13.3</td>
<td>14.0</td>
<td>17.0</td>
<td>15.7</td>
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<td>19.8</td>
<td>9.6</td>
<td>23.6</td>
<td>14.6</td>
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<tr>
<td>Females</td>
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<td></td>
<td>12.9</td>
<td>14.7</td>
<td>15.0</td>
<td>13.6</td>
<td>13.1</td>
<td>15.8</td>
<td>10.1</td>
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<td>10.3</td>
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<td>8.9</td>
<td>13.0</td>
<td>13.1</td>
<td>9.7</td>
<td>17.6</td>
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<td></td>
<td>14.2</td>
<td>14.9</td>
<td>16.7</td>
<td>15.6</td>
<td>15.0</td>
<td>15.9</td>
<td>11.0</td>
<td>22.3</td>
<td>11.8</td>
<td>12.3*</td>
<td>15.2</td>
<td>12.3*</td>
<td>13.0</td>
<td>16.5</td>
<td>9.7</td>
<td>20.8</td>
<td>12.9*</td>
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</tbody>
</table>

# Statistically significant change between 2010 and 2013.
Tobacco control: effective interventions
An extract from the National Cancer Control Policy of Cancer Council Australia

Australia has a strong record of tobacco control and has implemented a number of successful interventions for reducing tobacco use. The success of Australian tobacco control policy is reflected in the declining rates of smoking. Despite this, more than one in six Australian adults smoke daily, accounting for 2.8 million people in 2011-2012.

This section focuses on interventions for which there is evidence of a positive effect on smoking initiation, quitting and prevalence, and for which there remain opportunities for improving tobacco control in Australia.

OVERARCHING FRAMEWORKS
Effectively reducing the burden of smoking-related cancer in Australia requires a coordinated, multi-strategy approach with intervention and funding from all levels and sectors of government, as well as non-government, community and health organisations.

A number of policy frameworks exist in Australia to address this, including the Council of Australian Government Agreements for Healthcare, Preventive Health and Closing the Gap in Indigenous Health Outcomes. These agreements are designed to facilitate Federal and State and Territory Government cooperation.

The National Tobacco Strategy 2012-2018 is a policy framework designed to provide a platform for government at all levels to work with non-government, community and health organisations.

See the ‘Policy context section’ of this chapter for more on the current policy environment in Australia.

TAXATION
Tax increases have been one of the most effective tobacco control strategies in Australia and globally. With increases in taxes on tobacco products, the size of the resulting price increase leads to a proportional fall in demand.

Tobacco taxation, including federal excise, customs duty and state franchise fees has been a central tobacco control strategy in Australia. In Australia, excise, customs duty and GST make up around 60% of the final price of leading brands of cigarettes.

The Australian Government has regularly indexed tobacco excise by the Consumer Price Index. However, from 2014 onwards, tobacco excise is to be indexed on the basis of changes in Average Weekly Earnings.

In April 2010, a 25% tax increase on tobacco products was introduced. In 2013, the Government announced it would introduce staged 12.5% increases in tobacco excise over four years from 2013-2016, in addition to the increases that will occur under indexation arrangements. The first two 12.5% increases commenced on 1 December 2013 and 1 September 2014, and the remaining 12.5% increases will occur on 1 September 2015 and 1 September 2016, respectively.

Analysis by Federal Treasury found that the 2010 tobacco tax increase in Australia exceeded the set objective of a 6% decrease in tobacco consumption, with a decline of 11% two years after implementation. There was insufficient data to determine whether the increase met the objective of decreasing the number of smokers by 2-3%. The analysis concluded that the excise increase supported other policy, price and taxation measures aimed at reducing the harms of tobacco consumption in Australia.

The two main reasons smokers in Australia cited for changing their smoking behaviour in 2010 were because smoking was affecting their health (44.3%) and because it was costing too much money (44.1%). The proportion of people nominating cost as a factor increased significantly from 35.8% in 2007 to 44.1% in 2010 when the tax increase was introduced.

The 2010 tax increase saw increased numbers of people attempting to quit, and decreases in the number of cigarettes smoked by...
The effect was strongest in younger smokers and people in the lowest socioeconomic tier. Directly following the tax increase (May 2010), one study reported 22% of the study sample quit smoking, compared with 12% at the same time in the previous year and 13% in the previous month. This increased number of people quitting was evident for a short time, however this was not sustained further than three months following the tax increase.

MASS MEDIA CAMPAIGNS

Mass media campaigns, including social marketing, can have a significant impact on reducing tobacco use. Mass media campaigns play a role through education, changing attitudes, prompting quit attempts and decreasing smoking prevalence. They have a direct impact on smokers by prompting quit attempts and avoidance of smoking, and also have an indirect effect by de-normalising smoking in society.

Television campaigns remain the primary mass media channel for reaching and influencing adult smokers. Developing sustained mass media campaigns, such as repeated cycles of advertising, are the most effective medium for reducing the burden of tobacco-related cancer. There is evidence that while mass media campaigns are effective at increasing quit attempts, the impact does not last beyond a few months of the campaign ending. Adequate campaign intensity is especially important for vulnerable population subgroups.

Mass media campaigns are highly cost-effective, as they have high reach into populations. The savings from averted health care costs associated with tobacco control mass media campaigns exceed campaign costs. Mass media campaigns are a particularly effective component of comprehensive tobacco control strategies. Their effectiveness is maximised when coordinated with other tobacco control programs to reinforce the messaging and promote awareness. Mass media campaigns and pictorial health warnings running concurrently may have a complementary effect on increasing awareness of the harms of smoking and motivation to quit.

ELIMINATING TOBACCO ADVERTISING, PROMOTION AND SPONSORSHIP

While many avenues of tobacco advertising, promotion and sponsorship have been restricted, there still remain avenues by which tobacco companies seek to promote their products. The rise of new media and lack of relevant regulations have created an environment in which tobacco control is hampered by the tobacco industry denormalising public health strategies and policies.

Eliminating remaining forms of promotion such as internet advertising, price specials, public relations activities, incentive programs and exemptions to point-of-sale display restrictions is an obligation under the World Health Organization Framework Convention on Tobacco Control. The role of tobacco advertising remains important particularly in smoking initiation. A recent meta-analysis demonstrated that non-smoking adolescents who were more aware of tobacco advertising were more likely to experiment with cigarettes and to become smokers.

Enforcing plain packaging laws, which commenced in Australia on 1 December 2012, is an important strategy to reduce young people’s exposure to tobacco promotion. In an environment where the majority of advertising streams for tobacco products are blocked, product packaging is an important marketing tool.

### TABLE 1 OVERVIEW OF STATE LEVEL SMOKE-FREE ENVIRONMENT REGULATIONS

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>Enclosed public places*</th>
<th>Outdoor eating/drinking areas</th>
<th>In cars (children present)</th>
<th>Outdoor public venues</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>Banned</td>
<td>Banned (exception for designated areas)</td>
<td>Banned</td>
<td></td>
</tr>
<tr>
<td>NSW</td>
<td>Banned</td>
<td>Banned</td>
<td>Banned</td>
<td>Dependent on local council jurisdiction.</td>
</tr>
<tr>
<td>NT</td>
<td>Banned</td>
<td>Banned</td>
<td>Banned</td>
<td>Banned</td>
</tr>
<tr>
<td>QLD</td>
<td>Banned</td>
<td>Banned (exception for designated areas)</td>
<td>Banned</td>
<td>Banned in stadiums, children’s playgrounds, patrolled beaches. Additions dependent on local council jurisdiction.</td>
</tr>
<tr>
<td>SA</td>
<td>Banned</td>
<td>Banned</td>
<td>Banned</td>
<td>Banned in children’s playgrounds, public transport stations.</td>
</tr>
<tr>
<td>Tas</td>
<td>Banned</td>
<td>Banned</td>
<td>Banned</td>
<td>Banned in sporting and cultural venues, beaches and children’s playgrounds.</td>
</tr>
<tr>
<td>Vic</td>
<td>Banned</td>
<td>Banned</td>
<td>Banned</td>
<td>Banned in public transport stations. Additions dependent on local council jurisdiction.</td>
</tr>
<tr>
<td>WA</td>
<td>Banned</td>
<td>Banned</td>
<td>Banned</td>
<td>Banned at beaches and children’s playgrounds.</td>
</tr>
</tbody>
</table>

* Includes public transport

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Early indications suggest that plain packaging of tobacco products is associated with lower smoking appeal and higher urgency to quit among adult smokers. Smokers using plain packs are 81% more likely to have thought about quitting at least once a day during the previous week, and to rate quitting as a higher priority compared with those using branded packs. Smokers using plain packs were 66% more likely to think their cigarettes were poorer quality than a year ago and 70% more likely to say they found them less satisfying.

See the Quit Victoria and Cancer Council Victoria ‘Plain packaging review of evidence’ for more information.

**SMOKE-FREE ENVIRONMENTS**

Policies that create smoke-free environments are effective at reducing tobacco-related illness on a number of levels. Smoke-free environments protect individuals from second-hand smoke exposure, denormalise smoking behaviour, help prevent smoking experimentation and uptake among youth, and provide an environment that helps promote quit attempts.

The creation of smoke-free environments has had a net benefit to businesses, with no adverse effect on sales in hospitality industry.

Flow-on effect of smoke-free policies is an increasing number of smoke free homes, which has an important impact on reducing exposure to second-hand smoke, particularly among children.

See the section on ‘Links between smoking and cancer’ for more information.

**TARGETING DISADVANTAGED AND HIGH-RISK GROUPS**

Smoking rates in highly disadvantaged groups are significantly higher. These communities bear a disproportionate burden of tobacco-related illness.

See the ‘Impact’ section of this chapter for more information.

Tobacco control measures effectively used in the general population may or may not be effective in specific high-risk populations. A recent meta-analysis of cessation support programs in highly disadvantaged groups cited the lack of high-quality evidence in these populations, particularly among the homeless, Indigenous Australians and prisoners.

Similarly, a review of mass media campaigns targeting disadvantaged populations reported a lack of high-quality evidence, particularly for highly disadvantaged communities. Evaluation of the effectiveness of population-based tobacco control strategies in these specific populations, and appropriate tailoring where appropriate, is necessary to effectively target tobacco-related disparities.

Alliances between expert organisations in tobacco control and social services, mental health services, correctional facilities and government are key to assisting disadvantaged groups. These partnerships are important for the development of capacity in community organisations and for the implementation of targeted strategies for specific populations to complement mainstream programs.

Current examples include the Cancer Council NSW Tackling Tobacco program which partners community organisations to promote quit attempts and the Break Free Alliance in the US who unite health departments with community organisations and public health advocates.

See the Cancer Council Australia ‘Position statement – Tobacco related disparities’ for more information.

**PRODUCT AND SUPPLY REGULATION**

Tighter regulation of tobacco products can increase understanding of the health impacts, counter misconceptions of ‘healthier’ options, decrease take-up and increase quit attempts.

The introduction of pictorial warnings in Australia resulted in an increase in people noticing and
reading health warnings, considering the health risks, smoking fewer cigarettes, and quitting\(^\text{36}\). The pictorial warnings also stimulated stronger cognitive responses and more reports of reduced tobacco consumption than text-only health warnings in the UK\(^\text{30}\).

Monitoring and enforcing compliance with regulations on the supply of tobacco products are key strategies for targeting smoking initiation. In Australia, higher merchant compliance from 1997-2003 predicted lower levels of daily smoking in adolescents\(^\text{38}\). A 20.8% reduction in the odds of smoking among 10th graders during this period was attributed to the improvement in merchant compliance\(^\text{33}\).

**DISCLOSURE**

All government jurisdictions in Australia have endorsed the National Tobacco Strategy 2012-18, which includes a commitment to “consider further regulation of the contents, product disclosure and supply of tobacco products and alternative nicotine delivery systems”\(^\text{34}\).

The Commonwealth Department of Health is leading two projects to assess the feasibility of improved tobacco product regulation in Australia. One is focused on the scientific, technical and practical feasibility of regulating the disclosure of tobacco product ingredients and emissions data in Australia. Public consultations are currently underway. There is also a literature review and research into the relationship between tobacco product ingredients, palatability and smoking behaviour.

Since September 2010, all cigarettes in Australia have been required to meet a reduced fire propensity standard.

See the Cancer Council Australia position statement on ‘Dangers of reduced-harm’ cigarettes’ for more information.

**CESSATION SERVICES**

Close to three in 10 (29%) smokers in Australia tried unsuccessfully to quit smoking in 2010\(^\text{3}\). Almost 40% reduced the amount they smoked in a day\(^\text{4}\).

Behavioural interventions such as individual, group and telephone counselling may be effective at improving smoking cessation, as measured at six and twelve months after quitting\(^\text{5,36}\). Pharmacotherapy-based interventions such as nicotine replacement therapy can improve smoking quit rates by 50-70%\(^\text{57}\) and a combination of behavioural and pharmacotherapy interventions can increase smoking cessation success even further\(^\text{38}\).

Given the effectiveness of cessation services, improving access to such services is an important strategy to reduce the burden of tobacco-related illness. This is particularly important for reducing the tobacco burden in disadvantaged groups. Understanding the barriers to uptake of cessation services among disadvantaged groups is an important step in increasing their access and use.

See ‘Targeting disadvantaged and high-risk groups’ for more information.

Further development of existing services is important for integration of cessation support into routine care, tailoring of services for specific high-risk groups, implementing best-practice and improving awareness and uptake.

See the Cancer Council Australia position statement on ‘Stopping smoking’ for more information.

**RESEARCH AND MONITORING**

Ongoing research and monitoring of current interventions is important to assess and improve intervention effectiveness, and to enable the dissemination of evidence within the international tobacco control community.

**REFERENCES**


13. Hayes L. Smokers’ responses to the 2010 increase to tobacco excise: Findings from the 2009 and 2010 Victorian Smoking and Health Surveys. CBRC Topline Research Report. Melbourne: Centre for Behavioural...


TOBACCO TAX HELPS TAKE THE PUFF OUT OF SMOKING

The Heart Foundation has applauded the Australian Government for maintaining support of a significant increase in tobacco tax in its 2016 Budget. Heart Foundation tobacco control spokesperson Maurice Swanson said the legislation introduced in 2014 was a measure that would continue to save lives.

Smoking is a major cause of cardiovascular disease, including heart attack, stroke and peripheral vascular disease, with around 15,000 people dying each year because they smoke,” Mr Swanson said.

“There is no safe level of exposure to tobacco smoke, with even a non-smoker’s risk of heart disease increased by up to 25-30% if they are exposed to second-hand smoke.

“Studies conducted throughout the world across all socio-demographics found that the most effective intervention available to governments to reduce demand for tobacco were tax increases resulting in higher tobacco prices.

“Change will provide real health benefits and will be enhanced by the comprehensive set of tobacco control initiatives in place such as tax, education campaigns and plain packaging.

“Changes to behaviour by smokers may be difficult but it will occur and these measures will not only help existing smokers quit, but deter people from taking up smoking in the first place.”

Mr Swanson said the introduction of the tax increases of 12.5%, initially announced by the previous Government in 2013 and reiterated by Opposition Leader Bill Shorten last year of another four years, demonstrated strong tri-partisan support for tobacco control policies.

He said the Australia continued to adopt world-best practice, with the World Health Organisation outlining that the most potent and cost-effective option for governments everywhere was the simple elevation of tobacco prices by use of consumption taxes.

“Evidence from the World Health Organisation found that price increases on cigarettes reduced demand in countries across all income levels, inducing cessation and preventing initiation of tobacco use, especially amongst younger people,” Mr Swanson said.

World Health Organisation studies found that on governments everywhere raised tobacco prices by use of consumption taxes.

RISING COST OF TOBACCO

<table>
<thead>
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<th>Cost of tobacco has risen more than 340% over the past 20 years</th>
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Australian Consumer Price Index

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average, a 10% price increase on a pack of cigarettes would be expected to reduce demand for cigarettes by about 4% in high-income countries and by about 5% in low- and middle-income countries, where lower incomes tend to make people more sensitive to price changes.

“Increased prices of tobacco has a significant impact on children and adolescents, who are more sensitive to price increases than adults, which assists in discouraging initial use of tobacco,” Mr Swanson said.

“Evidence from the World Health Organisation found that price increases on cigarettes reduced demand in countries across all income levels, inducing cessation and preventing initiation of tobacco use, especially amongst younger people.”

“In Australia smoking prevalence among children appears to reflect the overall levels of tobacco-control funding and taxation policy, particularly in early teens, which is the period of peak smoking uptake.

“Although a study (1987-2005) of smoking among children in schools with varying degrees of socio-economic disadvantage in all Australian States and Territories indicated smoking prevalence had decreased overall, there was an increase among students aged 12-15 years when tobacco-control funding and activity in Australia was low (1992-1996).

“We must stay vigilant on educating about the effects and deterring people from smoking as we strive for a smoke-free Australia.”

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WINNING THE FIGHT AGAINST BIG TOBACCO

Todd Harper, the CEO of Cancer Council Victoria, is proud to work for an organisation that has been prepared to fight back against Big Tobacco

Facing legal action from the tobacco industry focusses the mind on what is important.

This is an industry responsible for six million deaths per annum globally. Its products are unique in killing two-thirds of its users when used as intended. This industry’s very existence and its multi-billion dollar profits depend on recruiting children as smokers to replace the 15,000 Australians who die from smoking every year.

Using legal action to intimidate is a standard tool of the trade. As one tobacco industry lawyer noted money is no object, claiming they won their cases not by spending all of their money, “but by making sure that other son of a bitch spent all his”.

Despite being up against these wealthy and unethical foes, Australia’s success against them has been remarkable – fewer than 15% of adults smoke (smoking for men peaked at 72% after WW2) and only 5% of teenagers smoke today.

This feat has been built on the back of reforms that banned advertising, created smokefree environments, invested in public education programs through Quit and the Cancer Council, increased taxes and of course, the introduction of tobacco plain packaging.

It is four years since plain packaging was rolled out in Australia and its overwhelming success has Big Tobacco scrambling, leading them to fight back with legal challenges and Freedom of Information (FOI) requests to access sensitive information about children.

For more than 30 years, the Cancer Council has been surveying Australian children (with the consent of teachers, parents and children themselves) to ask about their smoking, alcohol and illicit drug use. This information is critical in understanding why children smoke, and what might make them more or less likely to start.

This survey was one of the first to show Australia’s plain packaging laws were working, with children finding the new packs to be less appealing.

Research like this pricked attention globally as the United Kingdom, Ireland, Canada and New Zealand began contemplating their own plain packaging laws.

Desperate, British American Tobacco resorted to legal action through FOI laws to try and get its hands on the children’s data collected by the Cancer Council.

Using FOI laws is an approach that’s been used previously by Philip Morris to try and gain access to sensitive children’s data from the University of Stirling in the United Kingdom. In that case, it was an expensive and time-consuming two years before the tobacco giant gave up on its attempts.

Similarly the Cancer Council has been defending such attempts from British American Tobacco for the past two years. The FOI process imposed on us by them has taken up valuable resources and the time of our world-class scientists who have been instrumental in demonstrating the success of plain packaging.

We considered turning over such sensitive children’s data to a tobacco company would have been a breach of faith to parents, children and teachers who trusted us to collect and analyse the data, but also to keep it safe.

Despite these intimidation tactics it was important for us to continue our work to investigate the impact of plain packaging.

We’ve found that it has delivered on its aim to reduce the appeal of packs, particularly among adolescents and young adults, and new larger health warnings on packs...
have also increased adult smokers’ attempts to quit.

Most recently, a study on the Victorian public’s support of plain packaging and larger graphic health warnings has shown support remains high for the changes. Between 2011 and 2013, approval for plain packaging was high and unchanged at about 70% among former smokers, and at around 50% among current smokers, while disapproval of the new laws fell.

Australia’s success has inspired confidence globally: Ireland, the United Kingdom, New Zealand and France have passed plain packaging legislation, while Norway, Hungary, Slovenia, Singapore and Canada have announced their intentions.

If those countries can emulate Australia’s experience where we saw more than 100,000 less smokers in the first three years of plain packaging, then countless lives will be saved and heartbreak prevented for millions of families.

I’m proud to work for an organisation that has been prepared to fight back against Big Tobacco. In this case, our decision to prevent the tobacco industry’s access to sensitive information has been vindicated with the Victorian Civil and Administrative Tribunal recently refusing British American Tobacco’s request.

Thankfully, this time they have finally given up but past experience suggests the tobacco industry will not stop its efforts to undermine programs that save lives.

Hopefully, our research demonstrating that plain packaging is working will encourage other countries to stare down the tobacco industry as we have.

And that will make the last few years worth it.
Young Australians are being increasingly exposed to tobacco advertising and branding online, most commonly on Facebook, a new study reveals. A report by Cancer Institute NSW

This comes despite tobacco advertising being banned in traditional media. The study by the Cancer Institute NSW shows almost a third of young people aged 12-24 in NSW and Queensland were exposed to online tobacco advertising in 2013, increasing from 21% in 2010.

The results demonstrate levels of exposure are increasing over time. In addition to advertising, more than a quarter (26%) said they had seen online tobacco branding.

Manager for Cancer Prevention at the Cancer Institute NSW, Anita Dessaix, says this exposure poses a danger to young people in Australia.

“At a stage when youth smoking is at an all time low, the exposure to tobacco branding and advertising online could reverse efforts to reduce smoking rates further,” she says.

Tobacco control has been a great success story here in Australia, particularly for young people. “Over the past couple of decades we have seen rapidly declining youth smoking rates, with only 6.7 per cent of young Australians smoking daily,” Anita says.

“This study shows that younger never-smokers who saw tobacco advertising and branding online were more likely to be susceptible to smoking, which is concerning given the already well-established link between tobacco company marketing and smoking susceptibility.”

How is it happening on Facebook?
The paper, published in the Journal of Medical Internet Research, notes promotion of tobacco products is not permitted by the owners of many social media sites, including Facebook.

So how are tobacco companies still able to use these to sites to increase the visibility of their products?

What Facebook doesn’t prohibit is unpaid promotion through individuals sharing content among their friends and connections.

“At a stage when youth smoking is at an all time low, the exposure to tobacco branding and advertising online could reverse efforts to reduce smoking rates further.”

Additionally, tobacco companies can still operate branded pages and channels on social media portals.

The study mentions a recent analysis of 70 cigarette brands on social media that revealed more than 238 Facebook fan pages with more than 1 million likes.

What’s on YouTube?
The paper also reported increases in the proportion of youth seeing tobacco branding on YouTube, where pro-smoking imagery and tobacco promotions are well-documented.

YouTube doesn’t allow tobacco product advertising either, but ‘advertising’ only applies to paid forms of promotion on the site.

These are things like advertisements embedded in popular videos or advertisements that appear for certain key word searches.

Outside of this, tobacco content can still be uploaded, shared and consumed by people around the world with no restrictions on age.

What can we do?
Anita Dessaix says ongoing campaigns targeting online realms can help counter the message from tobacco companies.

“To reduce the impact of online tobacco advertising and branding on young Australians, we need to start...”
A third of young adults exposed to online tobacco ads

- Despite Australia’s concerted efforts to ban all forms of tobacco promotion, a study by the Cancer Institute NSW has revealed that international online branding and advertising campaigns are appearing in the social media accounts and online searches of young adults.
- According to the study of around 9,000 participants, almost a third of young people (aged 12-24) in New South Wales and Queensland have been exposed to tobacco advertising online.
- Facebook was the most common online space for young people to encounter tobacco branding; one-in-five young adults claimed to have had exposure to cigarette branding on the social media site.
- The research, published in the *Journal of Medical Internet Research*, also found that 19% of young adults saw tobacco positively promoted online through pop-up messages.
- Since the legal prohibition of tobacco advertising in traditional media was introduced in 1992, online platforms and social media have become one of the few avenues for tobacco promotion to Australians.
- In 2013, the most common place to report seeing tobacco branding was on Facebook, followed by pop-up messages, banner advertisements, YouTube, and Google advertisements.
- The national law banning tobacco advertising (*Tobacco Advertising Prohibition Act 1992*) was amended in 2012, to extend restrictions on tobacco advertising to the internet and other electronic media.
- Researchers also examined tobacco branding online, including peer-to-peer promotion like Facebook profile photos which clearly depict a specific brand of cigarette packaging, as well as advertising.
- They found that tobacco advertising exposure increased from 21% in 2010 to 29% in 2013; exposure to branding increased from 20% in 2010 to 26% in 2013.
- The study also revealed that young people who see online-based tobacco advertising or branding were more likely to be influenced to smoke.

Read the full paper at the *Journal of Medical Internet Research* at [www.jmir.org/2016/6/e104/](http://www.jmir.org/2016/6/e104/)

Support and information to help quit smoking is available from the Quitline (13 78 48) or via the iCanQuit website: [www.icanquit.com.au](http://www.icanquit.com.au)


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looking at counter-marketing tactics and monitoring efforts.”

“Continuing to build awareness around the effects of tobacco smoking in new media is crucial to further strengthen anti-smoking behaviours.”

The paper notes ensuring tobacco advertising bans are inclusive of internet-based media is essential, as well as cooperation among signatory nations to the World Health Organization *Framework Convention Alliance on Tobacco Control.*


Noone, Y (30 June 2016), ‘One third of young adults exposed to tobacco advertising online’, SBS Life.
Plain packaging will work

Plain packaging for tobacco products has the potential to be one of the most important policy measures in Australian history for reducing cancer deaths from smoking, writes Paul Grogan for Cancer Council Australia.

Cancer Council research along with documents obtained from the tobacco industry show the pack is an important marketing tool, particularly for attracting new smokers – usually young people. Sceptics claimed the TV and radio ad bans in the 1970s would not work either, but their implementation coincided with a substantial drop in smoking rates. We expect to see a similar reduction after plain packets are phased in; so, apparently, does the tobacco industry.

On one hand we have some vested interests saying plain packages will not affect consumption, while on the other hand a tobacco industry funded retailers’ campaign suggests the measure will put them out of business. It’s a ludicrously contradictory argument, so we should stick with the evidence. And the evidence, based on behavioural research from both the health sector and the tobacco industry, shows that glossy, branded packs are an important marketing tool, therefore making them unattractive will send an important health message to would-be smokers.

What better indication of effectiveness do you need than the tobacco industry’s desperate opposition to the proposal?

The research is clear and compelling. Smoking is the largest preventable cause of cancer death in Australia. Plain packaging will help to reduce Australia’s unacceptably high tobacco-related cancer burden.

The introduction of plain packaging is relatively cost-neutral. The Government may need to fund a legal fight with the tobacco industry, but we think the Government is on solid legal ground, in which cases costs will be minimal.

Philip Morris recently launched its ‘I deserve to be heard’ campaign urging smokers to exercise their rights and resist tactics to reduce smoking rates. The individual’s right to smoke is not being challenged. Plain packaging is predominantly about deterring young people from becoming addicted to tobacco products.

Decades ago people argued that mandatory use of seatbelts in cars was an infringement on the rights of the individual. Now it is seldom discussed, and statistics show that thousands of road trauma deaths have been avoided. (It’s also worth considering the rights of non-smokers who are exposed to secondhand smoke because of the smoker’s right to light up in many public spaces.)

Why not ban tobacco? Tobacco has been a legal product for centuries, is used regularly by almost one in five Australians and is highly addictive. Banning it would simply be unfeasible. A comprehensive set of measures over the past 35 years, including price control through taxation (the most effective policy measure over time), advertising restrictions, public information emphasising the health risks, and restrictions to smoking in public places has led to Australian smoking rates dropping dramatically.

Based on this, more of these measures, complemented by plain packaging to eliminate the most powerful remaining form of advertising, will see smoking rates eventually reduced to below 10%. When we get to the stage that only a small minority of the population smokes, we can look at more targeted approaches, but an outright ban would be unfair for millions of smokers who became addicted when it was legal and would be impossible to police.

Some people argue the Government’s money would be better spent on helping people quit. Smoking is the largest preventable cause of cancer death in Australia. Plain packaging will help to reduce Australia’s unacceptably high tobacco-related cancer burden.
Smoking and Tobacco Control

Most people who successfully quit smoking do so ‘cold turkey’ – through their own determination to enjoy the many benefits of a smoke-free life. However, quit programs are important and have assisted a substantial number of people end their addiction to tobacco. The Government recently agreed to subsidise nicotine replacement therapy; and it already contributes to Quitline funding.

No other common consumer product comes near tobacco in terms of death and disease in its long-term users. Tobacco has been treated differently ever since small health warnings were mandated on packaging and ad bans were introduced 38 years ago. This initiative is a continuation of that policy and is specifically about tobacco. Cancer Council fully supports the Australian Government’s draft legislation.

© Cancer Council Australia.


PROGRESS OF PLAIN PACKAGING

EVALUATION OF TOBACCO PLAIN PACKAGING

- Tobacco plain packaging is a core part of Australia’s comprehensive set of tobacco control measures.
- The Tobacco Plain Packaging Act 2011 and the Tobacco Plain Packaging Regulations 2011 set out the requirements for plain packaging in Australia. The objectives of the Act are to improve public health by discouraging people from using tobacco products, discouraging relapse of tobacco use and reducing exposure to tobacco smoke.
- It is intended that tobacco plain packaging contributes to these objectives by regulating the retail packaging and appearance of tobacco products in order to:
  - Reduce the appeal of tobacco products to consumers
  - Increase the effectiveness of health warnings, and
  - Reduce the ability of the retail packaging of tobacco products to mislead consumers about the harmful effects of smoking or using tobacco products.
- The full effects of plain packaging are expected to be seen over the long term, however early available evidence indicates that the measure is beginning to achieve its public health objectives.
- The Department of Health commenced a Post-Implementation Review (PIR) of tobacco plain packaging in December 2014. The PIR was published in February 2016 and concludes that the tobacco plain packaging measure has begun to achieve its public health objectives of reducing smoking and exposure to tobacco smoke in Australia and it is expected to continue to do so into the future.
- The studies considered for the PIR show that the tobacco plain packaging measure is having an impact by reducing the appeal of tobacco products, increasing the effectiveness of health warnings, and reducing the ability of the pack to mislead.
- The studies also provide early evidence of positive changes to actual smoking and quitting behaviours.

BIG TOBACCO LOSES IN PLAIN PACKAGING COURT CASE

- 10 July 2017: A 6-year court battle by tobacco company Philip Morris to try to kill off the government’s plain packaging laws has ended in the government’s favour.
- The tobacco giant has been ordered to pay the federal government an estimated $50 million dollars in legal fees.
- The company argued that the tobacco plain packaging laws should either be scrapped or that the government should pay them billions of dollars in damages.
- The total to be paid to the government has not been made public, but Philip Morris has called the amount “unreasonable”.

SOURCES:
Department of Health (25 January 2017), Evaluation of Tobacco Plain Packaging in Australia.

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Goodbye glamour-puss and rugged hero: smokers lose brand identity with plain cigarette packaging

Plain cigarette packaging has been a great Australian success story. There’s now strong evidence that a record decline in smoking rates occurred soon after plain packaging was introduced in Australia in 2012. In fact, these early impacts were greater than expected, report researchers Hugh Webb, Daniel Skorich and Tegan Cruwys.

We know the policy worked, but what’s less clear is why it worked so well.

Our latest research tested the idea that part of the reason plain packaging has been such a success is because it strips away smokers’ sense of identification with fellow smokers of their brand.

We showed that reductions in brand identity following the introduction of plain packaging predicted lower smoking behaviour. These effects were robust even after we controlled for the increased salience of warning labels and smokers’ prior addiction levels.

CIGARETTE BRANDS HAVE SOCIAL MEANING

Before the introduction of plain packaging, many experts predicted plain packs would have limited effects on established smokers, but would deter young people from starting. Others emphasised that any effects for established smokers would occur because plain packs would make smokers attend more to the health warning labels (made larger at the same time as plain packaging was introduced).

There is evidence for both of these explanations. But my colleagues and I argued that, for established smokers, branded packs don’t just look pretty and distract from the ugly warning labels, they are also full of social meaning that helps smokers define themselves and their smoking behaviour in a positive light.

In making this claim, we drew on some key ideas from established social psychological theory, in particular the social identity approach.

The first idea is that people’s sense of self is powerfully determined not just by their individual characteristics (like their personality) but also by the groups to which they belong (“I’m a Queenslander”, “I’m a smoker”, “I’m a feminist”, “I’m a Holden man”).

The second idea is that people usually seek to positively define themselves and often find creative ways to do so.

This is important because defining yourself positively as a smoker has become a hard sell in recent years. While smoking was once seen as a mark of sophistication, smokers are now often stereotyped as unhealthily and dirty, even among smokers themselves.

One way people might respond to this is to identify as a smoker of a particular brand. Doing so deflects the negative connotations of the category “smoker”. Tobacco companies get this, and use brand identities to subvert the dirtiness of smoking by appealing to the minty-freshness of a slender, smiling woman; or the rugged outsider status of a cowboy.

You can guess where the story goes from here. We predicted that by stripping away branding, plain packs take away the established smokers’ sense of positive brand identity that was helping to maintain their smoking behaviour.

It’s important to note here that media advertising for tobacco has been banned in Australia since 1992. In effect this meant that branded packaging was the last avenue for signalling to smokers themselves and to others about what brands mean.
SMOKERS’ CHANGING SENSE OF IDENTITY

We ran an online survey of 178 smokers before and after plain packaging was introduced. On both occasions we asked participants about their sense of social identification with fellow smokers of their brand (such as, “I identify with the group of Marlboro smokers”), the stereotypes they linked with smokers of their brand, and their smoking behaviour and quit intentions.

As we predicted, we found positive brand stereotypes, people’s brand identities, and smoking behaviour all decreased after the introduction of plain packaging. But for the first time, we also demonstrated these last two things were related: reductions in brand identity predicted people smoking less, attempting to quit and intending to quit in the future.

We found these associations were robust even after we statistically controlled for the increased salience of warning labels, how heavily people smoked to begin with, and other characteristics like age, gender and socio-economic status.

Finally, we predicted and found evidence that people who identified most strongly with their brand before the policy change experienced the sharpest declines in brand identity, and this went on to predict lower smoking behaviour. This last point makes sense: if cigarette brands weren’t particularly meaningful to a smoker’s sense of self to begin with, then we wouldn’t expect plain packaging to have much of an effect for them.

This evidence is an important contribution to understanding why plain packaging works. Our findings support the idea that plain packaging decreases smoking in established smokers because of a loss of brand identity.

Of course a limitation to the study is that, even though it’s longitudinal, it’s not experimental. So it’s possible there’s something else we’re not measuring that’s causing the declines in identity and smoking behaviour.

However, by examining changes over time, and controlling for the salience of warning labels, people’s age and levels of prior addiction, we took account of the most obvious alternative explanations for our results.

More broadly, our findings are a good example of how the social identity approach is proving to be a powerful tool for understanding health behaviours and for developing novel “social cures” that harness group processes to drive positive behavioural change.

Hugh Webb is PhD candidate (submitted), Australian National University.
Daniel Skorich is Postdoctoral Research Fellow, The University of Queensland.
Tegan Cruwys is Australian Research Council Fellow: Discovery Early Career Research Award, The University of Queensland.

Our findings support the idea that plain packaging decreases smoking in established smokers because of a loss of brand identity.
WORKSHEETS AND ACTIVITIES

The Exploring Issues section comprises a range of ready-to-use worksheets featuring activities which relate to facts and views raised in this book.

The exercises presented in these worksheets are suitable for use by students at middle secondary school level and beyond. Some of the activities may be explored either individually or as a group.

As the information in this book is compiled from a number of different sources, readers are prompted to consider the origin of the text and to critically evaluate the questions presented.

Is the information cited from a primary or secondary source? Are you being presented with facts or opinions?

Is there any evidence of a particular bias or agenda? What are your own views after having explored the issues?

CONTENTS

BRAINSTORM 54
WRITTEN ACTIVITIES 55
MULTIPLE CHOICE 56
Brainstorm, individually or as a group, to find out what you know about smoking and tobacco control.

1. What is nicotine, and how does it relate to tobacco?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. What are some of the methods used to help someone to quit smoking?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. What does NRT stand for in relation to smoking, and what are some examples?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4. What are electronic cigarettes; what are the major arguments for and against their use as a healthier alternative to conventional tobacco cigarettes?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Complete the following activity on a separate sheet of paper if more space is required.

“Australia has a strong record of tobacco control and has implemented a number of successful interventions for reducing tobacco use.”

Cancer Council Australia, *Effective interventions.*

Consider the above statement, and in the spaces below write two to three paragraphs providing your thoughts on each of the following methods of tobacco control. Include explanations of each method (with examples), and express whether you believe each is an effective strategy for tobacco control, and why.

**SMOKE-FREE ENVIRONMENTS**

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

**TAXATION**

________________________________________________________________________

________________________________________________________________________

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________________________________________________________________________

**ELIMINATING TOBACCO ADVERTISING**

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________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

**MASS MEDIA CAMPAIGNS**

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Complete the following multiple choice questionnaire by circling or matching your preferred responses.

1. Which of the following substances can be found in tobacco cigarettes?
   a. Carbon monoxide
   b. Tar
   c. Nicotine
   d. Caffeine
   e. Insect killers
   f. Hydrogen cyanide
   g. Radioactive compounds

2. In what year was plain packaging introduced for tobacco products in Australia?
   a. 1982
   b. 2002
   c. 2012
   d. 2016

3. In what year was cigarette advertising banned on radio and television in Australia?
   a. 1973
   b. 1976
   c. 1982
   d. 1989

4. In 2006, which of the following tobacco control strategies was introduced?
   a. Ban on smoking in restaurants.
   b. Graphic health warnings required on packaging of most tobacco products.
   c. Offence for any person to publish tobacco advertising on the internet or other electronic media.
   d. 25% increase in the tobacco excise.

5. Respond to the following statements by circling either ‘True’ or ‘False’:
   a. Cigarette smoking is a cause of 30% of all strokes in individuals under 65 years of age. True / False
   b. Metals such as lead, nickel and cadmium can be found in tobacco smoke. True / False
   c. If you already smoke, quitting won’t make any difference to your health. True / False
   d. Approximately one in four fire deaths occur in fires started by cigarettes. True / False
   e. Vaping is like breathing in water vapour. True / False
   f. In Australia, it is currently illegal to sell, use or possess electronic cigarettes that contain nicotine. True / False
   g. It is estimated that smoking kills 15,000 Australians every year. True / False
   h. Smoking can cause these types of cancer; lung, tongue, mouth, throat, nose, voice box, oesophagus, pancreas, stomach, liver, kidney, bladder, ureter, bowel, ovary, cervix and bone marrow. True / False
Tobacco smoking is one of the largest preventable causes of death and disease in Australia. It is associated with an increased risk of a wide range of health conditions, including heart disease, diabetes, stroke, cancer, renal disease, eye disease and respiratory conditions such as asthma, emphysema and bronchitis (ABS, National Health Survey: First Results, 2014-15). (p.1)

Considerable progress towards reducing the smoking rate in the general population has been made over the last 15 years with the daily smoking rate declining by over 40% for people in their 20s and 30s and by over 20% for people in their 40s and 50s (AIHW, Tobacco smoking trends). (p.4)

Among adult smokers, smoking manufactured cigarettes has been gradually declining since 2007 and significantly declined between 2013 and 2016 (from 89% to 86%). In contrast, smoking roll-your-own cigarettes has been steadily increasing – from 26% in 2007, to 33% in 2013 and to 36% in 2016 (ibid). (p.4)

Electronic cigarettes are most commonly tried by smokers aged under 25 years with 1 in 2 trying e-cigarettes in their lifetime (ibid). (p.5)

Tobacco contributes to more drug-related hospitalisations and deaths than alcohol and illicit drug use combined (ibid). (p.6)

Higher tobacco prices have been shown to be the most effective intervention available to governments to reduce demand for tobacco (Sax Institute, The numbers are in: 1.8 million Australian smokers will die from their habit). (p.9)

Tobacco smoke is made up of thousands of chemicals and many of them are very harmful. Around 70 of them cause cancer (Quit Victoria, Health risks of smoking). (p.10)

Approximately 1 in 4 fire deaths occur in fires started by cigarettes (ibid). (p.10)

80% of cases of lung cancer are due to smoking. Lung cancer is the most common form of cancer caused by smoking (ibid). (p.10)

Smokers have 2-3 times the risk of suffering sudden cardiac death than non-smokers (ibid). (p.11)

Cigarettes are made from the dried leaves of the tobacco plant which are grown mainly in China, USA, Brazil and India. The leaves of the tobacco plant are dried by burning trees in ovens. Nearly 5 million hectares of forest are lost each year to produce cigarettes (Smoke Free Young People Working Group, What’s in a cigarette?). (p.13)

From your first day of quitting your body begins to repair itself. Within days your smell and taste improves and your breathing improves making exercise easier. Within 1-9 months, coughing and shortness of breath also decrease (NSW Health, Nicotine dependence and withdrawal). (p.14)

E-cigarettes contain nicotine solution, flavour and other chemicals in a disposable cartridge that can be replaced or refilled. E-cigarettes use heat to transform nicotine solution into vapour which is inhaled (Alcohol and Drug Foundation, E-Cigarettes). (p.18)

There is currently insufficient evidence to demonstrate that e-cigarettes are effective in assisting people to quit smoking and no brand of e-cigarette has been approved by the TGA for this purpose (NHMRC, NHMRC Statement: Electronic cigarettes (E-cigarettes). (p.22)

Currently, nicotine-containing e-cigarettes are effectively prohibited in Australia (Mendelsohn, C, Australia’s looming e-cigarette ban robs smokers of a chance to quit). (p.28)

Tobacco remains the leading cause of preventable death and disability in Australia, with smoking estimated to kill almost 19,000 Australians a year (Department of Health, Tobacco Control key facts and figures). (p.33)

In 2004-05, the social and economic costs of smoking (including health costs) to Australian society were estimated to be approximately $31.5 billion each year (ibid). (p.33)

In Australia, excise, customs duty and GST make up around 60% of the final price of leading brands of cigarettes (Caner Council Australia, Tobacco control: effective interventions). (p.38)

The two main reasons smokers in Australia cited for changing their smoking behaviour in 2010 were because smoking was affecting their health (44.3%) and because it was costing too much money (44.1%) (ibid). (p.38)

Enforcing plain packaging laws, which commenced in Australia on 1 December 2012, was an important strategy to reduce young people’s exposure to tobacco promotion (ibid). (p.39)

Smoke-free environments protect individuals from second-hand smoke exposure, denormalise smoking behaviour, help prevent smoking experimentation and uptake among youth, and provide an environment that helps promote quit attempts (ibid). (p.40)

There is no safe level of exposure to tobacco smoke, with even a non-smoker’s risk of heart disease increased by up to 25-30% if they are exposed to second-hand smoke (National Heart Foundation of Australia, Tobacco tax helps take the puff out of smoking). (p.43)

Smoking is a major cause of cardiovascular disease, including heart attack, stroke and peripheral vascular disease, with around 15,000 people dying each year because they smoke (ibid). (p.43)

Promotion of tobacco products is not permitted by the owners of many social media sites, including Facebook (Cancer Institute NSW, Young Australians being exposed to online tobacco advertising and branding). (p.47)

Media advertising for tobacco has been banned in Australia since 1992 (Webb, H, Skorich, D and Cruwys, T, Goodbye glamour-puss and rugged hero: smokers lose brand identity with plain cigarette packaging). (p.51)
Carbon monoxide
Poisonous gas that is colourless and odourless, found in tobacco smoke, and also in car exhaust and smoke from fires. When a person smokes, carbon monoxide enters the bloodstream more easily than the oxygen that we need to breathe. The lungs then take in less oxygen, and this leads to hardening of the arteries and consequent heart disease and other circulatory problems.

Dependence
Dependence on tobacco means that smoking takes up much of your thoughts, emotions and activities. Not all people who smoke are dependent.

E-cigarettes
Battery-operated devices resembling tobacco cigarettes, cigars or pipes but which do not contain tobacco. The device allows users to inhale nicotine and other chemicals in a vapour form rather than smoke. There are also a number of non-nicotine devices that contain a variety of ingredients and flavours like fruit, sweets, coffee or alcohol flavours. Also known as electronic cigarettes, electronic nicotine delivery systems (ENDS), e-cigs, ecigarro, electro-smoke, green cig and smartsmoker.

Plain packaging
In April 2010 the Australian Government announced that all tobacco products must be sold in plain packaging in Australia by 1 July 2012 – the first country in the world to make this commitment. It requires all tobacco products to be sold in packaging with plain-font brand name only – no colour, decorative or design that could add appeal; no trademarks, logos, descriptors, inserts/onserts or promotional information.

Nicotine
Chemical that acts on the brain and causes people to become dependent on tobacco. The immediate effect of nicotine on the brain is to make you feel alert, active, and/or relaxed. Nicotine causes the blood vessels to narrow, which then affects blood pressure and also makes the heart beat faster. These effects only happen when you smoke tobacco, and not with nicotine replacement therapy, as smoking delivers nicotine to the body very quickly. Nicotine is a poison – swallowing one drop of pure nicotine is enough to kill an adult.

Nicotine addiction
Nicotine is a psychoactive drug, causing chemical or biological changes in the brain, and producing a mood altering effect. It is reinforcing, which means that smokers will keep using the drug. Even after long periods of abstinence, most smokers who want to have an occasional cigarette quickly return to previous levels of smoking. Smokers develop a tolerance to nicotine, so the body gets used to the drug and its effect is reduced. Regular smokers are therefore able to take in far greater amounts of tobacco smoke and associated poisons than if they had not become tolerant. Smokers are physically dependent on nicotine. Most smokers suffer from withdrawal which affects their behaviour – a major reason for taking up smoking again.

Nicotine replacement therapy
Nicotine replacement therapy (NRT) products can assist highly dependent smokers who are motivated to quit. They are designed to reduce nicotine withdrawal symptoms while the person quitting concentrates on breaking the habit. There are several different forms of NRT, including patches, gum, inhalers, lozenges and tablets. A doctor or pharmacist can help determine the best NRT for you and explain how to use the products. Research shows that nicotine replacement products are most helpful for people who smoke more than 15 cigarettes per day.

Nicotine withdrawal
Withdrawal is usually worst within 24-48 hours of quitting. Few people experience all the symptoms and they don't all happen at once. The symptoms you might experience are a normal and expected part of quitting smoking. The symptoms will gradually decline in intensity and the worst is usually over after a couple of weeks. Withdrawal symptoms can include: irritability and anxiety; difficulty concentrating; restlessness; problems falling asleep; frequent waking; tobacco craving; tingling sensations; dizziness; coughing; appetite changes; and stomach problems.

Quitting
Most smokers prefer to quit on their own; 90% of smokers successfully quit without the use of pharmacological aids or courses. However, many may make several attempts before they are successful. Quitting methods include: cold turkey; gradual approaches (cutting down, postponing); courses; and using quitting products such as nicotine replacement therapy (patches, gum, inhalers, lozenges, tablets); alternative therapies; and prescription drugs.

Second-hand smoking
Second-hand smoking is breathing in other people's tobacco smoke, either from the burning end of a cigarette or from the smoke breathed out by a smoker. There are over 4,000 chemicals present in cigarette smoke, and many are cancer-inducing carcinogens. It is sometimes referred to as 'exposure to environmental tobacco smoke' or 'passive smoking.' Second-hand smoking affects people who don't smoke, as well as people who do.

Tar
Black, sticky substance that comes from burning tobacco. It is released in tobacco smoke in the form of tiny particles. Tar is the main cause of lung and throat cancers and makes asthma and other lung diseases worse. It also causes yellow stains on teeth and fingers.

Tobacco
Tobacco is made from the dried leaves of the tobacco plant. It is smoked in cigarettes, cigars or pipes, or less commonly chewed. Many smokers become ill or die from the effects of tobacco.

Tobacco control
A part of public health science dedicated to controlling the prevalence of tobacco use and limiting the morbidity and mortality it causes.
Websites with further information on the topic

Australian Bureau of Statistics  www.abs.gov.au
Better Health Channel  www.betterhealth.vic.gov.au
Cancer Council Australia  www.cancer.org.au
Cancer Council NSW  www.cancercouncil.com.au
Cancer Council SA  www.cancersa.org.au/quitline
Cancer Council Western Australia  www.cancerwa.asn.au
Department of Health  www.health.gov.au
National Heart Foundation of Australia  www.heartfoundation.org.au
National Tobacco Campaign  www.quitnow.gov.au
Quit Victoria  www.quit.org.au
Smarter than Smoking  www.smarterthansmoking.org.au
Tobacco in Australia  www.tobaccoinaustralia.org.au

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INDEX

A
advertising 6, 27, 29, 30, 31, 32, 33, 35, 36, 39, 47-48, 49, 51
bans 35, 36, 45, 47-48, 49-50, 51
online 36, 39, 47-48

carbon monoxide 10, 12, 13, 25, 29
cessation, smoking 7, 8, 14-15, 16, 21-22, 25, 29, 30, 31, 32, 40, 41, 43
see also quitting, smoking
chemicals 10, 13, 14, 17, 18-19, 23, 26, 29, 30, 32, 33-35, 36, 38-41, 43-44, 46, 47, 48, 51-52 see also tobacco, products contents of, chemical 10
conventional 18-19, 20-22
electronic 5, 6, 16, 18, 20-23, 31 see also e-cigarettes
packaging see packaging
price of 34, 38, 43-44, 46
roll-your-own 4, 34, 35, 36

cravings 14-15, 17

d
death, cause of 1, 31, 33, 49
disease 1, 10-12, 21, 24, 30, 50 see also illness; smoking, health impacts
cancer 1, 9, 10-12, 13, 17, 24, 25, 26, 38, 39, 49
cause of 10, 12, 13, 14, 21, 25, 49
lung 10, 11, 13, 26
cardiovascular 9, 21, 25, 26, 43
diabetes 1, 2, 11-12
dephymsia 1, 10
heart 1, 10-12, 43
attack 9, 10, 12, 43
peripheral vascular 9, 11-12, 43
preventable 9, 31
respiratory 1, 21, 25, 26
smoking-related 10-12, 17, 30
stroke 1, 9, 10-12, 43
duty, customs 33-34, 38, 44

e
ecigarettes 5, 6, 18-19, 20-23, 24-27, 28-29, 30, 31-32 see also cigarettes, electronic
ban on 19, 22, 27, 28-29
benefits of 20, 22, 32
health effects of 19, 20
manufacturing of 22-23, 24-25
myths about 24-27
names for, other 18, 19
regulation of 27, 29, 32
risks of 18, 20, 21, 31-32
uptake of 22, 32
e-liquid 19, 20-23, 24, 26, 28, 29
environments, smoke-free 39, 40, 45
excise, tobacco 33-35, 36, 38, 44, 46
see also tax

H
harm reduction 6, 22, 24, 29, 31, 38

I
illness 11, 21, 40-41 see also disease; smoking, health impacts

M
medications 15, 16, 17, 22, 30 see also cessation; quitting

N
National Tobacco Strategy 2012-2018 7, 8, 41
indicators, outcomes 7, 8

P
packaging
plain 6, 9, 27, 33, 35, 36, 39, 40, 43, 45-46, 49-50, 51-52
health warnings 45-46, 50, 51, 52
graphic 6, 27, 33, 35, 36, 46
poisons 10, 11, 13, 22

Q
quitting, smoking 8, 9, 10-12, 14, 16, 17, 18-19, 20, 22, 24, 25, 28-29, 30, 31-32, 39, 44, 49, 50, 52 see also cessation, smoking

S
smoking 1-3, 4-6, 7, 8, 9, 13, 14-16, 17, 18, 20-23, 24-27, 28-29, 30, 31-32, 33-36, 38-41, 43-44, 45-46, 47-48, 49-50, 51-52
daily 1-3, 7, 31, 33-37, 38, 41, 47
decline in 1-3, 4-6, 9, 31-32, 33-36, 39, 47, 49, 51-52
exposure to 5, 7, 8, 17, 30, 40, 43, 49, 50
health impacts 1-17, 19 see also disease; illness
prevalence 1-17, 33-37, 39, 44
quitting see quitting, smoking
rates 1-3, 4-6, 7, 9, 19, 28, 31-32, 33-35, 40, 47, 49, 51
risks of 10-12, 30
second-hand 8, 12, 19, 49
trends 4-6, 7, 8
uptake of 7, 8, 20, 22, 35, 40, 44
tar 10, 11, 13, 29
tax, tobacco 30, 33-34, 36, 38-39, 43-44, 46, 49 see also excise, tobacco increases in 9, 27, 38-39, 43-44, 45
tobacco 1, 4-6, 7, 8, 9, 10, 14, 17, 18-19, 20-22, 24-25, 27, 29, 30, 31, 33-37, 38-42, 43-44, 45-46, 47-48, 49-50
tobacco companies 24, 27, 30, 39-40, 47, 51
tobacco control 9, 22, 24, 27, 31, 33-52
educational programs 30, 33, 43, 45
interventions 38-42, 44
measures 33, 35, 40, 50
policies 6, 22, 27, 29, 36, 38, 40, 43, 49-50, 52
strategies 38-41
timeline 36
duty free allowance 34, 36
illicit 5-6, 44
industry 34, 39, 44, 45-46, 49
perceptions of 5-6
price of 9, 33, 43-44, 46
products 6, 19, 22, 26, 30, 33-34, 36, 38-41, 44, 46, 47, 49-50 see also cigarettes
regulation of 40-41
promotion of 33-52
exposure to 39-40
sale of 30, 33, 46
supply of 6, 40-41
tax see tax, tobacco
use 31, 36-37, 38-39, 43, 50 see also smoking

V
‘vaping’ 16, 20, 24-27, 28-29, 32 see also cigarettes, electronic; e-cigarettes