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WHY PEOPLE SMOKE

Clinicians who want to encourage people to quit smoking are likely to be more successful if they have some understanding and empathy for why people start smoking and continue to smoke. This understanding and empathy is unlikely to come from experience as statistics show only 3.4% of New Zealand medical practitioners are regular smokers and 81.4 % have never smoked.[1]

In this article we look at what are commonly perceived by smokers as the "benefits" of smoking, along with some of the more significant barriers to quitting.

Why do people start smoking?

It has been estimated that 80% of adult smokers begin smoking as children, and about 30% of children have tried smoking by the age of 11.[2]

There is no single reason why young people begin to smoke.

Predisposing factors such low socioeconomic status, adverse childhood experiences and mental illness are generally not easily changed. Knowing about these factors is useful because they can help identify which young people might be at greatest risk for smoking and in greatest need of support to resist smoking.

Influencing factors provide the opportunity for young people to experiment with smoking. Friends and the presence of people around them who smoke are major influencing factors. Understanding these influencing factors is useful as many of them are able to be changed.[3]

It is important to ensure young people avoid starting to smoke in the first place as nicotine addiction can occur rapidly. In one study, 10% of children who became regular smokers showed signs of nicotine dependence within two days of first inhaling from a cigarette, and 25% within a month.[4] Within a year of starting to smoke, it has been reported that children will be inhaling the same amount of nicotine as adults, will experience cravings when they do not smoke, will make quit attempts and will suffer withdrawal symptoms.[5]

Why do people continue to smoke?

Because of the effects of nicotine

The primary reason why people smoke is that they are nicotine dependent.

When inhaled, nicotine reaches the brain in 10 to 16 seconds (faster than if it was delivered intravenously), and has a terminal half life of about two hours. Given this short half life, regular cigarettes are required to maintain nicotine levels and avoid symptoms of withdrawal.

Nicotine activates nicotinic acetylcholine receptors in the midbrain, inducing the release of dopamine and

Table 1: Symptoms of nicotine withdrawal[5]

Symptom	Duration	Incidence (%)
Lightheadedness	<48 hours	10
Sleep disturbance	<1 week	25
Poor concentration	<2 weeks	60
Craving for nicotine	<2 weeks	70
Irritability or aggression	<4 weeks	50
Depression	<4 weeks	60
Restlessness	< 4 weeks	60
Increased appetite	< 10 weeks	70

exerting dependence producing effects, in a similar way to amphetamines and cocaine. Nicotine demonstrates a biphasic effect, meaning it can both invigorate and relax a smoker, depending on how often they smoke. In new users, nicotine improves reaction time and sustained performance, but tolerance soon develops and these effects are not seen in chronic users.

Nicotine withdrawal has significant physical and psychological effects starting within hours of the last cigarette and peaking within the first week.

Because of the behavioural rewards

Continued smoking is also influenced by non-nicotine effects, including the sensory-motor effects of smoking as well as smoking-associated behaviours that become reinforced.

A person smoking a pack of cigarettes a day can accrue over 70 000 deliveries of nicotine per year. The sight, smell and sensations of smoking have a behavioural conditioning effect on the brain. While nicotine replacement therapy can be very successful in achieving smoking cessation, it does not address the non-nicotine effects of smoking.

Smoking has been shown to elicit a strong Pavlovian response for many people. For example, having a cup of coffee, concluding a meal, seeing another person smoke or smelling smoke may trigger the psychological desire to smoke. The Pavlovian response is considered a reason a number of light smokers, with low nicotine dependence, continue to smoke.[6]

Social norms play a role in continued smoking. In some cases this will discourage smoking, e.g. the increasing number of smoke free public areas and work places and the increasing number of smoke free messages. On the other hand, in groups where the smoking prevalence is high, this may constitute the social norm; therefore there may be less of an expectation to quit.

Because cigarettes help people deal with stress

Many people think they need cigarettes to help them relax and cope with stressful situations. Many smokers report they feel calmer and have improved concentration after a cigarette. However, it is more likely that declining nicotine levels begin to cause symptoms of withdrawal including agitation, and smoking another cigarette simply restores nicotine levels alleviating these effects.

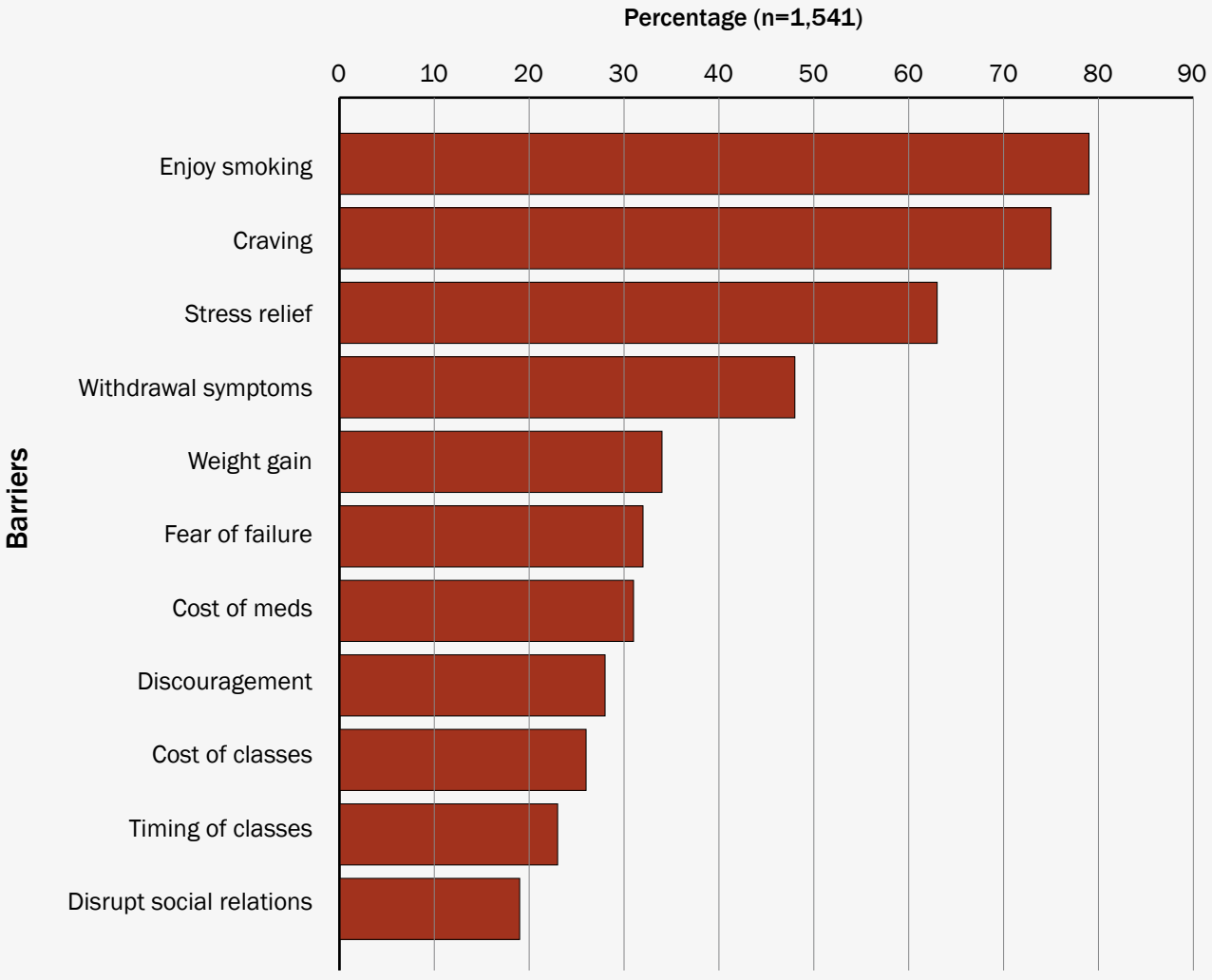
It is also worth considering the actions associated with smoking. For example people may go outside to smoke, removing themselves from the stressful environment and creating an opportunity to "clear their head". Furthermore, the smoke is often inhaled and exhaled in a slow and often deliberate manner – similar to relaxation breathing techniques. Each of these are useful methods in their own right for dealing with stress, so it may be useful to remind people they already have the skills to manage stress, even if they don't realise it.

Because of concern of weight gain on stopping

Many people, especially young women, believe that smoking helps them to maintain a lower body weight. Following smoking cessation, weight gain occurs in approximately 75% of people,[7] with an average gain of around 7 kg.[8]

It is thought some of this weight gained is caused by a decrease in metabolic rate following smoking cessation. In some people the metabolic rate may slow down even further and return to normal over a period of weeks or months.

Figure 1: Barriers to quitting smoking (adapted from UW Center for Tobacco Research and Intervention, 2005)[7]



The lifetime benefits of quitting

Many of the major risks associated with smoking decrease within two to five years of quitting smoking. For some conditions a residual risk remains and never returns to the level of a non-smoker. This is summarised in Table 2.

Table 2: Modification of risk upon quitting smoking (adapted from Dresler et al 2006)[9]

Disease	Risk lower in former smokers than continuing smokers	Time for risk reduction	Returning to level of non-smoker
Lung cancer	✓	5–9 years	Never
Laryngeal cancer	✓	60% after 10–15 years after cessation	Not for at least 20 years
Oral and pharyngeal cancer	✓	Inadequate data	20 years
Stomach cancer	✓	Decreases with continued abstinence, lower risk associated with younger age at cessation	Inadequate data
Pancreatic, renal cell, and bladder cancer	✓	Decreases with continued abstinence	Pancreatic – 15 years Renal cell – 20 years Bladder cancer – 25 years
Coronary heart disease	✓	35% in 2–4 years	Variable: 10–15 years, others small risk after 10–20 years
Cerebrovascular diseases	✓	Marked reduction in 2–5 years	Variable: some say 5–10 years, other say residual risk after 15 years
Abdominal aortic aneurysm	✓	Inadequate data	Residual risk may always remain higher
Peripheral arterial disease	✓	Inadequate data	Residual risk may always remain higher
COPD	✓	Improvement in FEV_1 during first year	After 5 years, the age related decline in FEV of ex-smokers reverts to that of never-smokers
Chronic bronchitis	✓	Symptoms reduce rapidly within a few months	Prevalence of symptoms are same as never-smokers within 5 years

Following smoking cessation, many people have an increased appetite, which may last for two to three months.

There are also several behavioural aspects that may influence weight gain. Ex-smokers may miss the familiar mouth and hand actions of smoking and replace this with snacking. People that smoke to deal with stress, boredom or loneliness may replace their smoking rituals with increased food intake.

While smokers should be aware they may gain weight when they stop smoking, it is not inevitable. It is important to incorporate advice on a healthy diet and exercise into a quit-plan. However a recent Cochrane Review concluded that advice alone on healthy lifestyles is not effective and may reduce abstinence. More focused intervention is required.[8]

Barriers to quitting

There are a number of barriers that make it difficult for people to stop smoking. These barriers vary depending on age, gender and number of cigarettes consumed.

In a survey of 1500 smokers, over 80% wanted to quit, but factors such as enjoyment, craving and stress relief reduced their desire to attempt quitting (Figure 1).[7]

People who live with others smokers find it more difficult to quit and this is associated with a higher incidence of relapse.

Conclusion

Understanding why an individual smokes and what their barriers are to quitting will assist in counselling them to stop smoking and stay stopped.

People smoke because;

- They are addicted to nicotine
- Withdrawal from nicotine causes unpleasant symptoms
- Smoking is associated with strong behavioural rewards
- Smoking is perceived to help deal with stress
- Concern about weight gain upon stopping

The Prevalence of Smoking in New Zealand

Contributed by Sharon Ponniah

Smoking is the single largest preventable cause of death and disease and is a major contributor to health inequalities. The burden of smoking on the public health system is substantial and approximately 5000 deaths are attributable to smoking in New Zealand every year. While a comprehensive approach to tobacco control including preventive health, education strategies and cessation interventions has been employed to reduce prevalence rates, wide social and ethnic inequalities in New Zealand continue.

Trends in smoking

Large decreases in the prevalence of smoking were observed between 1976 and 1990. These decreases have slowed and between 1996 and 2006, the prevalence of daily smoking in New Zealand decreased by 3% (from 23.7% to 20.7%), which represents around 100,000 less smokers.

The smoking population

A current snapshot of smoking in New Zealand indicates smokers to more likely be aged 20–49 years, identify with Māori and Pacific ethnic groups, have lower personal incomes and be unemployed. Smoking prevalence increases with level of socio-economic deprivation, a trend that is particularly marked among Māori.

Table 1: Prevalence of daily cigarette smoking, 15+ years (%) by ethnic group and socioeconomic deprivation (NZDep06)

Deprivation decile	European	Māori	Pacific Peoples	Asian	Other Ethnicity	Total
Decile 1	10.8%	21.9%	19.9%	7.5%	9.7%	10.7%
Decile 2	13.7%	28.2%	24.2%	8.9%	12.1%	13.6%
Decile 3	15.4%	30.3%	25.8%	9.7%	13.3%	15.3%
Decile 4	17.1%	33.4%	25.9%	9.7%	15.1%	17.0%
Decile 5	18.8%	35.9%	26.9%	10.6%	16.3%	18.8%
Decile 6	20.8%	38.8%	28.8%	11.4%	18.3%	21.0%
Decile 7	22.8%	41.0%	28.9%	11.9%	19.7%	23.1%
Decile 8	25.5%	43.7%	30.6%	12.5%	21.9%	26.1%
Decile 9	28.1%	46.8%	31.2%	12.9%	23.9%	29.5%
Decile 10	33.9%	52.9%	32.8%	15.1%	27.6%	36.5%
Total	19.4%	42.2%	30.3%	11.1%	16.5%	20.7%

Source: Ponniah S, Bloomfield A. Sociodemographic characteristics of New Zealand adult smokers, ex-smokers and non-smokers: results from the 2006 Census. N Z Med J 2008;121(1284): 34-42.

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