

Smoking Cessation Research Review™

Making Education Easy

Issue 10 – 2013

In this issue:

- > **Weight gain and CVD after quitting smoking**
- > **50-year trends in smoking-related mortality**
- > **Public support for nicotine regulation**
- > **Tobacco legislation reduces AUDs**
- > **Educating nondaily smokers about quitting**
- > **Ask-Advise-Connect**
- > **Experimentation with e-cigs**
- > **NRT increases chances of quitting success**
- > **Using NRT for temporary abstinence**
- > **Young adults' ratings of cigarette packet design**

Abbreviations used in this issue

- AUD** = alcohol use disorder
COPD = chronic obstructive pulmonary disease
CVD = cardiovascular disease
NRT = nicotine replacement therapy

Welcome to the tenth issue of Smoking Cessation Research Review.

An investigation into the association between 4-year weight gain following smoking cessation and cardiovascular disease (CVD) event rate among adults without diabetes reports that quitting smoking was associated with a lower risk of CVD compared with continuing smoking. Moreover, weight gain that occurred following smoking cessation did not lessen the benefits of quitting smoking on CVD risk among adults without diabetes. The take home message for our patients is that a net cardiovascular benefit of smoking cessation exists, despite subsequent weight gain.

Another study examined smokers' views about using nicotine replacement therapy (NRT) to help them abstain from smoking in their homes in order to protect their children's health. The research was conducted with socially-economically disadvantaged families with children aged <5 years because tobacco smoke exposure is highest amongst disadvantaged children and younger children suffer the greatest morbidity from exposure to environmental tobacco smoke.

We hope you find this edition stimulating reading, and we welcome any comments or feedback.

Kind Regards,

Brent Caldwell

brentcaldwell@researchreview.co.nz

Natalie Walker

nataliewalker@researchreview.co.nz

Smoking Cessation Research Review

Independent commentary by Brent Caldwell.

Brent Caldwell is a Senior Research Fellow at Wellington Asthma Research Group, he is currently working on the Inhale Study. His main research interest is in identifying and testing improved smoking cessation methods, with a particular focus on clinical trials of new smoking cessation pharmacotherapies.



Independent commentary by Dr Natalie Walker.

Dr Natalie Walker is an epidemiologist and leader of the Addiction Research programme at the National Institute for Health Innovation, University of Auckland. Natalie joined the University in 1995, and completed a PhD in cardiovascular epidemiology in 2000. Natalie currently holds a Heart Foundation Douglas Senior Fellowship in Heart Health (Prevention). Her primary area of interest is the conduct of phase III, community-based, clinical trials, particularly in the fields of smoking cessation, alcohol consumption, and heart health. She is a member of the Society for Research on Nicotine and Tobacco, and a board member of ASH.



Research Review publications are intended for New Zealand health professionals.

Disclosure Statement:

Natalie Walker has provided consultancy to the manufacturers of smoking cessation medications, received honoraria for speaking at a research meeting and received benefits in kind and travel support from a manufacturer of smoking cessation medications. Natalie has also undertaken two trials of very low nicotine content cigarettes, which were purchased from two different tobacco companies. The companies concerned had no role in development of the study design, data collection, data analysis, data interpretation, or writing of the trial publications.



HELP KIWIS BECOME SMOKEFREE NOW AND NZ CAN BE SMOKEFREE BY 2025.

At 12 weeks, smokers are 4x more likely to quit with Champix than if they had taken placebo¹

Contact Glenn.martin@pfizer.com to discuss Champix and the support resources available.



¹P<0.0001 vs. Placebo¹. At 52 weeks 3x greater odds of quitting with Champix vs. placebo P<0.0001¹. References: 1. Nides M et al. Varenicline versus Bupropion SR or Placebo for smoking cessation: A pooled Analysis. Am J Health Behav 2008;32(6):664-675. 2. www.pharmac.govt.nz/schedule found in nervous system, treatments for substance dependence, last accessed Jan 2012. Before prescribing please refer to important safety information contained in the prescribing information attached or found at www.medsafe.govt.nz Pfizer New Zealand 096380000 DA2711CG.

CHAMPIX
varenicline tartrate
Fully funded under special authority.²

For more information, please go to <http://www.medsafe.govt.nz>

www.researchreview.co.nz

a RESEARCH REVIEW publication

Association of smoking cessation and weight change with cardiovascular disease among adults with and without diabetes

Authors: Clair C et al

Summary: This study used data from the Framingham Offspring Study collected between 1984 and 2011 to assess the association between 4-year weight gain following smoking cessation and cardiovascular disease (CVD) event rate among adults with and without diabetes. At each 4-year examination, self-reported smoking status was assessed and categorised as smoker, recent quitter (≤ 4 years), long-term quitter (> 4 years) and nonsmoker. Over a mean 25-year follow-up, 631 CVD events (coronary heart disease, cerebrovascular events, peripheral artery disease, and congestive heart failure) occurred among 3251 participants. Median 4-year weight gain was greater for recent quitters without diabetes (2.7 kg) and with diabetes (3.6 kg) than for long-term quitters (0.9 kg and 0.0 kg, respectively, $p < 0.001$). Among participants without diabetes, age- and sex-adjusted incidence rate of CVD was 5.9 per 100 person-examinations in smokers, 3.2 per 100 person-examinations in recent quitters, 3.1 per 100 person-examinations in long-term quitters, and 2.4 per 100 person-examinations in nonsmokers. After adjustment for CVD risk factors, compared with smokers, recent quitters had a 53% lower risk for CVD and long-term quitters had 54% lower risk; these associations had only a minimal change after further adjustment for weight change. Among participants with diabetes, there were similar point estimates that did not reach statistical significance.

Comment (NW): Smoking not only increases a person's metabolism, but also acts as an appetite suppressant. Consequently, when smokers quit smoking they may gain weight (on average 4–5 kg after 12 months of abstinence), as their metabolism, appetite and sense of smell and taste returns to normal. Eating also replaces some of the hand-to-mouth actions of smoking. However, both excess weight and smoking are risk factors for cardiovascular disease – so which is worse? This cohort study shows that in people without diabetes, weight gain from quitting smoking is the lesser of the two evils. People who have quit smoking have a lower risk of heart attack or stroke than current smokers – even if they gain a few extra kilos of weight.

Reference: *JAMA* 2013;309(10):1014-21

<http://jama.jamanetwork.com/article.aspx?articleid=1667090>

50-year trends in smoking-related mortality in the United States

Authors: Thun MJ et al

Summary: Data from two historical American Cancer Society cohorts (CPS I and CPS II) and pooled data from 5 contemporary cohort studies were used to calculate death rates and the relative risks associated with active cigarette smoking and smoking cessation in the US from 1959–1965, 1982–1988 and 2000–2010. In women who were current smokers, compared with women who had never smoked, the relative risks of death from lung cancer were 2.73, 12.65 and 25.66 in the 1960s, 1980s, and contemporary cohorts, respectively; corresponding values for male current smokers compared with male never-smokers were 12.22, 23.81 and 24.97, respectively. In the contemporary cohorts, male and female current smokers had similar relative risks for death from chronic obstructive pulmonary disease (COPD) (25.61 for men and 22.35 for women), ischaemic heart disease (2.50 for men and 2.86 for women), any type of stroke (1.92 for men and 2.10 for women) and all causes combined (2.80 for men and 2.76 for women). COPD-related mortality among male smokers continued to increase in the contemporary cohorts in nearly all the age groups represented in the study and within each stratum of duration and intensity of smoking. Among men aged 55–74 years and women aged 60–74 years, all-cause mortality was at least 3-fold higher among current smokers versus never-smokers. Quitting smoking at any age dramatically lowered mortality.

Comment (NW): Tobacco has supreme killing power and remains a leading cause of premature death. There is also a clear dose-response relationship for many diseases, according to the number of cigarettes smoked per day. The take home message from the paper is that women who smoke like men are now seen to be dying like men. Mortality from COPD is also on the increase, probably as a result of changes over time in the design features of cigarettes that allow easier and deeper inhalation of smoke. The impact of this finding on future health service needs should be considered in New Zealand.

Reference: *N Engl J Med* 2013;368(4):351-64

<http://www.nejm.org/doi/full/10.1056/NEJMsa1211127>

Public support of mandated nicotine reduction in cigarettes

Authors: Pearson JL et al

Summary: This investigation assessed public support for a potential Food and Drug Administration (FDA)-mandated reduction in cigarette nicotine content, in this analysis of nationally representative data from a June 2010 cross-sectional survey of 2649 US adults. It also assessed the potential role of political ideology in support of FDA regulation of nicotine. Nearly 50% of the public supported mandated cigarette nicotine reduction and another 28% expressed no strong opinion. Support for nicotine reduction was highest among Hispanics, African Americans, and those with less than a high school education. Among smokers, the odds of supporting FDA nicotine regulation were 2.77 times higher among smokers who intended to quit in the next 6 months than among those with no plans to quit.

Comment (NW): One policy under consideration by governments around the world as a way of reducing smoking prevalence is a 'nicotine reduction' strategy, in which over time there is a stepped reduction in the nicotine content of cigarettes, or there is an immediate and significant reduction to a nicotine level where no compensation occurs. Nicotine has been able to be removed from the tobacco leaf since the 1930s, either through patented refining techniques, genetic modification or selective breeding. This study found that 45% of smokers in a US sample were in support of regulating the nicotine content of cigarettes. In comparison, approximately 85% of smokers in New Zealand want the addictiveness of cigarettes reduced. Although reduced nicotine cigarettes are still just as harmful as regular cigarettes, good quality clinical trials have shown that reducing the nicotine content of cigarettes can halve smokers' addiction ratings, thereby making it easier to quit.

Reference: *Am J Public Health* 2013;103(3):562-7

<http://tinyurl.com/chfczto>

Smoke-free policies in drinking venues predict transitions in alcohol use disorders in a longitudinal U.S. sample

Authors: Young-Wolff KC et al

Summary: These researchers sought to determine whether tobacco legislation impacts the likelihood of alcohol use disorders (AUDs) over time, using data from the US National Epidemiological Survey on Alcohol and Related Conditions (NESARC). Individuals in states that implemented smoke-free legislation in bars and restaurants between Waves I (2001–2002) and II (2004–2005) had a higher likelihood of AUD remission compared to participants in states without such legislation. Among public drinkers, smoke-free legislation was associated with a greater likelihood of AUD remission and a lower likelihood of AUD onset. These findings were especially pronounced among smokers, men, and younger age groups.

Comment (NW): Nicotine is known to increase alcohol tolerance, with exposure to alcohol cues known to elicit cravings to smoke and vice versa. People with greater use of alcohol are less likely to quit smoking and are more likely to relapse back to smoking. Furthermore, the combined use of alcohol and tobacco increases the risk of CVD and certain forms of cancers, over and above the use of these drugs in isolation. In the 2007/8 New Zealand Health Survey, 33% of smokers also consumed alcohol at hazardous levels, compared to 13% of non-smokers. This paper provides some unique insights into the impact of smoke-free policies on alcohol use disorders, and is an area that has not yet been explored in New Zealand. It is possible that as we move towards our smokefree 2025 goal we are also bringing about a positive change in alcohol use in our society.

Reference: *Drug Alcohol Depend* 2013;128(3):214-21

<http://www.sciencedirect.com/science/article/pii/S0376871612003456>

Counseling nondaily smokers about secondhand smoke as a cessation message

Authors: Schane RE et al

Summary: Outcomes are reported from a study involving 52 nondaily smokers (smoked in the past week, but not daily) who took part in brief counselling interventions (<20 min) focused on the harm smoking does to themselves (harm to self, HTS), or traditional smoking cessation counselling focusing on the harm their secondhand smoke (SHS) does to others (harm to others, HTO). Forty completed the study. At 3 months postintervention, 9.5% (2 out of 21) of the HTS group and 36.8% (7 out of 19) of the HTO group reported not smoking any cigarettes in the prior week ($p=0.06$). Motivation and self-efficacy were increased similarly in both groups from baseline to 3-month follow-up.

Comment (NW): Non-daily smokers are sometimes referred to as social smokers, light smokers or intermittent smokers. As stronger tobacco control policies are implemented and the prevalence of daily smoking declines, the prevalence of non-daily smoking will increase. In New Zealand, it will be important to monitor the prevalence of non-daily smokers as we progress towards our smokefree 2025 goal. Many non-daily smokers do not consider themselves to be smokers and don't believe that smoking is harmful. These facts have been well known by the tobacco industry for more than 40 years. This paper focused on an intervention around the harm to others from their smoking behaviour and, although a small pilot study, it produced encouraging results that warrant a larger trial. There is likely, over the coming years, to be more research undertaken specifically focused on smoking cessation interventions for this population.

Reference: *Nicotine Tob Res* 2013;15(2):334-42

<http://ntr.oxfordjournals.org/content/15/2/334.abstract>

Ask-Advise-Connect. A new approach to smoking treatment delivery in health care settings

Authors: Vidrine JL et al

Summary: GPs in America follow the 5 As (Ask, Advise, Assess, Assist, Arrange) in treating smokers, but the majority of those smokers fail to follow through on the advice to contact Quitline. This study evaluated the efficacy of an "Ask-Advise-Connect" approach in connecting smokers from GP practices with Quitline services. Ten clinics in Houston, Texas, were randomised to the active intervention (referral to Quitline using the patient's electronic health record) or control intervention (standard care of giving patients a Quitline referral card for them to phone Quitline and self-enrol in the Quitline service).

Comment (BC): In this study, electronic referral was 13 times more effective at enrolling smokers from primary care into a Quitline service than simply advising smokers to contact Quitline themselves. New Zealand Quitline has sought to increase referrals from primary care by developing an electronic referral system via Medtech and is also working on a method to report back to GPs about the outcomes of the patients who they referred, in the hope that this will encourage GPs to keep referring their patients to Quitline. More effective methods to enrol smokers with Quitline are essential to achieve the Smokefree Aotearoa 2025 Vision.

Reference: *JAMA Intern Med* 2013;173(6):458-64

<http://archinte.jamanetwork.com/article.aspx?articleid=1656544>

Characteristics associated with awareness, perceptions, and use of electronic nicotine delivery systems among young US midwestern adults

Authors: Choi K, Forster J

Summary: 2624 US Midwestern adults aged 20–28 years were questioned on their awareness, use and perceptions of electronic nicotine delivery systems (e-cigarettes) as a smoking cessation aid. Overall, 69.9% of respondents were aware of e-cigarettes, 7.0% had ever used e-cigarettes and 1.2% had used e-cigarettes in the past 30 days. Men, current and former smokers, and participants who had at least 1 close friend who smoked were more likely to be aware of and to have used e-cigarettes. Among those who were aware of e-cigarettes, 44.5% agreed e-cigarettes can help people quit smoking, 52.8% agreed e-cigarettes are less harmful than cigarettes and 26.3% agreed e-cigarettes are less addictive than cigarettes.

Comment (BC): The authors cite concerns that e-cigarettes (e-cigs) may undermine quit attempts and promote smoking initiation. The authors call for longitudinal real-world studies to determine if these concerns are warranted. 17% (31/184) of young adults who had ever used e-cigs had never been regular smokers. However, the survey did not measure the frequency or duration of their use of e-cigs. The majority of e-cig users viewed e-cigs as useful for quitting smoking. A trial is underway in Auckland to measure e-cig abstinence rates. Perhaps one of New Zealand's isolated islands would be a good setting for a longitudinal real-world study?

Reference: *Am J Public Health* 2013;103(3):556-61

<http://tinyurl.com/cgwpuue>

Association between use of nicotine replacement therapy for harm reduction and smoking cessation: a prospective study of English smokers

Authors: Beard E et al

Summary: These UK researchers sought to determine to what extent smokers' attempts at using nicotine replacement therapy (NRT) for smoking 'harm reduction' (reducing harm from continued smoking) promote or undermine cessation. Data were collected from 15,539 smokers involved in the Smoking Toolkit Study, a series of monthly household surveys of adults aged ≥ 16 years; 3149 (23%) completed a 6-month follow-up questionnaire on attempts to quit smoking and smoking status. At baseline, participants were asked whether they were currently using nicotine replacement therapy (NRT) for smoking reduction (SR) or temporary abstinence (TA). The use of NRT for SR and TA predicted attempts to quit smoking (OR 1.61, 95% CI 1.30 to 2.01 for SR and OR 1.94, 95% CI 1.56 to 2.38 for TA) and abstinence (OR 1.51, 95% CI 1.06 to 2.16 for SR and OR 2.09, 95% CI 1.51 to 3.34 for TA), at 6 months' follow-up. Use of NRT for SR or TA was associated with a small reduction in cigarette consumption (two cigarettes per day) compared with SR without NRT or non-use of NRT for TA.

Comment (BC): Beard et al. showed that in the community, outside a trial setting, smokers who had chosen to reduce their smoking or practice temporary abstinence were more likely to be abstinent 6 months later, particularly if they had used NRT. This is consistent with reviews of clinical trials that have shown that smoking reduction and abrupt quitting produce similar quit rates (Lindson N et al. *Cochrane Database Syst Rev* 2010;(3):CD008033) and using NRT to assist reduction increases abstinence even further (Moore D et al. *BMJ* 2009;338:b1024). Medical professionals should encourage smokers who want to reduce their smoking to use NRT to increase their chances of success.

Reference: *Tob Control* 2013;22(2):118-22

<http://tobaccocontrol.bmj.com/content/early/2011/11/30/tobaccocontrol-2011-050007.short>

Search over 700 healthcare roles

trade me
JOBS 

www.trademe.co.nz/jobs

The role of nicotine replacement therapy for temporary abstinence in the home to protect children from environmental tobacco smoke exposure: a qualitative study with disadvantaged smokers

Authors: Atkinson O et al

Summary: These researchers conducted qualitative in-depth interviews with 36 disadvantaged smoking parents who were currently, or had recently stopped smoking in the home that had at least one child aged <5 years. The analysis sought to determine smokers' views about using NRT to help them abstain from smoking in their homes in order to protect their children from exposure to environmental tobacco smoke (ETS). Overall, participants responded negatively to the concept of attempting temporary abstinence in the home in general and more specifically to the use of NRT whilst at home to reduce children's exposure to ETS. Many parents would prefer to either attempt cutting down or quitting completely to make a substantial effort to change their smoking behaviour. There was limited interest in the use of NRT for temporary abstinence in the home as a first step to quitting, although some parents did express a willingness to use NRT to cut down as a first step to quitting.

Comment (BC): It is likely that socioeconomically deprived parents in New Zealand will have a similar lack of interest in using NRT to help them be smoke-free in their homes to reduce their children's ETS exposure. This study suggests that the best way to reduce children's ETS exposure is to encourage parents to use NRT to quit abruptly and help them think of alternative methods for taking a break and having time to themselves. Parents who cannot quit abruptly need education about the harm of ETS and how NRT-assisted temporary abstinence in the home can help them quit long-term.

Reference: *BMC Public Health* 2013;13:262

<http://link.springer.com/article/10.1186%2F1471-2458-13-262>

The impact of structural packaging design on young adult smokers' perceptions of tobacco products

Authors: Borland R et al

Summary: Responses were analysed from 160 young adult ever-smokers (18–29 years) who completed a web-based survey showing computer images of plain packaged cigarette packs in five different shapes, followed by packs illustrating five different methods of opening. Views were sought on brand (prestige or budget) and size of the health warnings (30% or 70% warning size). Significant differences were found between respondents' rankings of pack shapes on attractiveness, perceived quality of the cigarettes contained within and distraction from warnings. Standard, 2×10 and 4×5 packs were ranked as less attractive than Bevelled and Rounded packs. 2×10 and 4×5 packs were also perceived as lower quality than Bevelled and Rounded packs. The Standard pack was less distracting to health warnings than all other shapes except the 2×10 pack. Pack openings were perceived as different on quality of cigarettes contained and extent of distraction to warnings. The Standard Flip-top was rated significantly lower in distracting from warnings than all other openings.

Comment (BC): Strict limitations need to be placed on every conceivable aspect of cigarette pack design in order to minimise their attractiveness and emphasise health warnings. Further research is required to identify potential ways to use cigarette pack design to aid smokers to quit, such as messages about the effectiveness of NRT, messages about the benefits of quitting and inclusion of NRT in the packs.

Reference: *Tob Control* 2013;22(2):97-102

<http://tobaccocontrol.bmj.com/content/early/2011/12/12/tobaccocontrol-2011-050078.short>

CLICK HERE

to read previous issues of
Smoking Cessation Research Review

Subscribing to Research Review

To subscribe or download previous editions of Research Review publications go to

www.researchreview.co.nz

Privacy Policy: Research Review will record your email details on a secure database and will not release them to anyone without your prior approval. Research Review and you have the right to inspect, update or delete your details at any time.

Disclaimer: This publication is not intended as a replacement for regular medical education but to assist in the process. The reviews are a summarised interpretation of the published study and reflect the opinion of the writer rather than those of the research group or scientific journal. It is suggested readers review the full trial data before forming a final conclusion on its merits.

A Simple Offer

We knew brief medical advice to quit smoking increases quit attempts (by 24% actually).

What we didn't know was that simply making an offer of treatment prompts a further 40-60% of people to give up.

Even if they weren't thinking about it.



ASK ABOUT THE ELEPHANT

It's a simple offer that changes lives

Want to learn more?
Visit the e-learning tool at:
www.smokingcessationabc.org.nz

newzealand.govt.nz



a RESEARCH REVIEW publication