

20th Anniversary Priority Setting Workshop

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PRIMARY CARE
HEALTH SCIENCES



Programme

10:00 – 12:00 A background to the Cochrane Tobacco Addiction Group

- A history of Cochrane TAG
- The recent history of tobacco cessation research
- What is in a Cochrane TAG review?
- How does Cochrane TAG work?
- The Cochrane TAG taps project and survey results

12:00 – 13:00 Lunch

13:00 – 15:45 Workshop Session

15:45 – 16:30 Drinks with final voting

A history of the Cochrane Tobacco Addiction Group (TAG)

Dr Tim Lancaster
Coordinating Editor

Cochrane Tobacco Addiction Group
Nuffield Department of Primary Care Health Sciences
University of Oxford

 @cochraneTAG

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BRITISH MEDICAL JOURNAL

LONDON SATURDAY JUNE 26 1954

THE MORTALITY OF DOCTORS IN RELATION TO THEIR SMOKING HABITS

A PRELIMINARY REPORT

BY

RICHARD DOLL, M.D., M.R.C.P.

Member of the Statistical Research Unit of the Medical Research Council

AND

A. BRADFORD HILL, C.B.E., F.R.S.

Professor of Medical Statistics, London School of Hygiene and Tropical Medicine ; Honorary Director of the Statistical Research Unit of the Medical Research Council

In the last five years a number of studies have been made of the smoking habits of patients with and without lung cancer (Doll and Hill, 1950, 1952 ; Levin, Gold-

tionary. In addition to giving their name, address, and age, the doctors were asked to classify themselves into one of three groups—namely, (a) whether they were, at

PRACTICE OBSERVED

Practice Research

Controlled trial of three different antismoking interventions in general practice

KONRAD JAMROZIK, MARTIN VESSEY, GODFREY FOWLER, NICHOLAS WALD, GILLIAN PARKER, HELEN VAN VUNAKIS

Abstract

Of 6052 adult patients who consulted their doctors in six Oxfordshire general practices between October 1980 and February 1981, 2110 (35%) were smokers. The smokers were allocated to one of four study groups—a control (non-intervention) group; a group that received verbal and written antismoking advice from the general practitioner; a group that received this advice and also a demonstration of exhaled carbon monoxide; and a group that received the advice plus the offer of further help from a health visitor.

After one year 72% of smokers replied to a postal follow up questionnaire: 11% of the control group claimed to have stopped smoking compared with 15% in the group that received advice alone, 17% in the exhaled carbon monoxide group, and 13% in the health visitor group. Validation of these findings by assays of urinary concentrations of cotinine showed that between

24% and 46% of subjects may have misreported their smoking habits, but there was no indication that the rate of misreporting was higher in the intervention groups than in the control group.

Giving advice routinely against smoking has a useful effect, and showing an immediate, personal, and potentially harmful consequence of smoking using a CO-oximeter may improve this, particularly in lower socioeconomic groups.

Introduction

The value of advice against smoking given routinely during general practice consultations in helping people to stop smoking is uncertain. Of the seven published studies,¹⁻⁷ only four incorporated a control group^{1-3,7} and, of these, only two suggested that routine antismoking advice had an appreciable beneficial effect.^{1,2} Even so, the largest study, a randomised

Results

PREVALENCE OF SMOKING

Of the 6052 eligible patients seen (2225 men and 3827 women), 2110 (820 men and 1290 women) admitted to smoking cigarettes at the time of the index consultation. The overall smoking prevalence of 35% was similar to the rate of 39% found in a national sample of over 22 500 people surveyed in 1980.¹¹

BALANCE OF STUDY GROUPS

The four study groups were balanced with respect to the age and sex distributions of the patients, but, despite randomisation, there was a significant imbalance of social classes ($p < 0.01$) whereby the advice group was weighted towards higher socioeconomic groups and the health visitor group towards lower ones, compared with the control and exhaled carbon monoxide groups. There were no appreciable differences in cigarette consumption, type of cigarette smoked, duration of smoking, or desire or intent to stop among patients allocated to the three "active treatment" groups.

OUTCOME OF FOLLOW UP

A one year questionnaire was returned by 72% of the smokers and the response rate did not vary appreciably among the four groups.

Attempts to stop smoking.—Of the control patients who returned a questionnaire at one year, 64% reported that they had attempted to stop or reduce smoking. The corresponding figures in the three other groups were 70% (advice), 72% (exhaled carbon monoxide), and 68% (health visitor). These data provide no statistically significant evidence of any effect of intervention on the frequency of attempts to stop or reduce smoking.

Stopping smoking.—Table 1 gives the numbers of patients who reported that they were no longer smoking at the time of the one year follow up, and the results of the trial are shown in fig 2. Non-respondents were assumed not to have stopped smoking but, despite this conservative assumption, a significant difference between the "treatment" groups is apparent ($p < 0.05$). Pooling the results for the

TABLE 1—Number of patients who reported that they had stopped smoking at one year follow up (624 non-responders assumed not to have stopped smoking)

Study group	No in group	No (%) who reported not smoking
Intervention:		
Advice	412	37 (15.0)
Exhaled carbon monoxide	428	84 (19.6)
Health visitor	421	68 (16.2)
All intervention groups	1261	237 (18.9)
Control	589	56 (9.5)
Total	2110	295 (14.0)

Comparison of all four groups: $\chi^2 = 4.5$, 3 d.f., $p = 0.05$. Comparison of pooled intervention groups with control group: $\chi^2 = 5.8$, 1 d.f., $p = 0.02$. Both values adjusted for effect of social class.

three groups that received "active treatment" shows a clear increase in stopping smoking compared with the non-intervention control group ($p < 0.02$). Table 11 gives the data on stopping smoking, classified both by "treatment" group and by social class. It is apparent that the influence of intervention is most impressive in social classes I to III non-manual, while there is no indication of a beneficial effect of any "treatment" other than exhaled carbon monoxide in social classes IV and V.

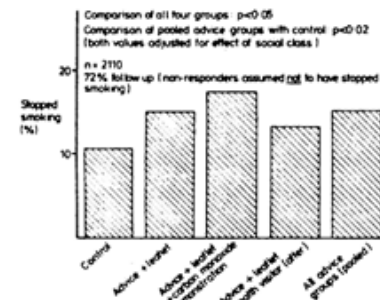


FIG 2—Self reporting of stopping smoking by patients at one year follow up.

Yield of successful attempts.—In view of the conclusion by Russell *et al* that advice acted only to increase the number of attempts made to stop smoking and not the success rate among those who did try,¹² we examined our data to determine the proportion or "yield" of attempts that resulted in stopping successfully. When the three active intervention groups were considered together there was a 60% increase in the number of attempts resulting in success, while the exhaled carbon monoxide group had almost twice the yield of the non-intervention control. These differences were highly significant ($p < 0.01$, corrected for social class).

VALIDATION OF SMOKING HISTORIES

A sample of 122 (41%) of the 295 self described ex smokers was selected for home visit, but 24 of these were not available for interview because of absence from home on three separate evenings (13 cases), changed address (seven cases), or refusal (four cases). Although 90% of visits were completed within three months of the follow up questionnaire being returned, 40 patients admitted to having begun smoking again, at least intermittently, since the postal inquiry. Every one of the 58 patients who denied relapse provided a urine

The Cochrane rationale

- All effective treatments should be encouraged and all ineffective treatments should be rooted out. This ideal has seldom, if ever, been attained because — in part — doctors tend to be over enthusiastic about their treatments. But, there is an additional problem which is a genuine uncertainty about which treatments really are effective. Confronted with uncertainty, clinicians cannot share with laboratory scientists the luxury of being able to do a few more experiments until the problem is solved, but must decide whether to recommend — or not — a particular treatment to an individual patient. As long as uncertainty prevails there will be variation in medical practice and waste of resources because costly ineffective treatments are recommended to some patients while other patients are denied treatments which really do work. So, even if one has assessed the health needs of a population or an individual and determined the costs of treatment, it is still quite impossible to make cost-effective decisions without knowing what is effective and to what degree, and what is not (Cochrane 1972).

Cochrane Principles

- Collaboration
- Building on the enthusiasm of individuals
- Avoiding duplication of effort
- Minimising bias
- Keeping up to date

Meta-analysis on efficacy of nicotine replacement therapies in smoking cessation*

Christopher Silagy, David Mant, Godfrey Fowler, Mark Lodge

Summary

Nicotine-replacement therapy (NRT) by gum, transdermal patch, intranasal spray, or inhalation is expensive but how effective is it? We have done a meta-analysis of controlled trials to see how effects on abstinence rates are influenced by the clinical setting, the level of nicotine dependency, the dosage of NRT, and the intensity of additional advice and support offered. Published or unpublished randomised controlled trials of NRT that have assessed abstinence at least 6 months after the start of NRT were identified and 53 trials (42 gum, 9 patch, 1 intranasal spray, 1 inhaler), with data from 17 703 subjects, were included in the analyses.

Use of NRT increased the odds ratio (OR) of abstinence to

specialised smoking cessation clinics and that it was of questionable value when used in general practice.⁵ A 1990 review confirmed those findings.¹ However, since then there have been over 20 new randomised trials of nicotine gum. Two reviews of nicotine patches,^{6,7} published in 1992, suggested that this form is also highly effective, but neither review used comprehensive methods to identify all the published and unpublished trials, nor did they use quantitative techniques to synthesise the data and test for homogeneity or significance.

Since nicotine replacement therapy is widely available and costly, it is important to establish the efficacy of its different forms when offered to smokers with varying levels of dependency and motivation to quit and to do so in a range

NRT preparation	Proportion quitting		OR (95% CI)	χ^2 test for heterogeneity
	NRT	Control		
Gum (n=39)	1149/6328 (18.2%)	893/8380 (10.6%)	1.61 (1.46–1.78)	$\chi^2_{38} = 49.0, p = 0.11$
Patches (n=9)	255/1245 (20.5%)	105/968 (10.8%)	2.07 (1.64–2.62)	$\chi^2_8 = 7.1, p = 0.53$
Nasal spray (n=1)	30/116 (25.9%)	11/111 (9.9%)	2.92 (1.49–5.74)	Not applicable
Inhaler (n=1)	22/145 (15.2%)	7/141 (5.0%)	3.05 (1.42–6.57)	Not applicable
All NRT trials	1456/7834 (18.6%)	1016/9600 (10.6%)	1.71 (1.56–1.87)	$\chi^2_{44} = 64.3, p = 0.07$

Test for heterogeneity between different types of NRT ($\chi^2_3 = 8.49, p = 0.04$).

Based on longest follow-up available for each trial (minimum 6 months).

Table 1: Comparison of proportion of smokers who successfully quit with NRT versus control

Statistics

The statistical methods used to pool the data involved calculating the typical odds ratio (OR) and its 95% confidence interval (CI) on the basis of a fixed-effects model.¹⁰ Heterogeneity was tested for by a Mantel-Haenszel approach.¹¹ Results are expressed as the OR (NRT to control) for achieving abstinence from smoking at a given time point together. The number of smokers that would have to be treated to produce one successful quitter at 12 months was derived from the inverse of the pooled typical event rate difference.¹² In subgroup analyses we used 12-month abstinence rates wherever possible, except for studies providing only 6 months of follow-up data.

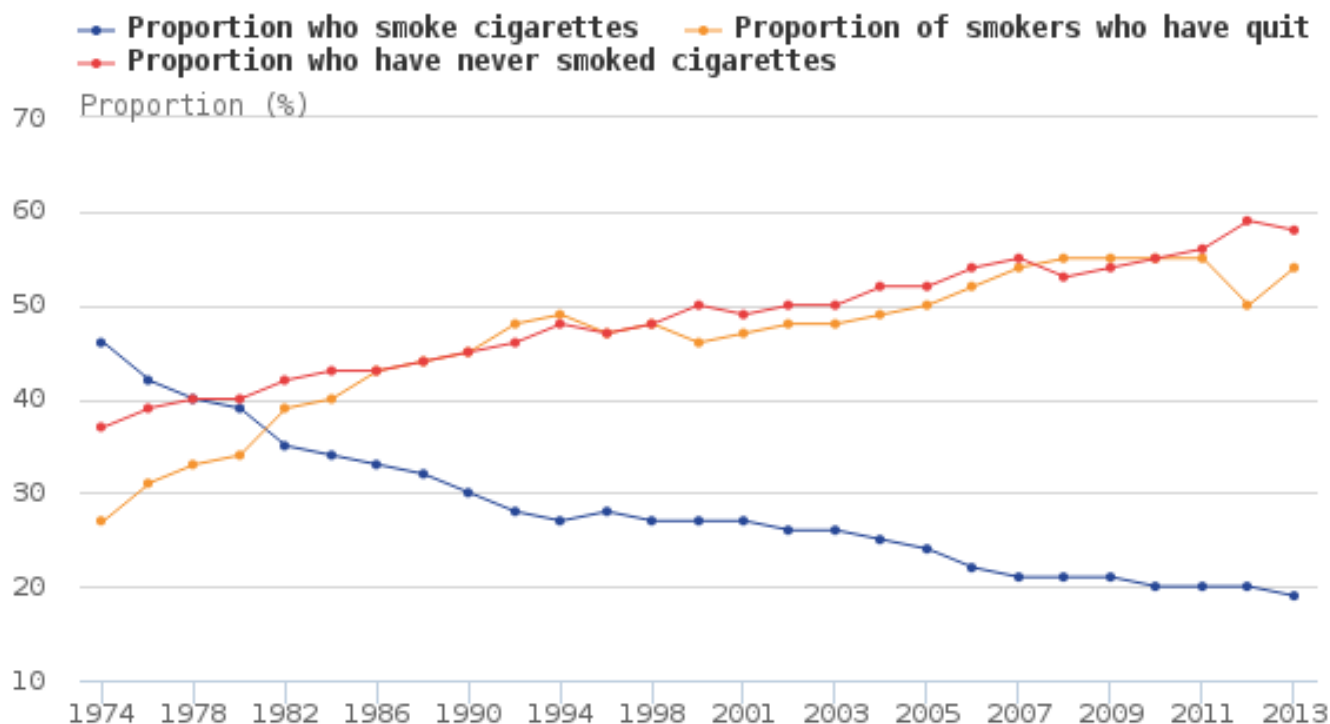
Results

the OR for abstinence with transdermal patches was greater than with nicotine gum, though this was not significant ($\chi^2_1 = 3.69, p = 0.05$). Similarly the ORs for abstinence with the newer forms of NRT (nasal spray and inhaler) were greater than with either nicotine gum or transdermal patch ($\chi^2_3 = 8.49, p = 0.04$). For trials of nicotine gum and transdermal patch, the odds of not smoking were not affected by whether the control group was placebo or no therapy (not shown).

The pooled odds of abstinence in the two trials which directly compared 4 mg with 2 mg gums was 76% greater with the higher dose (OR 1.76 [95% CI 0.99–3.13]). Only 1 trial compared a “fixed” dose regimen of nicotine gum with

Smoking prevalence UK 1974-2013

(Office for National Statistics. Opinions and Lifestyle Survey 2015)



The recent history of tobacco cessation research

Professor Robert West
Health Behaviour Research Centre,
University College London
June 2016

 [@robertjwest](https://twitter.com/robertjwest)

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Declaration of interests

I undertake research and consultancy for companies that develop and manufacture smoking cessation medications (Pfizer, J&J and GSK)

I am an advisor to the UK Centre for Smoking Cessation and Training

My salary is funded by Cancer Research UK

Three epochs

1. The dark ages (up to mid 1970s)

- Smoking considered mainly as habit or choice; harms not widely known
- Studies poorly described and mainly involve small samples and focus on psychological intervention; few useful conclusions

2. The pre-enlightenment (mid 1970s to mid 1990s)

- Recognition of role of nicotine as central to tobacco addiction
- Introduction of more rigorous methods to smoking research

3. The enlightenment (mid 1990s to present)

- Introduction of systematic reviews and meta-analyses
- Increasing requirement for study registration and power analyses

Milestone findings

1970s: Brief opportunistic GP advice has a small but clinically significant effect in promoting lasting smoking cessation in patients

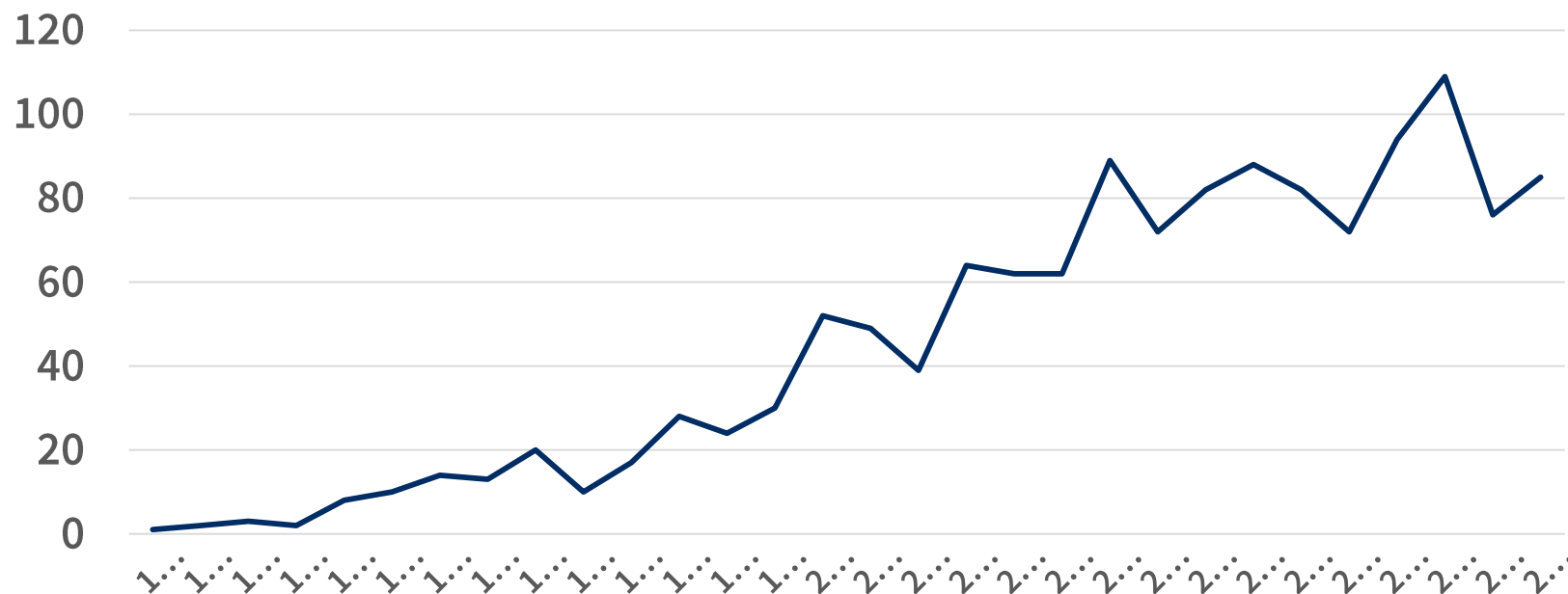
1980s: Nicotine replacement therapy (NRT) can increase the chances of success of quit attempts compared with placebo

1990s: Multi-session face-to-face psychological support can increase the chances of success of quit attempts compared with brief advice

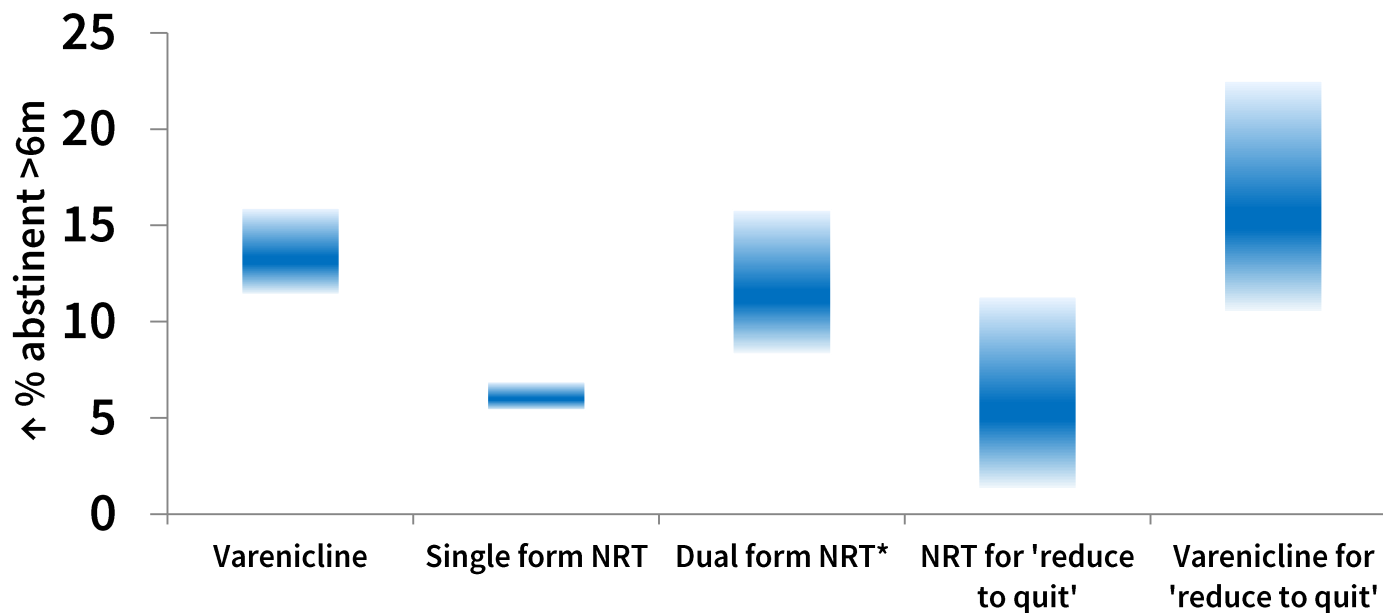
2000s: NRT can promote smoking cessation in smokers not ready to quit

2010s: Varenicline and dual form NRT (transdermal patch [plus a faster acting product) increase the chances of success of quit attempts more than single-form NRT

Systematic reviews of ‘smoking cessation interventions’ in PubMed

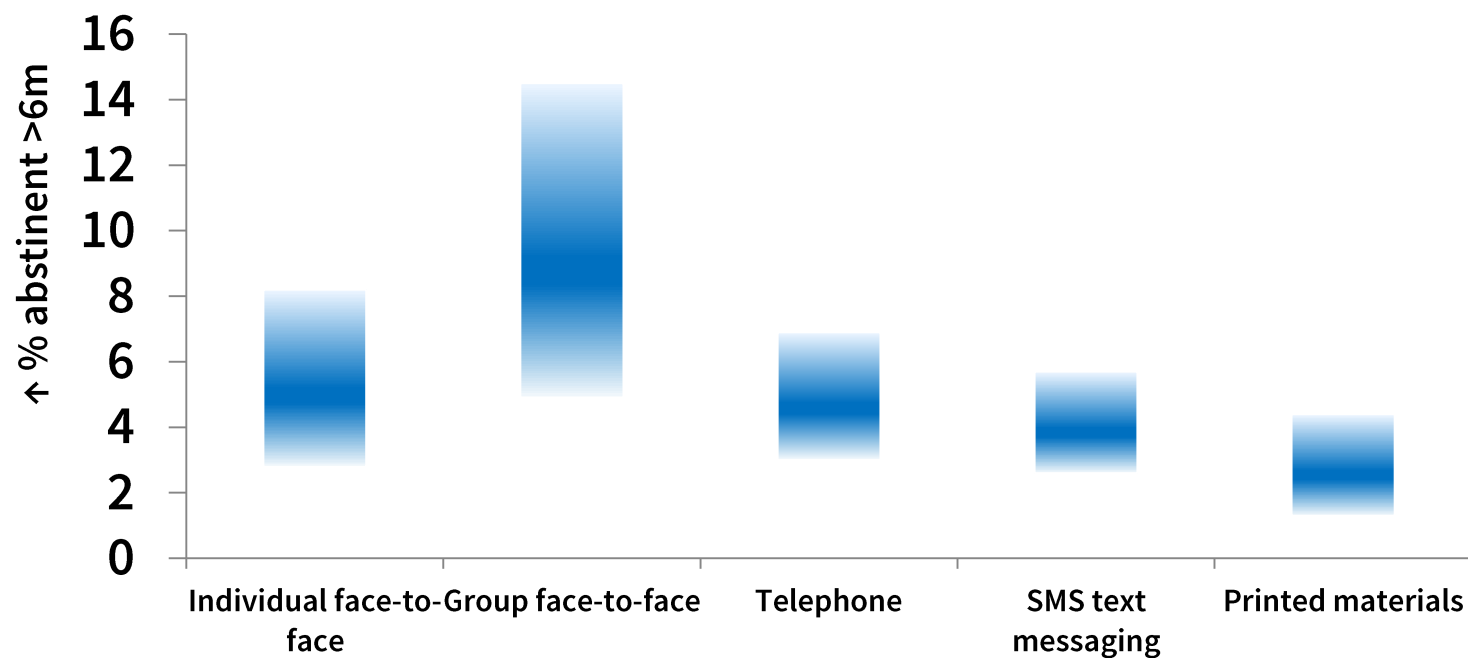


Medication



Data from RCTs; Cochrane reviews (NRT 2013; Varenicline 2016); Wu 2015
doi:10.3390/ijerph120910235; *Estimated by combining effect sizes; All comparisons are active
medication versus placebo in context of behavioural support

Psychological support



Data from RCTs; Cochrane reviews (2008, 2009, 2013, 2016); Indirect estimates compared with nothing; Insufficient data on smartphone apps; Mixed data on websites

Limitations in field to date

1. Limited evidence on impact of target population, usage, setting, combinations of interventions etc.
2. Poor description of intervention content and delivery
3. Lack of integrative models on mechanisms of action
4. Weak methods for judging and accounting for study 'quality' and bias
5. Lack of coherence in topics chosen for investigation

New research areas: examples

E-cigarettes

Implementing best practice

Standardised packaging

Burden of smoking in developing countries

What is in a Cochrane TAG review?

Professor Paul Aveyard
Professor of Behavioural Medicine,
University of Oxford

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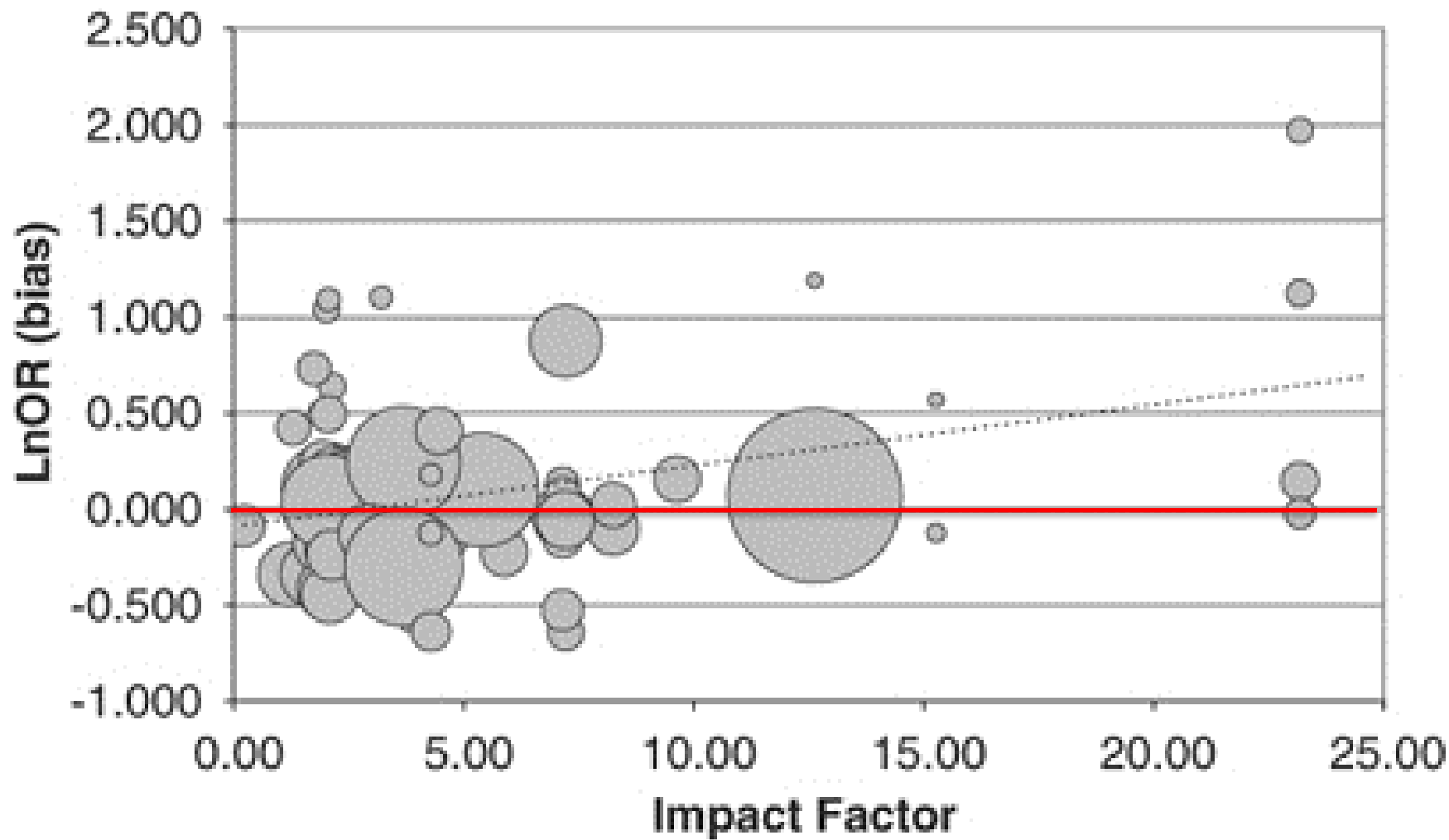
Conflicts of interest

- In the past three years I have not done consultancy work with pharmaceutical companies
- In one of our trials (Preloading), GSK has donated smoking cessation medication free of charge

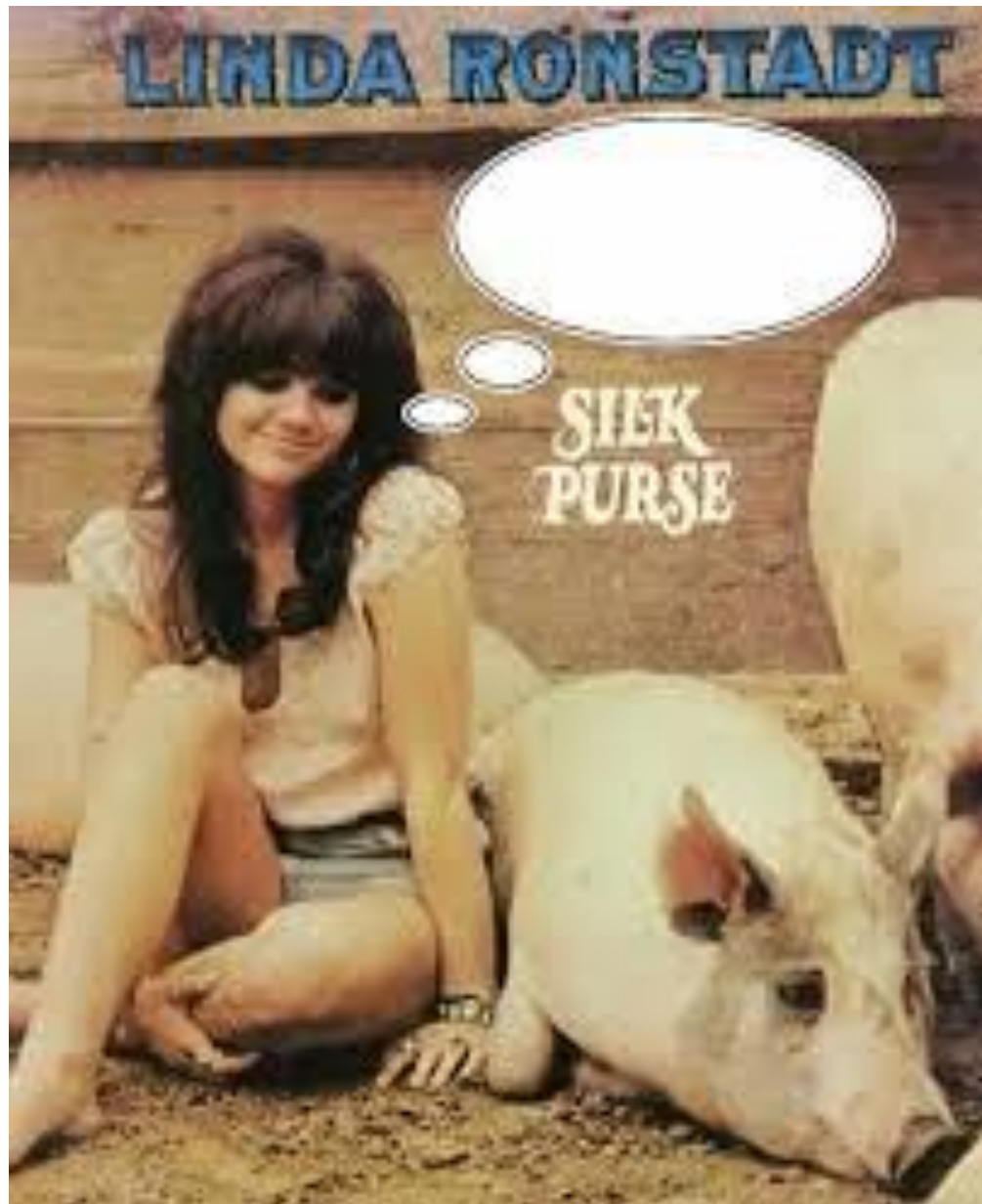
What is the aim?







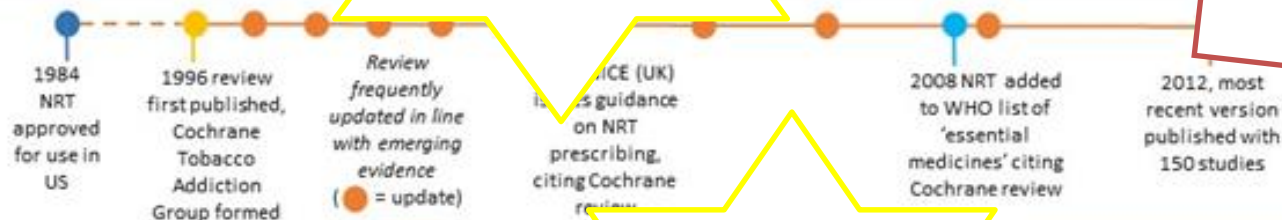




Nicotine replacement therapy: a review in review

Influencing healthcare guidance

Updated 10 times!



When we take a snapshot at 4-year intervals...

Influencing treatment availability

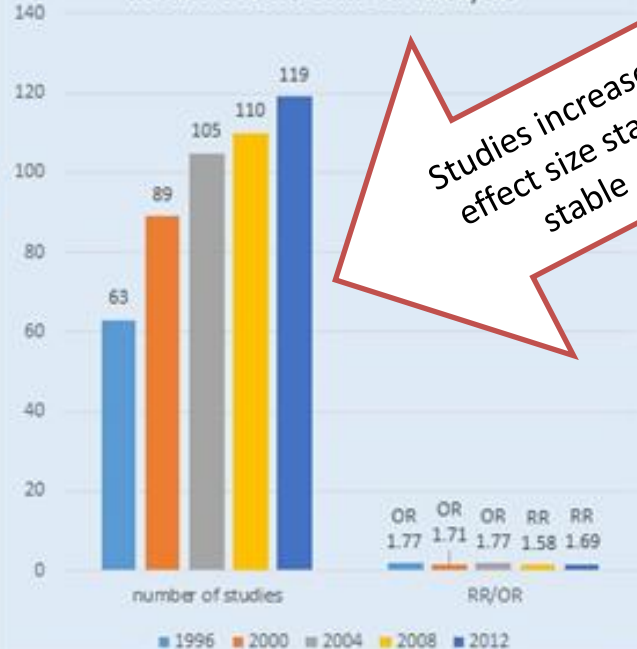
Adapts to usage methods

Number of studies per meta-analysis per update		Year of publication				
Comparison in meta-analysis		1996	2000	2004	2008	2012
prescribing and dosing	control	63*	89*	105*	110*	119*
	4mg v 2mg gum	3*	4*	5*	5*	5*
	high v low dose patch	3	6*	6*	7*	8*
	fixed v ad lib gum schedule		2	2	2	2
	abrupt v gradual weaning of patch			2	2	2
	precessation use v start on quit day				4*	8*
forms	combined vs single form of NRT			7*	7*	9*
	spray v patch			2	2	2
	lozenge v patch					3
compared with bupropion	NRT + bupropion v bupropion				2	4
	NRT v bupropion					5
	NRT + bupropion v placebo					2*

*Significant effect detected

See the full review: Stead LF et al. Nicotine replacement therapy for smoking cessation. Cochrane Database of Systematic Reviews 2012, Issue 11. DOI: 10.1002/14651858.CD000146.pub4.

Number of studies and effect estimate in NRT v control meta-analysis



Studies increase, effect size stays stable

Recent evidence: e-cigarettes

- It is important that TAG reviews move with the times
- The recent publication of the first version of our e-cigarette review was an example of this (McRobbie et al. 2014)
- Highlighted the lack of high quality research in the area- only 2 RCTs met the inclusion criteria!
- Received publicity worldwide, following press release & news briefing at the Science Media Centre in London, UK
- Due for update this year!



Thank you

paul.aveyard@phc.ox.ac.uk

How does Cochrane TAG work?

Lindsay Stead & Jamie Hartmann-Boyce
Managing Editors

Cochrane Tobacco Addiction Group
Nuffield Department of Primary Care Health
Sciences
University of Oxford

 @cochraneTAG

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This session

- About our group
- Lifecycle of a systematic review, including systematic searches and dissemination
- How to access and use the Cochrane Library
- How you can get involved

How the Cochrane TAG works

- Funded by the National Institute for Health Research (NIHR)
- Manages over 90 reviews & 350 authors
- Editorial base in the University of Oxford
Nuffield Department of Primary Care Health Sciences



Lindsay Stead
Managing Editor &
Information Specialist



Jamie Hartmann-Boyce
Managing Editor



Nicola Lindson-Hawley
Managing Editor



Tim Lancaster
Co-ordinating Editor



Kate Cahill
Managing Editor
2001-2015



Paul Aveyard
Editor, University of Oxford



Robert West
Editor, University College London



John Hughes
Editor, University of Vermont

Functions of the Editorial Base

- Manage the editorial process
- Find author teams for priority reviews
- Help authors access training
- Help authors use Cochrane software
- Maintain a register of trials relevant to reviews
- Manage searches
- Provide advice and support to authors
- Organise peer review of protocols and reviews

Life Cycle of a Review

1. Title

- Agree topic
- Agree author team responsibilities

2. Protocol

- Clearly stated objectives
- Pre-defined eligibility criteria
- Explicit, reproducible methodology
- Search strategy
- Publication in The Cochrane Library

Life Cycle of a Review

3. Full Review

- Systematic screening of search results
- Assessment of validity of included studies
- Data extraction
- Systematic synthesis
 - meta-analysis if appropriate
- Summary of findings table
- Plain language summary
- External peer review & editorial feedback
- Final draft & copy edit
- Publication in Cochrane Library

Life Cycle of a Review

4. Dissemination

- Press releases
- Podcasts, blogs, twitter
- Conference presentations

5. Updating

- Every two years for high priority topics with active research

TAG Specialised Register

- Database of reports of (randomized) controlled trials
- Likely to be relevant to current or future reviews
- Identified from regular searches of databases, eg Medline, conference abstracts and registers of ongoing trials
- Makes updating reviews quicker
- Identifies active research areas
- Partly study based – links multiple reports, and the study registration details
- Searchable via the Cochrane Library – Cochrane Central Register of Controlled Trials (CENTRAL)

Search	Search Manager	Medical Terms (MeSH)	Browse
<input type="text" value="Search All Text"/> Search Limits <input type="button" value="Clear"/>	<input type="text" value="SR-tobacco"/> Search Help Trials (What variations have been searched) Clear limits		<input type="button" value="Go"/> <input type="button" value="Save"/> Add to Search Manager

All Results (8130)

☒ Trials (8130)

☒ All

☐ Current Issue

- ☒ **Me** Methodology
- ☒ **Dx** Diagnostic
- ☒ **Ov** Overview
- ☒ **Pg** Prognosis
- ☒ **Qu** Qualitative
- ☒ **Cc** Conclusions changed
- ☒ **Ns** New search
- ☒ **Mc** Major change
- ☒ **Up** Update
- ☒ **Wd** Withdrawn
- ☒ **Cm** Comment

Cochrane Central Register of Controlled Trials : Issue 5 of 12, May 2016

There are 8130 results from 948714 records for your search on 'SR-tobacco in Trials'

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- ☐ [The coupling of nicotine and stimulant craving during treatment for stimulant dependence.](#)
 Magee JC and Winhusen T
 Journal of consulting and clinical psychology, 2016, 84(3), 230
 Publication Year: 2016

- ☐ [You can't pay me to quit: The failure of financial incentives for smoking cessation in head and neck cancer patients.](#)
 Ghosh A , Philiponis G , Bewley A , Ransom ER and Mirza N
 Journal of laryngology and otology, 2016, 130(3), 278
 Publication Year: 2016

- ☐ [BMI changes in adolescents treated with bupropion SR for smoking cessation.](#)
 Floden L , Taren DL , Muramoto ML and Leischow SJ
 Obesity (Silver Spring, Md.), 2016, 24(1), 26
 Publication Year: 2016

- ☐ [The role of tobacco outlet density in a smoking cessation intervention for urban youth.](#)
 Mennis J , Mason M , Way T and Zaharakis N
 Health & place, 2016, 38, 39
 Publication Year: 2016

- ☐ [Varenicline effects on smoking, cognition, and psychiatric symptoms in schizophrenia: A double-blind randomized trial.](#)
 Smith RC , Amiaz R , Si T-M , Maayan L , Jin H , Boules S , Sershen H , Li C , Ren J , Liu Y , Youseff M , Lajtha A , Guidotti A , Weiser M and Davis JM
 PloS one, 2016, 11(1) (no pagination)
 Publication Year: 2016

Dissemination (sharing our reviews)

- Guiding principle for disseminating Cochrane reviews:
reach the widest possible audience via different routes
whilst maintaining the integrity of the individual
Cochrane reviews
- Key user groups

**Clinicians and
healthcare
workers**

Researchers

**Consumers
(patients and
carers)**

Students

Policy makers

How we share our findings

Central Cochrane activities:

- Press releases and briefings
- Podcasts and journal clubs
- Featured reviews on Cochrane websites
- Editorials and special collections
- Social media

CTAG specific activities:

- Blogs
- Liaison with guideline developers (for example, NICE)
- Twitter
- Attendance at key conferences
- Events for members of the public, including science fairs

Topics of our tobacco-related reviews

Individual-level interventions for quitting

Medications for quitting tobacco

- Antidepressants, such as bupropion
- Anxiolytics (anti-anxiety)
- Cannabinoid type 1 receptor antagonists
- Clonidine
- Lobeline
- Mecamylamine
- Nicobrevin
- Nicotine receptor partial agonists, such as varenicline
- Nicotine replacement therapy
- Nicotine vaccines
- Opioid antagonists
- Silver acetate
- An overview of medications

Combinations of medications & behavioural therapy

- Medication plus behavioural support
- Intensity of behavioural support provided with medications

Complimentary therapies

- Acupuncture
- Hypnotherapy

Behavioural therapy for quitting tobacco

- Group therapy
- Individual therapy
- Internet-based therapy
- Mobile phone based therapy
- Motivational interviewing
- Print-based therapy
- Reduction versus abrupt quitting
- Stage-based therapy
- Telephone-based therapy

Population & system-level interventions for quitting

Population-level interventions

- Community interventions
- Institutional smoking bans
- Legislative smoking bans
- Packaging design
- Workplace interventions
- Impact of smoking in the media
- Mass media

Service delivery interventions

- Healthcare financing systems
- Training health professionals
- Recruiting smokers into cessation programmes
- Support from electronic health records
- System change
- Improving delivery in primary care

Quitting interventions for specific groups

Interventions for specific groups

- Preoperative patients
- Smokeless tobacco users
- Smokers with schizophrenia
- Hospitalised patients
- Indigenous populations
- Substance abusers
- Smokers with HIV and AIDS
- Waterpipe users
- Smokers with pulmonary tuberculosis
- Smokers with current/past depression
- Young people
- In psychiatric settings
- Smokers with chronic inflammatory arthropathy disease

By provider

- Community/pharmacy
- Physician
- Dental setting
- Nurses

Prevention

Interventions to prevent tobacco use

- Community interventions for young people
- Family-based interventions
- Impact of tobacco promotion
- Incentives
- Prevention of tobacco sales to minors
- Youth in indigenous populations
- School policies
- School based programmes
- Mass media

Other types of interventions

Other types of interventions

- Aversive smoking
- Biomedical risk assessment
- Competitions
- Electronic cigarettes
- Partner support
- Exercise
- Incentives
- Increasing adherence to medications
- Relapse prevention
- Genomic analysis

Interventions to reduce harm

- Family/carer smoking control programmes to reduce environmental smoke
- Prevention of weight gain on quitting smoking
- Harm reduction interventions

Using the Cochrane Library

Funded by
NHS
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Health Research



Cochrane
Library

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[Cochrane.org](https://www.cochrane.org)

Search title, abstract, keyword



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Psychological preparation and postoperative outcomes
For adults having elective surgery under general anaesthesia

[Read the review](#) ➔



Breast cancer chemotherapy test

[Read the editorial](#) ➔



World No Tobacco Day

[Read the Special Collection](#) ➔

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Biologic interventions for fatigue in rheumatoid arthritis

Celia Almeida, Ernest HS Choy, Sarah Hewlett, John R Kirwan, Fiona Cramp, Trudie Chalder, Jon Pollock, Robin Christensen

6 June 2016

Psychological preparation and postoperative outcomes for adults undergoing surgery



Accessing a review on the library



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Cochrane Database of Systematic Reviews

Nicotine receptor partial agonists for smoking cessation

New search

Conclusions changed

Review

Intervention

Kate Cahill, Nicola Lindson-Hawley, Kyla H Thomas, Thomas R Fanshawe, Tim Lancaster

First published: 9 May 2016

Assessed as up-to-date: 12 May 2015

Editorial Group: Cochrane Tobacco Addiction Group

DOI: 10.1002/14651858.CD006103.pub7 View/save citation

Cited by: 0 articles Check for new citations



22



Text size



Share



Comment

Plain language summary

English | Croatian | Russian

Can nicotine receptor partial agonists, including cytisine and varenicline, help people to stop smoking?

Background

When people stop smoking they experience cravings to smoke and unpleasant mood changes. Nicotine receptor partial agonists aim to reduce these withdrawal symptoms and the pleasure people usually experience when they smoke. The most widely-available treatment in this drug type is varenicline, which is available world-wide as an aid for quitting smoking. Cytisine is a similar medication, but is only available in Central and Eastern European countries and through internet sales.

Study characteristics

We searched for randomised controlled trials testing varenicline, cytisine or dianicline. We found 39 studies of varenicline compared to placebo, bupropion or nicotine patches. We also found four trials of cytisine, one of which compared it to nicotine replacement therapy. We include one trial of dianicline, which is no longer in development, and so not available to use as a quitting aid. To be included, trials had to report quit rates at least six months from the start of treatment. We preferred the strictest available definition of quitting, and results which had been biochemically confirmed by testing blood or bodily fluids. We conducted full searches up to May 2015, although we have also included several key trials published after that date.

Key findings

From the information we found (27 trials, 12,625 people), varenicline at standard dose more than doubled the chances of quitting compared with placebo. Low-dose varenicline (four trials, 1266 people) roughly doubled the chances of quitting, and reduced the number and severity of side effects. The number of people stopping smoking with varenicline was higher than with bupropion (five trials, 5877 people) or with NRT (eight trials, 6264 people). Based on the evidence so far, we can calculate that varenicline delivers one extra successful quitter for every 11 people treated, compared with smokers trying to quit without varenicline.

Most common side effect of varenicline is nausea, but this is mostly at mild or moderate

Abstract

Background

Nicotine receptor partial agonists may help people to stop smoking by a combination of maintaining moderate levels of dopamine to counteract withdrawal symptoms (as an agonist) and reducing smoking satisfaction (acting as an antagonist).

Objectives

To review the efficacy of nicotine receptor partial agonists, including varenicline for smoking cessation.

Summary of findings tables

- Summary of key information from review
- Most important outcomes for someone making a decision

Cytisine versus placebo for smoking cessation

Patient or population: Individuals who smoke tobacco
Setting: Varied
Intervention: Cytisine
Comparison: Placebo

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	N _o of participants (studies)	Quality of the evidence (GRADE)	Comments
	Risk with placebo	Corresponding risk with Cytisine				
Cytisine vs placebo: continuous abstinence at longest follow-up (24+ weeks)	Study population (where risk refers to quitters)		RR 3.98 (2.01 to 7.87)	937 (2 RCTs)	⊕⊕⊕⊕ LOW ¹	
	21 per 1000	85 per 1000 (43 to 169)				

*The risk in the intervention group (and its 95% confidence interval) is based on the assumed risk in the comparison group and the relative effect of the intervention (and its 95% CI). The assumed risk in the comparison group is calculated as the median risk in control groups.

CI: Confidence interval; RR: Risk ratio

GRADE Working Group grades of evidence

High quality: We are very confident that the true effect lies close to that of the estimate of the effect

Moderate quality: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different

Low quality: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect

Very low quality: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

How you can get involved

Comment on our reviews – register with our group to review our outputs before they come out

Help identify areas where we should be conducting reviews (today and in the future!)

Help identify reports of randomized controlled trials through **Cochrane Crowd** (<http://crowd.cochrane.org/faq.html>)

Participate in other tasks (e.g. translation) through **Cochrane Task Exchange** (<http://taskexchange.cochrane.org/>)

Clinicians and
healthcare
workers

Researchers

Consumers
(patients and
carers)

Students

Policy makers

The Cochrane Consumer network

- Network for patients, carers and members of the public
- Based in 79 countries
- Training and support are offered

Helps with:

- choosing research priorities
- identifying how research can be measured
- working alongside researchers to produce reviews
- checking the readability and helping to write Plain Language Summaries

Consumers

Join or find out more: @CochraneConsumr; Consumers.Cochrane.org;
ccnet@cochrane.org; www.facebook.com/CochraneConsumerNetwork

How to find out more or contact us

- Visit our website: <http://tobacco.cochrane.org/>
- Tweet us:  @cochraneTAG
- Email us: nicola.lindson-hawley@phc.ox.ac.uk
- Call us: +44 (0)1865 289 320



The Cochrane TAG taps project and survey results

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Aims of the Cochrane TAG anniversary project (CTAG taps)



- Raise awareness of the group, and what we have achieved so far
- Identify areas where further research is needed in the areas of tobacco control & smoking cessation by involving our stakeholders
- Identify specific goals for Cochrane TAG

Funded by the NIHR School for Primary Care Research

Raising awareness- outputs

- Increase Twitter profile- gained approx 290 followers in 2016 so far
- Promoting the group at public engagement events
 - Uni of Ox, Primary Care research methods talks
 - Oxfordshire Science Festival
- Promotion & talks at academic & practitioner conferences
- Writing review paper on what we do for an academic journal
- Put together special collection of reviews for World No Tobacco Day



Raising awareness- blogs

News & Events

Current news

► Cochrane Opportunities/jobs

Other opportunities/jobs

Select evidence-based health care events

► Workshops

Non-Cochrane workshops

Cochrane Tobacco Addiction Group



The BMJ [SUBSCRIBE NOW](#)

Jamie Hartmann-Boyce: Nicotine replacement evolution of an evidence base

EvidenceLive
University of Oxford **June 22 - 24 2016**

Beyond the buffet table: celebrating the past to inform the future



Dr Nicola Lindson-Hawley,
Cochrane Managing Editor

The [Cochrane Tobacco Addiction Group](#) (CTAG) are one of Cochrane's many subject specific editorial groups, which specialises in reviewing the evidence for the prevention and treatment of tobacco addiction. CTAG's work has been used to inform healthcare

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Nicola Lindson-Hawley

22 April 2016

[Health behaviours](#)



Left to right - Dr Nicola Lindson-Hawley, Dr Rachna Begh, and Jamie Hartmann-Boyce at a recent departmental open day.

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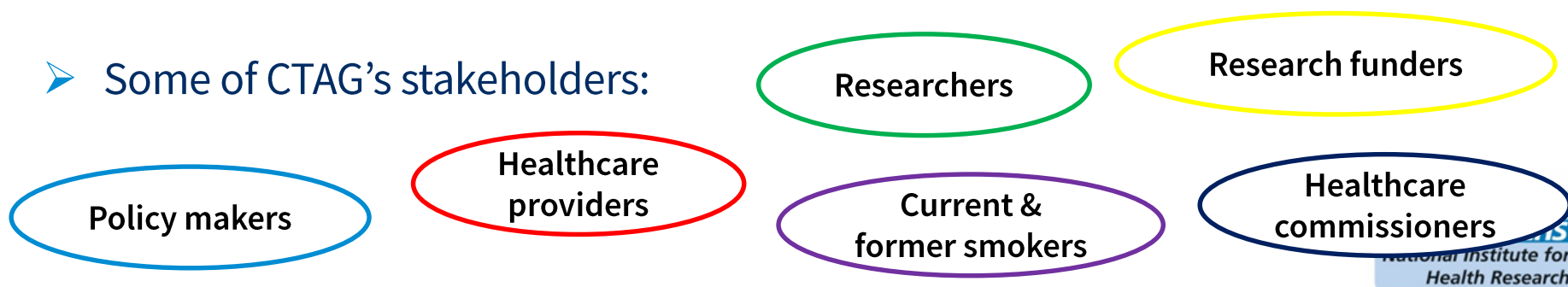
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Involving our stakeholders



- Until now CTAGs work has mainly been informed by researchers
- Including others in decisions about future directions will enable findings to:
1) be better applied to those who need them; and 2) have a higher global impact
- Some of CTAG's stakeholders:



Two stage prioritisation survey

STAGE 1

- Developed and presented to Nottingham smoker's panel – adjusted in response to comments
- Built in Survey Monkey and accessed via internet link
- Asked anyone with an interest in tobacco to share a max. of 4 questions they would like to see answered by tobacco control research
- Disseminated via mailing lists, contacting public health organisations, Twitter, Facebook, conferences, blogging

STAGE 2

- Again, checked by member of the public, built in Survey Monkey, accessed via link
- Asked original respondents to rank the questions identified in Stage 1 in order of importance (prioritisation)
- Opportunity to win 1 of 3 Amazon vouchers



- Funded by
NHS
National Institute for
Health Research

Research categories

Addressing inequalities

Nicotine and tobacco risk

Alternative tobacco products

Population level interventions

Digital interventions

Pregnancy

E-cigarettes

Smoking bans and second-hand smoke

Illness & chronic disease sufferers

Smoking treatment methods excluding medications

Initiating quit attempts

Treatment delivery

Medications

Young people

Mental health and other substance abuse

Survey stage 2: Ranking uncertainties

- Over 1000 people gave full contact details and were emailed a

1. E-cigarettes

- Then asked to rank the 15 research categories in order of their importance (1 = most important; 15 least important)

- Then asked to rank the 15 research categories in order of their importance (1 = most important)

2. Addressing inequalities

- 175 people completed the survey (17% of those invited)

- Total ranks for each category/question were added together and the categories were ordered within their set and given an overall rank

3. Mental health & other substance abuse

- See pg. 12-14 for ranked categories and the top 5 categories

Stage 3: Prioritisation Workshop

Attendee breakdown:



- Building on the survey today focuses more specifically on Cochrane TAG
- Involving discussion of where CTAG should focus its future efforts and ways to disseminate our findings
- The findings of the project will be written up, with our priorities & aims for the future, and published
- We will begin to work on the priorities before the end of the year and will continue to do so into the future

Any Questions?

Workshop Introduction

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Objectives

- 1 To involve key stakeholders in decision making about the Cochrane Tobacco Addiction Group's (CTAG) future direction.
- 2 To develop a set of research priorities for the Cochrane Tobacco Addiction Group, and the wider tobacco addiction research community.
- 3 To identify the best way to put future research into practice.

20th Anniversary Priority Setting Workshop

 #ctagtaps / @CochraneTAG

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