Abstract

Background: Many epidemiological studies report that alcoholics overwhelmingly smoke tobacco and vice versa, which suggests a possible functional interaction between ethanol and nicotine. Although nicotine–ethanol interaction is well documented within the central nervous system, the mechanism is not well understood. Therefore, it is important from a public health standpoint to understand the mechanisms involved in nicotine and ethanol functional interaction. The intracerebellar (ICB) administration of nicotine significantly attenuates ethanol ataxia through nicotinic acetylcholine receptor (nAChR) \( \alpha_4\beta_2 \) subtype. This study, an extension of earlier work, was intended to investigate the possible role of nAChR subtype \( \alpha_7 \) in mitigating ethanol ataxia.

Methods: The effect of ICB injection of PNU-282987 (\( \alpha_7 \) agonist; 25 ng to 2.5 \( \mu \)g) and the antagonist methyllycaconitine was evaluated on ethanol (2 g/kg; i.p.)-induced ataxia with a Rotorod. Cerebellar nitric oxide was determined fluorometrically in the presence of ethanol and/or PNU-282987.

Results: Attenuation of ethanol-induced ataxia following PNU-282987 microinfusion was dose-dependent suggesting the participation of \( \alpha_7 \) subtype in nicotine and ethanol interaction. Intracerebellar pretreatment with methyllycaconitine (\( \alpha_7 \)-selective antagonist; 6 ng) virtually abolished the attenuating effect of PNU-282987 as well as the effect of nicotine, but not of RJR-2403 (\( \alpha_4\beta_2 \)-selective agonist; 125 ng) on ethanol-induced ataxia. Finally, ethanol administration significantly decreased cerebellar NO\(_x\), whereas ICB PNU-282987 significantly increased and/or opposed ethanol-induced decrease in NO\(_x\). These results were functionally in agreement with our Rotorod data.

Conclusions: These observations confirmed the following: (i) \( \alpha_7 \) participation in nicotine–ethanol interaction and (ii) \( \alpha_7 \)-selectivity of methyllycaconitine. Overall, the results demonstrate the role of cerebellar nAChR \( \alpha_7 \) subtype in nicotine-induced attenuation of ethanol-induced ataxia in cerebellar NO\(_x\)-sensitive manner.

The Tobacco Industry Tactics? A Challenge for Tobacco Control in Low and Middle Income Countries


Doku, D.

Tobacco use has fallen over the past decades in many developed countries. However in the developing countries smoking and tobacco use in general is now emerging. This commentary discusses the tactics of the tobacco industry and the challenges for tobacco in middle and low income countries in the 21st century...

While lauding the demonstration of the political will of many governments both in low and middle income countries in tobacco control through such things as the signing of the FCTC, it is equally incumbent on these countries, especially those in African to work out pragmatic and realistic modus operandi of dealing with the menace in a way that will yield significant and sustainable results. The tobacco industry is seeing a bright market in the developing world, and an alternative to the losing markets the developed world. It has not given up yet. Governmental and non-governmental organizations and tobacco advocacy groups working in low and middle income countries must be constant and innovative in their fight against tobacco. Policy actions are urgently needed in the fight against tobacco use. Increase in tobacco taxation; ban on advertising; promotion and sponsorship; and public education on the health, environmental and economic consequences of tobacco use; and checking tobacco smuggling and surveillance are some of the measures that can nullify the strategies and tactics of the tobacco industry and consequently help control the tobacco epidemic particularly in developing countries and in the world at large.

http://www.bioline.org.br/pdf?hs10038

Note: Full text PDF freely available from link immediately above.

Correspondence

Re: Risk of Incident Cardiovascular Disease Among Users of Smokeless Tobacco in the Atherosclerosis Risk in Communities (ARIC) Study


Joel L. Nitzkin

Yatsuya and Folsom (1) published data on and conclusions about cardiovascular disease incidence in smokeless tobacco users from the Atherosclerosis Risk in Communities Study data set. They concluded, “Current users of smokeless tobacco should be informed of its harm and advised to quit the practice. Current cigarette smokers should also be given sufficient information on safe, therapeutic methods of quitting which do not include switching to smokeless tobacco” (1, p. 600). These conclusions were not supported by either the literature review or the findings presented in their article. In their introductory literature review, the authors noted a number of prospective studies that showed no increase in risk of cardiovascular disease and concluded that the “health effects of smokeless tobacco are inconclusive” (1, p. 600)...

Nowhere did they reference the relative lack of efficacy of currently available nicotine replacement therapy products when those products are used as directed (3). They did not reference the fact that nicotine replacement therapy products have never been approved by the US Food and Drug Administration for long-term use. They failed to note the potential public health benefit of informing current smokers that those
unable or unwilling to quit can eliminate almost all risk of future tobacco-related illness by switching to snus (4). Not having discussed these topics, Yatsuya and Folsom should have refrained from drawing any conclusions relative to current smokers or the potential utility of “safe, therapeutic methods of quitting” (1, p. 604).

The Authors Reply


Hiroshi Yatsuya and Aaron R. Folsom

...The CVD incidence rate for dual users was higher than the rate for those who only smoked cigarettes (22.9 vs. 16.1 per 1,000 person years; Table 3 of our original article), although the association between smokeless tobacco use and CVD incidence in current cigarette smokers was not independent of the confounding factors. We also performed an analysis in which we categorized participants into 4 categories by current smokeless tobacco use (yes or no) and current cigarette smoking (yes or no). Crude hazard ratios compared with no smokeless tobacco and no cigarette use were 1.60 (95% confidence interval, 1.30, 1.96) for smokeless tobacco only, 1.68 (95% confidence interval, 1.54, 1.83) for cigarette smoking only, and 1.81 (95% confidence interval, 1.28, 2.55) for dual use. Thus, even though the CVD risks associated with cigarette smoking might be higher than those for smokeless tobacco, we believe it is inappropriate to advocate converting cigarette smokers to smokeless tobacco users as Nitzkin does (1), especially given the other harmful effects of smokeless tobacco, such as oral cancer (5). Users of any type of tobacco should quit...

In conclusion, we still believe that our data support our conclusions that current users of smokeless tobacco should be informed of its harmful effects and be advised to quit the habit and that current cigarette smokers should also be give information on other safe, therapeutic modalities for quitting, which do not include switching to smokeless tobacco.

Referenced AJE study:

Risk of Incident Cardiovascular Disease Among Users of Smokeless Tobacco in the Atherosclerosis Risk in Communities (ARIC) Study
http://aje.oxfordjournals.org/cgi/content/abstract/kwq191

Also:

http://aje.oxfordjournals.org/content/173/5/526.abstract

Am J Addict - Massey/Herrera

Association of Clinical Characteristics and Cessation of Tobacco, Alcohol, and Illicit Drug Use during Pregnancy


Massey SH, Lieberman DZ, Reiss D, Leve LD, Shaw DS, Neiderhiser JM.
Abstract

Pregnancy is a time of relative urgency and opportunity for the treatment of substance use disorders in women, yet little is known about modifiable factors that contribute to successful abstinence. We examined self-worth, depression, anxiety, and novelty seeking in the context of substance use cessation during pregnancy in a sample of women with a high prevalence of substance abuse. Subjects were 448 birth mothers who participated in a prospective adoption study. Discontinuation rates were: tobacco 22.2%, alcohol 64.7%, marijuana 77.2%, and other drugs, 73.7-100%. Depression, anxiety, and novelty seeking were lower among women who discontinued substance use, compared to those who did not. Self-worth was higher in women who discontinued substance use. Among 110 polysubstance users, the number of substances discontinued during pregnancy was correlated with depression, anxiety, and self-worth in the hypothesized direction. Possible clinical implications are discussed.


Also:

Mood and Cue Reactivity among Smokers with a History of Major Depression: The Role of Rumination and Impulsivity

Anesthesiol - Warner

Clinician-delivered Intervention to Facilitate Tobacco Quitline Use by Surgical Patients

Anesthesiology. 2011 Feb 10. [Epub ahead of print]


Abstract

BACKGROUND: Telephone quitlines that provide counseling support are efficacious in helping cigarette smokers quit and have been widely disseminated; currently, they are underused. Surgery represents a teachable moment for smoking cessation, which can benefit surgical outcomes; however, few surgical patients receive smoking cessation interventions. This study developed and tested a clinician-delivered intervention to facilitate quitline use by adult patients scheduled for elective surgery.

METHODS: After formative work involving patients and clinicians, a brief intervention was designed to facilitate telephone quitline use. It was then evaluated in a randomized trial of 300 adults scheduled for elective surgery. A control standard brief stop-smoking intervention served as a comparator, with both interventions delivered by clinicians. The primary outcome was the use rate of a quitline accessed through a dedicated toll-free telephone number, with use defined as completing at least one full counseling session. Secondary outcomes included self-reported abstinence from cigarettes at 30 and 90 days postoperatively.

RESULTS: Subject characteristics were similar between the two groups. Records from the designated quitline documented that 29 of 149 subjects (19.5%) in the quitline intervention group and 0 of 151 subjects in the control group completed the first full counseling session (P < 0.0001). There were no significant differences in the self-reported point-prevalent and continuous abstinence rates between groups at either 30 or 90 days postoperatively, although rates tended to be higher in the quitline intervention group.

CONCLUSIONS: Clinicians can effectively facilitate quitline use by surgical patients. Further work is necessary to evaluate the efficacy of this approach in terms of long-term abstinence from cigarette smoking.

http://journals.lww.com/anesthesiology/Abstract/publishahead...
Biomark - Wang

Is 24h nicotine equivalents a surrogate for smoke exposure based on its relationship with other biomarkers of exposure?

Biomarkers. 2011 Mar;16(2):144-54.

Wang J, Liang Q, Mendes P, Sarkar M.

Abstract

Nicotine and its 5 major metabolites (Nicotine equivalents, NE) may serve as a surrogate biomarker for smoke exposure. Objective: To investigate the relationship between nicotine equivalents (NE) and biomarkers of exposure (BOE) to cigarette smoke. Methods: Data from nine controlled studies in 916 adult smokers were used. BOEs to nicotine, NNK, pyrene, acrolein, benzene, 1,3-butadiene and CO were used. Results: Among all the factors investigated (NE, cigarette type, age, gender, BMI and study), NE was the most statistically significant factor for all biomarker relationships. Weak to moderate relationships ($0.32 \leq R^2 \leq 0.65$) were found between NE and the BOEs. Conclusions: Based on the relationships with BOEs, NE may be considered as a surrogate biomarker of total cigarette smoke exposure.

Declaration of interest

All authors are or were employees of Philip Morris USA Inc. / Altria Services Inc.

http://informahealthcare.com/doi/abs/10.3109/1354750X.2010.5...

Note: Tobacco industry research.

Biomed Environ Sci - Yang/Xiao/Hsia

Awareness of tobacco-related health hazards among adults in China


Yang Y, Wang JJ, Wang CX, Li Q, Yang GH.

Abstract

OBJECTIVE: To determine the level of awareness of the hazards of tobacco smoking and secondhand smoke inhalation among adults in China.

METHODS: Household surveys were conducted with a total of 13,354 respondents aged 15 years or over from 100 counties of 28 Chinese provinces using a stratified multi-stage geographically clustered sample design.

RESULTS: The findings revealed that 81.8% of the population was aware that smoking causes serious diseases, and 27.2% and 38.7% were aware that smoking causes stroke and heart attack, respectively. Only 64.3% of respondents were aware that secondhand smoke can cause serious diseases, and 27.5%, 51.0%, and 52.6% were aware that secondhand smoke causes heart disease in adults, lung disease in children and lung cancer in adults, respectively. Awareness regarding smoking-related hazards across all participants was significantly associated with several factors, including gender, smoking status, urban/rural residency, education level and exposure to tobacco control publicity in the last 30 days. Awareness regarding tobacco-related hazards in smokers was significantly associated with urban/rural residency, education level, exposure to tobacco control publicity in the last 30 days, and physician's advice. Awareness relating to the hazards of inhaling secondhand smoke was associated with smoking status, urban/rural residency, age,
education level, and exposure to tobacco control publicity in the last 30 days. Medical professionals were found to know more about the health hazards of tobacco compared with people in other types of employment.

CONCLUSIONS: Overall awareness of the health hazards of tobacco has improved in the last 15 years in China, but is still relatively poor. Improved means of communicating information and more effective warning labels on cigarette packaging are necessary for increasing public awareness of tobacco hazards, particularly among rural residents and people with less education.

Also:

Monitoring Epidemic of Tobacco Use, Promote Tobacco Control
Findings from 2010 Global Adult Tobacco Survey: Implementation of MPOWER Policy in China
Population-Based Survey of Secondhand Smoke Exposure in China
Methodology of the Global Adult Tobacco Survey in China, 2010
Global Adult Tobacco Survey(GATS): Fact Sheet China: 2010

http://www.sciencedirect.com/science/journal/08953988

BMC Pub Health - Leinsalu

Is income or employment a stronger predictor of smoking than education in economically less developed countries? A cross-sectional study in Hungary


Leinsalu M, Kaposvari C, Kunst AE.

Abstract

BACKGROUND: In developed European countries in the last phase of the smoking epidemic, education is a stronger predictor of smoking than income or employment. We examine whether this also applies in economically less developed countries.

METHODS: Data from 7218 respondents in the 25-64 age group came from two National Health Interview Surveys conducted in 2000 and 2003 in Hungary. Independent effects of educational level, income and employment status were studied in relation to smoking prevalence, initiation and continuation for all age groups combined and separately for 25-34, 35-49 and 50-64 years old. Absolute levels were evaluated by using age-standardized prevalence rates. Relative differences were assessed by means of logistic regression.

RESULTS: Education and income, but not employment, were associated with equally large differences in smoking prevalence in Hungary in the 25-64 age group. Among men, smoking initiation was related to low educational level, whereas smoking continuation was related to low income. Among women, low education and low income were associated with both high initiation and high continuation rates. Considerable differences were found between the age groups. Inverse social gradients were generally strongest in the youngest age groups. However, smoking continuation among men had the strongest association with low income for the middle-aged group.

CONCLUSIONS: Patterns of inequalities in smoking in Hungary can be best understood in relation to two processes: the smoking epidemic, and the additional effects of poverty. Equity orientated tobacco control measures should target the low educated to prevent their smoking initiation, and the poor to improve their cessation rates.

http://www.biomedcentral.com/1471-2458/11/97
http://www.biomedcentral.com/content/pdf/1471-2458-11-97.pdf
BMC Res Notes - Mannan

Age at quitting smoking as a predictor of risk of cardiovascular disease incidence independent of smoking status, time since quitting and pack-years


Mannan HR, Stevenson CE, Peeters A, Walls HL, McNeil JJ.

Abstract

BACKGROUND: Risk prediction for CVD events has been shown to vary according to current smoking status, pack-years smoked over a lifetime, time since quitting and age at quitting. The latter two are closely and inversely related. It is not known whether the age at which one quits smoking is an additional important predictor of CVD events. The aim of this study was to determine whether the risk of CVD events varied according to age at quitting after taking into account current smoking status, lifetime pack-years smoked and time since quitting.

FINDINGS: We used the Cox proportional hazards model to evaluate the risk of developing a first CVD event for a cohort of participants in the Framingham Offspring Heart Study who attended the fourth examination between ages 30 and 74 years and were free of CVD. Those who quit before the median age of 37 years had a risk of CVD incidence similar to those who were never smokers. The incorporation of age at quitting in the smoking variable resulted in better prediction than the model which had a simple current smoker/non-smoker measure and the one that incorporated both time since quitting and pack-years. These models demonstrated good discrimination, calibration and global fit. The risk among those quitting more than 5 years prior to the baseline exam and those whose age at quitting was prior to 44 years was similar to the risk among never smokers. However, the risk among those quitting less than 5 years prior to the baseline exam and those who continued to smoke until 44 years of age (or beyond) was two and a half times higher than that of never smokers.

CONCLUSIONS: Age at quitting improves the prediction of risk of CVD incidence even after other smoking measures are taken into account. The clinical benefit of adding age at quitting to the model with other smoking measures may be greater than the associated costs. Thus, age at quitting should be considered in addition to smoking status, time since quitting and pack-years when counselling individuals about their cardiovascular risk.

http://www.biomedcentral.com/1756-0500/4/39
http://www.biomedcentral.com/content/pdf/1756-0500-4-39.pdf

Note: Full text PDF freely available from link immediately above.

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CC&C - Sakoda/Ma/Wu

Chromosome 15q24-25.1 variants, diet, and lung cancer susceptibility in cigarette smokers

Cancer Causes and Control
Volume 22, Number 3, 449-461, DOI: 10.1007/s10552-010-9716-1

Abstract

Background

Studying gene–environment interactions may provide insight about mechanisms underpinning the reported association between chromosome 15q24-25.1 variation and lung cancer susceptibility.

Methods

In a nested case–control study comparing 746 lung cancer cases to 1,477 controls, all of whom were non-Hispanic white smokers in the β-Carotene and Retinol Efficacy Trial, we examined whether lung cancer risk is associated with single nucleotide polymorphisms (SNPs) tagging the AGPHD1, CHRNA5, CHRNA3, and CHRNB4 genes and whether such risk is modified by diet and other characteristics. Intake of fruits and vegetables, their botanical groups, and specific nutrients were ascertained generally at baseline by food-frequency questionnaire.

Results

Several sets of SNPs in high linkage disequilibrium were found: one set associated with a 27–34% increase and two sets associated with a 13–19% decrease in risk per minor allele. Associations were most prominent for the set including the non-synonymous SNP rs16969968. The rs16969968-lung cancer association did not differ by intake level of most dietary factors examined, but was stronger for individuals diagnosed at <70 years of age or having a baseline smoking history of <40 cigarette pack-years.

Conclusions

Our data suggests that diet has little influence on the relation between chromosome 15q24-25.1 variation and lung cancer risk.

http://www.springerlink.com/content/6218257m61m88566/

Also:

Cigarette smoking shortens the survival of patients with low-risk myelodysplastic syndromes http://www.springerlink.com/content/13u551334222x402/
Smoking and alcohol drinking increased the risk of esophageal cancer among Chinese men but not women in a high-risk population http://www.springerlink.com/content/k54u6449742gk6t2/ http://www.springerlink.com/content/k54u6449742gk6t2/fulltext...
Background: Several countries are discussing new legislation regarding the ban on smoking in public places, based on the growing evidence of the hazards of second-hand smoke (SHS) exposure. The objective of the present study is to quantitatively assess the relationship between smoking, SHS and serum cotinine levels in the large European Prospective Investigation into Cancer and Nutrition (EPIC) cohort. Methods: From a study on lung cancer in the EPIC cohort, questionnaire information on smoking was collected at enrolment, and cotinine was measured in serum. Three statistical models were applied using samples available in a cross-section design: 1) cotinine levels by categories combining smoking and SHS (n=859); 2) the effect of hours of passive smoking exposure in non-smokers only (n=107); 3) the effect of the number of cigarettes consumed per day in current smokers only (n=832). All models were adjusted for country, sex, age and body mass index. Results: Amongst non-smokers, passive smokers presented significant differences in cotinine compared to non-exposed, with a marked (but not significant) difference among former smokers. A one hour per day increment of SHS gave rise to a significant 2.58 nmol/L (0.45 ng/mL) increase in mean serum cotinine (P<0.001). In current smokers, a one cigarette per day increment gave rise to a significant 22.44 nmol/L (3.95 ng/mL) increase in cotinine mean (P<0.001). Conclusions: There is clear evidence that not only tobacco smoking but also involuntary exposure increases cotinine levels. Impact: This study strengthens the evidence for the benefits of a smoking ban in public places.

http://cebp.aacrjournals.org/content/early/2011/02/21/1055-9...

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Cochrane Data Syst Rev - Ebbert

Interventions for smokeless tobacco use cessation
Ebbert J, Montori VM, Erwin PJ, Stead LF.
Abstract
BACKGROUND: Use of smokeless tobacco (ST) can lead to nicotine addiction and long-term use can lead to health problems including periodontal disease, cancer, and cerebrovascular and cardiovascular disease.
OBJECTIVES: To assess the effects of behavioural and pharmacologic interventions for the treatment of ST use.
SEARCH STRATEGY: We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, CINAHL, Web of Science, PsycINFO, Dissertation Abstracts Online, and Scopus. Date of last search: October 2010.
SELECTION CRITERIA: Randomized trials of behavioural or pharmacological interventions to help users of ST to quit with follow up of at least six months.
DATA COLLECTION AND ANALYSIS: Two authors independently extracted data. We summarised as odds ratios. For subgroups of trials with similar types of intervention and without substantial statistical heterogeneity, we estimated pooled effects using a Mantel-Haenszel fixed-effect method.
MAIN RESULTS: Data from one study suggest that varenicline increases ST abstinence rates (Odds Ratio [OR] 1.6, 95% Confidence Interval (CI) 1.08 to 2.36) among Swedish snus users. Two trials of bupropion SR did not detect a benefit of treatment at six months or longer (OR 0.86, 95% CI 0.47 to 1.57). Nicotine replacement therapy (patch, gum, and lozenge) was not observed to increase tobacco abstinence rates (OR 1.14, 95% CI: 0.91 to 1.42). There was statistical heterogeneity among the 14 trials of behavioural interventions; seven of them reported statistically and clinically significant benefits, four suggested benefit but with wide CIs, whilst two had similar intervention and control quit rates and relatively narrow CIs. Heterogeneity was not explained by the design (individual or cluster randomization), whether participants were selected for interest in quitting, or specific intervention components. Most trials included either telephone counselling, an oral examination and feedback about any ST induced mucosal changes, or both. In a post-hoc subgroup analysis there was some evidence that behavioural interventions which include telephone counselling might increase abstinence rates more than interventions with less contact. In one trial an interactive website increased abstinence more than a static website.
AUTHORS’ CONCLUSIONS: Varenicline and behavioural interventions may help ST users to quit. Behavioural interventions incorporating telephone counselling or an oral examination are likely to increase abstinence rates.

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Crit Pub Health - Bell/Dennis
Legislating abjection? Secondhand smoke, tobacco control policy and the public’s health

Critical Public Health, First published on: 17 February 2011 (iFirst)
Kirsten Bell

Abstract

Since the mid-1990s, the position that 'no amount of secondhand smoke is safe' has achieved hegemonic status in the field of public health. This has bolstered efforts in the tobacco control community to advocate for smoke-free legislation and a variety of countries around the world have implemented indoor smoking bans, with many others presently following suit. This article examines why secondhand smoke has been such a central focus in tobacco control and public health policy, despite the limitations of the available evidence base on its health impacts. I argue that public health responses to secondhand smoke can only be understood in relation to the liminal and transitive qualities of cigarette smoke and its capacity to dissolve the boundaries between bodies. My key goal is to illustrate the influence of cultural assessments about the nature of 'risk' on epidemiological standards of evidence. I contend that the subjectively experienced abjectness of cigarette smoke far more than the 'objectively' demonstrable harms to health it causes ultimately explains both popular and public health responses to the substance.

http://www.informaworld.com/smpp/content~db=all~content=a933...

Also:

Alcohol, tobacco, obesity and the new public health
http://www.informaworld.com/smpp/section?content=a933665640&...
Smoking causes creative responses: on state antismoking policy and resilient habits
http://www.informaworld.com/smpp/content~db=all~content=a931...

Harm Reduct J - Hidayat
Are smokers rational addicts? Empirical evidence from the Indonesian Family Life Survey

Harm Reduction Journal 2011, 8:6
Published: 23 February 2011
Budi Hidayat and Hasbullah Thabrany

Abstract

Background

Indonesia is one of the largest consumers of tobacco in the world, however there has been little work done on the economics addiction of tobacco. This study provides an empirical test of a rational addiction (henceforth RA) hypothesis of cigarette demand in Indonesia.

Methods

Four estimators (OLS, 2SLS, GMM, and System-GMM) were explored to test the RA hypothesis. The author adopted several diagnostics tests to select the best estimator to overcome econometric problems faced in presence of the past and future cigarette consumption (suspected endogenous variables). A short-run and long-run price elasticities of cigarettes demand was then calculated. The model was applied to individuals pooled data derived from three-waves a panel of the Indonesian Family Life Survey spanning the period 1993-2000.

Results

The past cigarette consumption coefficients turned out to be a positive with a p-value <1%, implying that cigarettes indeed an addictive goods. The rational addiction hypothesis was rejected in favour of myopic ones. The short-run cigarette price elasticity for male and female was estimated to be-0.38 and -0.57, respectively, and the long-run one was -0.4 and -3.85, respectively.
Conclusions

Health policymakers should redesign current public health campaign against cigarette smoking in the country. Given the demand for cigarettes to be more prices sensitive for the long run (and female) than the short run (and male), an increase in the price of cigarettes could lead to a significant fall in cigarette consumption in the long run rather than as a constant source of government revenue.

http://www.harmreductionjournal.com/content/8/1/6/abstract
http://www.harmreductionjournal.com/content/pdf/1477-7517-8-...

**Note:** Full text PDF freely available from link immediately above.

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**IJERPH - Kasza/King**

**The Effectiveness of Tobacco Marketing Regulations on Reducing Smokers’ Exposure to Advertising and Promotion: Findings from the International Tobacco Control (ITC) Four Country Survey**


Karin A. Kasza, Andrew J. Hyland, Abraham Brown, Mohammad Siahpush, Hua-Hie Yong, Ann D. McNeill, Lin Li and K. Michael Cummings

**Abstract**

Exposure to tobacco product marketing promotes the initiation, continuation, and reuptake of cigarette smoking and as a result the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) has called upon member Parties to enact comprehensive bans on tobacco advertising and promotion. This study examines the immediate and long term effectiveness of advertising restrictions enacted in different countries on exposure to different forms of product marketing, and examines differences in exposure across different socioeconomic status (SES) groups. Nationally representative data from the United Kingdom, Canada, Australia, and the United States, collected from adult smokers between 2002 and 2008 using the International Tobacco Control Four Country Survey (ITC-4), were used in this study (N = 21,615). In light of the specific marketing regulation changes that occurred during the course of this study period, changes in awareness of tobacco marketing via various channels were assessed for each country, and for different SES groups within countries. Tobacco marketing regulations, once implemented, were associated with significant reductions in smokers’ reported awareness of pro-smoking cues, and the observed reductions were greatest immediately following the enactment of regulations. Changes in reported awareness were generally the same across different SES groups, although some exceptions were noted. While tobacco marketing regulations have been effective in reducing exposure to certain types of product marketing there still remain gaps, especially with regard to in-store marketing and price promotions.

http://www.mdpi.com/1660-4601/8/2/321

**Also:**


http://www.mdpi.com/1660-4601/8/2/411

**Note:** Full text PDFs freely available from links immediately above.

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**IJERPH - Talhout/CarlJord/DeGiacomo/Sumartono**

**Hazardous Compounds in Tobacco Smoke**

**Int. J. Environ. Res. Public Health** 2011, 8(2), 613-628; doi:10.3390/ijerph8020613

Reinskje Talhout, Thomas Schulz, Ewa Florek, Jan van Benthem, Piet Wester and Antoon Opperhuizen

**Abstract**
Tobacco smoke is a toxic and carcinogenic mixture of more than 5,000 chemicals. The present article provides a list of 98 hazardous smoke components, based on an extensive literature search for known smoke components and their human health inhalation risks. An electronic database of smoke components containing more than 2,200 entries was generated. Emission levels in mainstream smoke have been found for 542 of the components and a human inhalation risk value for 98 components. As components with potential carcinogenic, cardiovascular and respiratory effects have been included, the three major smoke-related causes of death are all covered by the list. Given that the currently used Hoffmann list of hazardous smoke components is based on data from the 1990s and only includes carcinogens, it is recommended that the current list of 98 hazardous components is used for regulatory purposes instead. To enable risk assessment of components not covered by this list, thresholds of toxicological concern (TTC) have been established from the inhalation risk values found: 0.0018 µg day$^{-1}$ for all risks, and 1.2 µg day$^{-1}$ for all risks excluding carcinogenicity, the latter being similar to previously reported inhalation TTCs.

http://www.mdpi.com/1660-4601/8/2/613

Also:

Experiences of Working with the Tobacco Issue in the Context of Health Promoting Hospitals and Health Services: A Qualitative Study
http://www.mdpi.com/1660-4601/8/2/498

Smoking Cessation in Indigenous Populations of Australia, New Zealand, Canada, and the United States: Elements of Effective Interventions
http://www.mdpi.com/1660-4601/8/2/388

Smoking and Socio-Demographic Determinant of Cardiovascular Diseases among Males 45+ Years in Indonesia
http://www.mdpi.com/1660-4601/8/2/528
http://www.mdpi.com/1660-4601/8/2/528/pdf

Note: Full text PDFs freely available from links immediately above.

Lancet - Nawrot/Baccarelli
Public health importance of triggers of myocardial infarction: a comparative risk assessment

Published Online: 24 February 2011

Dr Tim S Nawrot PhD, Laura Perez PhD, Prof Nino Künzli MD, Elke Munters MD, Prof Benoit Nemery MD

Summary

Background

Acute myocardial infarction is triggered by various factors, such as physical exertion, stressful events, heavy meals, or increases in air pollution. However, the importance and relevance of each trigger are uncertain. We compared triggers of myocardial infarction at an individual and population level.

Methods

We searched PubMed and the Web of Science citation databases to identify studies of triggers of non-fatal myocardial infarction to calculate population attributable fractions (PAF). When feasible, we did a meta-regression analysis for studies of the same trigger.

Findings
Of the epidemiologic studies reviewed, 36 provided sufficient details to be considered. In the studied populations, the exposure prevalence for triggers in the relevant control time window ranged from 0·04% for cocaine use to 100% for air pollution. The reported odds ratios (OR) ranged from 1·05 to 23·7. Ranking triggers from the highest to the lowest OR resulted in the following order: use of cocaine, heavy meal, smoking of marijuana, negative emotions, physical exertion, positive emotions, anger, sexual activity, traffic exposure, respiratory infections, coffee consumption, air pollution (based on a difference of 30 µg/m3 in particulate matter with a diameter <10 µm [PM10]). Taking into account the OR and the prevalences of exposure, the highest PAF was estimated for traffic exposure (7·4%), followed by physical exertion (6·2%), alcohol (5·0%), coffee (5·0%), a difference of 30 µg/m3 in PM10 (4·8%), negative emotions (3·9%), anger (3·1%), heavy meal (2·7%), positive emotions (2·4%), sexual activity (2·2%), cocaine use (0·9%), marijuana smoking (0·8%) and respiratory infections (0·6%).

**Interpretation**

In view of both the magnitude of the risk and the prevalence in the population, air pollution is an important trigger of myocardial infarction, it is of similar magnitude (PAF 5—7%) as other well accepted triggers such as physical exertion, alcohol, and coffee. Our work shows that ever-present small risks might have considerable public health relevance.

...We were not able to quantify the role of passive smoking as a trigger of myocardial infarction in our analysis, because this type of trigger has not been studied in individuals. However, as with polluted ambient air, environmental tobacco smoke is largely composed of an aerosol of particles derived from combustion, therefore, our conclusions for outdoor air pollution and those for passive smoking mutually support each other, even in terms of the relative magnitudes of the effect.75 Pooled aggregated data showed that after the implementation of legal smoking bans in public places, the rate of admittance to hospital for acute myocardial infarction during the following 12 months decreased by 17% (95% CI 20–13) on average...

http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(10)62296-9/abstract

**Related Lancet Comment:**

Triggers of MI for the individual and in the community
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**Nat Neurosci - Chua**

**Self-related neural response to tailored smoking-cessation messages predicts quitting**

**Nature Neuroscience.** Received 4 October 2010; accepted 19 January 2011; published online 27 February 2011.

Hannah Faye Chua, S Shaun Ho, Agnes J Jasinska, Thad A Polk, Robert C Welsh, Israel Liberzon & Victor J Strecher

**Abstract**

Tailored health interventions can be more effective in eliciting positive behavior change than generic interventions, but the underlying neural mechanisms are not yet understood. Here, 91 smokers participated in a functional magnetic resonance imaging session and a tailored smoking-cessation program. We found that increases in activation in self-related processing regions, particularly dorsomedial prefrontal cortex, to tailored messages predicted quitting during a 4-month follow-up.

http://www.nature.com/neuro/journal/vaop/ncurrent/abs/nn.276
Nat Neurosci - Counotte

Lasting synaptic changes underlie attention deficits caused by nicotine exposure during adolescence

Nature Neuroscience (2011) Received 21 December 2010, Accepted 20 January 2011, Published online 20 February 2011

Danielle S Counotte, Natalia A Goriounova, Ka Wan Li, Maarten Loos, Roel C van der Schors, Dustin Schetters, Anton N M Schoffelmeer, August B Smit, Huibert D Mansvelder, Tommy Pattij, Sabine Spijker

Abstract

Tobacco smoking and nicotine exposure during adolescence interfere with prefrontal cortex (PFC) development and lead to cognitive impairments in later life. The molecular and cellular underpinnings of these consequences remain elusive. We found that adolescent nicotine exposure induced lasting attentional disturbances and reduced mGluR2 protein and function on presynaptic terminals of PFC glutamatergic synapses. Restoring mGluR2 activity in vivo by local infusion of a group II mGluR agonist in adult rats that received nicotine as adolescents rescued attentional disturbances.

http://www.nature.com/neuro/journal/vaop/ncurrent/full/nn.27
http://www.nature.com/neuro/journal/vaop/ncurrent/pdf/nn.277...

Note: Full text PDF freely available from link immediately above.

N&TR - Glantz
Letter

Misleading Conclusions From Altria Researchers About Population Health Effects of Dual Use


Stanton A. Glantz, Ph.D. and Pamela M. Ling, M.D., M.P.H.

Frost-Pineda, Appleton, Fisher, Fox, and Gaworski (2010) from Altria Client Services reviewed the available literature on the health effects of “dual use” of smoked and smokeless tobacco and concluded that, “Overall, the concern about dual use appears to be contradicted by the evidence in the literature that dual use of smokeless tobacco and cigarettes may result in reduction in smoking-related harm as smoking intensity is decreased and smoking cessation increases.”

This conclusion is surprising, given that the confidence intervals for smokers and dual users overlap for all health endpoints (cancer, ischemic heart disease, stroke, and acute myocardial infarction) that they present. These results would include the effects of any reduction in cigarette consumption that might occur among dual users...

We published an analysis (Mejia, Ling, & Glantz, 2010) of the effects of aggressive smokeless promotion in the United States that accounts for likely changes that will result from explicit tobacco industry promotion of dual use of cigarettes and smokeless tobacco (branded as cigarette line extensions). Altria and other companies are promoting dual use as a way to continue tobacco use despite expanding smoke-free environments...

Indeed, based on a careful review of the data in their paper, we are surprised that Frost-Pineda et al. did not reach the same conclusion that we did.

http://ntr.oxfordjournals.org/content/early/2011/02/24/ntr.n...

Referenced N&TR tobacco industry research:

Does Dual Use Jeopardize the Potential Role of Smokeless Tobacco in Harm Reduction?
http://ntr.oxfordjournals.org/content/early/2010/09/16/ntr.n...

N&TR - Hutton/Catz/Sjoberg
A Systematic Review of Randomized Controlled Trials: Web-Based Interventions for Smoking Cessation Among Adolescents, College Students, and Adults

Nicotine Tob Res ntq252 first published online February 24, 2011

Heidi E. Hutton, Lisa M. Wilson, Benjamin J. Apelberg, Erika Avila Tang, Olaide Odelola, Eric B. Bass, and Geetanjali Chander

Abstract
Introduction: Web-based treatments can deliver broad reaching, relatively inexpensive, and clinically tested methods for smoking cessation. We performed a systematic review of randomized controlled trials (RCTs) of smoking cessation to evaluate the efficacy of Web-based interventions in adults, college students, and adolescents.

Methods: MEDLINE, EMBASE, The Cochrane Library, CINAHL, and PsycINFO were searched from January 1, 1990 through February 12, 2010 for RCTs examining the efficacy of Web-based smoking cessation programs. Paired reviewers abstracted data on study design, patient characteristics, and outcomes sequentially and did quality assessments independently.

Results: Twenty-one RCTs met eligibility criteria, with 15 conducted among adults. Among adults, 2 RCTs found that a multicomponent intervention with Web and non-Web–based elements was more efficacious than a self-help manual, and one of 2 RCTs found that Web-based interventions may be more effective than no treatment. Three trials provided insufficient evidence to demonstrate whether Web-based interventions were more efficacious than counseling. By contrast, tailored Web sites in 2 RCTs and greater Web site exposure in 6 of 7 RCTs were associated with higher rates of abstinence. Among college students, evidence supporting use of Web-based interventions was insufficient because the one RCT conducted was also a multicomponent intervention. Five RCTs among adolescents demonstrated mixed results, with insufficient evidence supporting their efficacy.

Conclusions: Evidence supporting the use of Web-based interventions for smoking cessation is insufficient to moderate in adults and insufficient in college students and adolescents. These RCTs have, however, elucidated clinical, methodological, and statistical practices that are likely to improve future trial design and treatment delivery.

http://ntr.oxfordjournals.org/content/early/2011/02/24/ntr.n... Also:

Adherence to Varenicline in the COMPASS Smoking Cessation Intervention Trial
http://ntr.oxfordjournals.org/content/early/2011/02/24/ntr.n... A Single 4 mg Dose of Nicotine Decreases Heart Rate Variability in Healthy Nonsmokers: Implications for Smoking Cessation Programs
http://ntr.oxfordjournals.org/content/early/2011/02/24/ntr.n... Psychiatr Danub - Jacques
Quit smoking? quit drinking? why not quit both? analysis of perceptions among Belgian postgraduates in psychiatry
Jacques D, Zdanowicz N, Reynaert C, Janne P.

Abstract

INTRODUCTION: concurrent alcohol and tobacco dependency appears to be a common phenomenon yet medical literature often focuses on only one substance at a time when examining the question of withdrawal and illustrates that the evaluation of tobacco consumption appears to be overlooked in psychiatry. SUBJECT AND METHODS: in this study, we analyse perceptions among first-year postgraduates in Psychiatry, before and after training in Motivational Interviewing, with regard to the idea of suggesting that patients might consider simultaneous dual alcohol-tobacco withdrawal. RESULTS: the trend is to disregard the systematic history of substance consumption and to not recommend concurrent alcohol-tobacco withdrawal. Motivational interview training tends to reverse this trend. DISCUSSION: the lessening of the therapist's feeling of powerlessness in the face of relapse is one of the explanatory factors behind this change of approach. A study design is proposed focusing on the patient's perceptions. CONCLUSION: guidelines concerning dual alcohol-tobacco withdrawal programs are to be developed.

http://hrcak.srce.hr/psychiatria-danubina?lang=en
Radioactive Smoke: A Dangerous Isotope Lurks in Cigarettes
The tobacco industry has known for decades how to remove a dangerous isotope from cigarettes but has done nothing about it. The government now has the power to force a change.

By Brianna Rego

In November 2006 former KGB operative Alexander Litvinenko died in a London hospital in what had all the hallmarks of a cold war–style assassination. Despite the intrigue surrounding Litvinenko’s death, the poison that killed him, a rare radioactive isotope called polonium 210, is far more widespread than many of us realize: people worldwide smoke almost six trillion cigarettes a year, and each one delivers a small amount of polonium 210 to the lungs. Puff by puff, the poison builds up to the equivalent radiation dosage of 300 chest x-rays a year for a person who smokes one and a half packs a day.

Although polonium may not be the primary carcinogen in cigarette smoke, it may nonetheless cause thousands of deaths a year in the U.S. alone. And what sets polonium apart is that these deaths could be avoided with simple measures. The tobacco industry has known about polonium in cigarettes for nearly 50 years. By searching through internal tobacco industry documents, I have discovered that manufacturers even devised processes that would dramatically cut down the isotope’s concentrations in cigarette smoke. But Big Tobacco consciously decided to do nothing and to keep its research secret. In consequence, cigarettes still contain as much polonium today as they did half a century ago...

Polonium would be an excellent first “poison” to ban from tobacco. It is a single isotope, rather than a complex ingredient of smoke. Other poisons—such as tar or carbon monoxide—are difficult to keep out of the smoke, but polonium is not. The industry's four decades of research could give the FDA a head start toward getting concrete results. Moreover, some of the same steps that would reduce polonium concentrations in smoke—such as washing tobacco leaves—might also help remove toxic metals such as lead, arsenic and cadmium. This is precisely the kind of regulation and change the FDA now has the power to enforce.

The World Health Organization has made clear that smoking is the most avoidable cause of death. It estimates that 1.3 million people die of lung cancer worldwide every year, 90 percent because of smoking. If polonium had been reduced through methods known to the industry, many thousands of those deaths could have been avoided. The industry’s lawyers made the conscious choice not to act on the results of their own scientists’ investigations. But it is the customers who have had to live with—and die from—that decision.

In Brief
Tobacco plants accumulate small concentrations of polonium 210, a radioactive isotope that mostly originates from natural radioactivity in fertilizers. Smokers inhale the polonium, which settles in “hot spots” in the lungs and can cause cancer. Its effects may lead to thousands of deaths a year in the U.S. alone.

The tobacco industry has known for decades how to virtually eliminate the polonium from cigarette smoke but kept its knowledge secret and failed to act.

The Food and Drug Administration now has the authority to regulate tobacco and could begin to use it by forcing manufacturers to reduce polonium content.

Related Sci Am Philip Morris documents:
Radioactive Smoke: A Reader Poll and Declassified Documents about Polonium in Cigarettes http://www.scientificamerican.com/article.cfm?id=polonium-radioactive-smoke-poll
Referenced, related reports:

Science - Radford: Polonium-210: A Volatile Radioelement in Cigarettes (1964)
http://www.sciencemag.org/content/143/3603/247.abstract

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http://www.nytimes.com/2006/12/01/opinion/01proctor.html?_r=1

Also:

JRSM - Tidd: The big idea: polonium, radon and cigarettes (2008)
http://jrsm.rsmjournals.com/cgi/content/full/101/3/156

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