

Cigarette smoking among youth with attention-deficit/hyperactivity disorder: Clinical phenomenology, comorbidity, and genetics.

Tercyak KP; Peshkin BN; Walker LR; Stein MA. *Journal of Clinical Psychology in Medical Settings* 9(1): 35-50, 2002. (124 refs.)

Cigarette smoking and other forms of tobacco use among children and adolescents is a significant public health concern. The negative consequences of pro-longed exposure to such substances are numerous, and include higher prevalence rates of cardiopulmonary dysfunction and certain cancers, and may lead to other forms of drug use. Identifying subgroups of youth who may be at greater risk than others to develop a nicotine habit is an important step forward in preventing smoking initiation, and controlling tobacco use. One such subgroup is children with attention-deficit/hyperactivity disorder (ADHD). This is because the prevalence of smoking among these youngsters is nearly twice as high as it is among those who are unaffected with ADHD. However, the etiology of this association is not known. It is possible that a constellation of social, behavioral, and biological factors influences this process, resulting in higher prevalence rates. To further our understanding of this problem, we reviewed each of these factors in relationship to smoking and to ADHD. Using the primary care population as a model, we then discuss clinical research methods that may shed additional light on this topic, as well as the strengths and limitations of current smoking prevention and cessation options for ADHD-affected youth who are assessed and treated in medical settings.

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Performing coolness: Smoking refusal and adolescent identities.

Plumridge EW; Fitzgerald LJ; Abel GM. *Health Education Research* 17(2): 167-179, 2002. (48 refs.)

The implications of smoking refusal for personal identity style were studied through conversations in six small focus groups or dyads of 13- and 14-year-old non-smokers from an urban New Zealand secondary school. The approach to analyzing their talk was informed by notions of 'performativity' and 'social space' to focus on the connections between identity and social relations. Smoking emerged as a key signifier of power and status. It was salient at both top and bottom ends of the social

hierarchy depending upon the competence displayed in smoking as part of a larger ensemble of personal deportment and behavior. Being a non-smoker therefore inevitably carried connotations of being 'average' or 'in the middle', presenting non-smoking adolescents with the problem of accrediting themselves against superior 'smoker cool' groups. A discourse analytic approach was used to examine the resources and strategies participants brought to bear on this 'problem', which was then seen to be solved differently by boys and girls. Boys could establish alternatives to 'smoker cool' through physical activity, girls had little re-course but to accept their inferior status. The implications of this for health education and promotion are discussed.

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Smoking and risk of coronary heart disease among women with type 2 diabetes mellitus.

Al-Delaimy WK; Manson JE; Solomon CG; Kawachi I; Stampfer MJ; Willett WC et al. *Archives of Internal Medicine* 162(3): 273-279, 2002. (39 refs.)

Background: Although the association between smoking and increased risk of coronary heart disease (CHD) is well established in the general population, this relationship is less well-defined among individuals with diabetes. Objective: To assess the relation-ship between cigarette smoking and risk of CHD among women with type 2 diabetes mellitus in the Nurses' Health Study cohort. Methods: The Nurses' Health Study, a prospective cohort study of 121700 US female registered nurses surveyed in 11 states and followed up from July 1, 1976, through July 1, 1996, involved a total of 6547 women diagnosed as having type 2 diabetes mellitus. Incident cases of CHD were our main outcome measure in this study. Results: We documented 458 incident cases of CHD (200 fatal CHD-related cases and 258 nonfatal myocardial infarctions) during 20 years (68227 person-years) of follow-up. We found a dose-response relationship between current smoking status and risk of CHD among diabetic women. Compared with never smokers, the relative risks (RRs) for CHD were 1.21 (95% confidence interval [CI], 0.97-1.51) for past smokers, 1.66 (95% CI, 1.10-2.52) for current smokers of 1 to 14 cigarettes per day, and 2.68 (95% CI, 2.07-3.48) for current smokers of 15 or more cigarettes per day in multivariate analyses (P<.001 for trend). The multivariate RR of CHD among diabetic women who had

stopped smoking for more than 10 years was similar to that among diabetic women who were never smokers (RR, 1.01; 95% CI, 0.73-1.38). In secondary analyses involving diabetic and nondiabetic women, the multivariate-adjusted RR of CHD for those with diabetes who currently smoked (>15 cigarettes per day) compared with those who never smoked was 7.67 (95% CI, 5.88-10.01). Conclusions: Cigarette smoking is strongly associated with an increased risk of CHD among women with type 2 diabetes mellitus. Furthermore, quitting smoking seems to decrease this excess risk substantially; women with diabetes should be strongly advised against smoking.

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Reductions in smoking prevalence and cigarette consumption associated with mass-media campaigns.

Friend K; Levy DT. *Health Education Research* 17(1): 85-98, 2002. (63 refs.)

This paper examines reductions in smoking prevalence and cigarette consumption associated with state and local mass-media campaigns. We review the findings of the empirical literature on campaigns targeted at the general population. We then discuss the findings on state- and community-level youth-oriented campaigns. The results suggest that well-funded and implemented mass-media campaigns targeted at the general population and implemented at the state level, in conjunction with a comprehensive tobacco control program, are associated with reduced smoking rates among both adults and youth. Studies of youth-oriented interventions specifically have shown more mixed results, particularly for smaller, community-level media programs, but they indicate strong potential to influence underage smoking rates. We conclude by examining issues that warrant additional research. The scale and duration of expenditures, the content of ad messages, and other tobacco control policies are aspects of media programs that may help explain differences among study results. In particular, tobacco control policies that are implemented during the campaign often make it difficult to identify the specific influence of media campaigns alone.

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Preventing lung cancer by stopping smoking.

Hurt RD; Ebbert JO. *Clinics in Chest Medicine* 23(1): 27+, 2002. (56 refs.)

Much progress has been made in recent years in treating tobacco dependence. The 2000 USPHS Guideline extends the understanding of effective treatments and encourages clinicians to be more diligent in recognizing tobacco users in the practice and more aggressive in treating every tobacco user. The guideline outlines the potential use of the five first-line medications (bupropion, nicotine patches,

gum, nasal spray, and inhaler) and the two second-line medications (nortriptyline and clonidine). The use of these medications can be tailored to meet the patients needs and combinations of these medications can be used when appropriate. More intensive treatment, such as residential treatment, may be needed for more addicted smokers.

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Long term and transitional intermittent smokers: A longitudinal study.

Lindstrom M; Isacson SO. *Tobacco Control* 11(1): 61-67, 2002. (36 refs.)

Objective: To investigate differences in snuff consumption, sociodemographic and psychosocial characteristics between baseline intermittent smokers that had become daily smokers, stopped smoking or remained intermittent smokers at the one year follow up. Design/setting/participants/measurements: A population of 12 507 individuals interviewed at baseline in 1992-94 and at a one year follow up, aged 45-69 years, was investigated in a longitudinal study. The three groups of baseline intermittent smokers were compared to the reference population (all others) according to sociodemographic, psychosocial, and snuff consumption characteristics. A multivariate logistic regression model was used to assess differences in psychosocial conditions, adjusting for age, sex, country of origin, marital status, education, and snuff consumption. Results: 60% of all baseline intermittent smokers had remained intermittent smokers, 16% had become daily smokers, and 24% had stopped smoking at the one year follow up. The long term intermittent smokers and those who had stopped smoking were young, unmarried, highly educated, and snuff consumers to a higher extent than the reference population. They also had more psychosocial resources than the reference population, while the psychosocial resources of those who had become daily smokers were poorer. Conclusions: The majority of intermittent smokers are long term intermittent smokers. The results suggest that long term intermittent smokers have other psychosocial characteristics than daily smokers. Copyright 2002, BMJ Publishing Group.

Case-control study of attention-deficit hyperactivity disorder and maternal smoking, alcohol use, and drug use during pregnancy.

Mick E; Biederman J; Faraone SV; Sayer J; Kleinman S. *Journal of the American Academy of Child and Adolescent Psychiatry* 41(4): 378-385, 2002. (58 refs.)

Objective: To address the putative association between attention-deficit hyperactivity disorder (ADHD) and prenatal exposure to maternal cigarette smoking, drugs of abuse, and alcohol attending to potential confounding by familial ADHD, maternal depression, conduct disorder,

and indicators of social adversity in the environment. Method: A retrospective, hospital-based, case-control study was conducted with 280 ADHD cases and 242 non-ADHD controls of both genders. The case and control children and their relatives were systematically assessed with structured diagnostic interviews. Logistic regression analysis was used to determine the adjusted effect of prenatal exposure to substance use and ADHD. Results: ADHD cases were 2.1 times (95% confidence interval 1.1-4.1; $p = .02$) more likely to have been exposed to cigarettes and 2.5 times (95% confidence interval = 1.1-5.5; $p.03$) more likely to have been exposed to alcohol in utero than were the non-ADHD control subjects. Adjustment by familial psychopathology, Rutter's indicators of social adversity, and comorbid conduct disorder did not account for the effect of prenatal exposure to alcohol or the products of cigarettes. Conclusions: ADHD may be an additional deleterious outcome associated with prenatal exposure to alcohol independently of the association between prenatal exposure to nicotine and smoke products and other familial risk factors for the disorder.

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Examining the effects of tobacco treatment policies on smoking rates and smoking related deaths using the SimSmoke computer simulation model.

Levy DT; Friend K. *Tobacco Control* 11(1): 47-54, 2002. (60 refs.)

Objectives: To develop a simulation model to predict the effects of different smoking treatment policies on quit rates, smoking rates, and smoking attributable deaths. Methods: We first develop a decision theoretic model of quitting behaviour, which incorporates the decision to quit and the choice of treatment. A model of policies to cover the costs of different combinations of treatments and to require health care provider intervention is then incorporated into the quit model. The policy model allows for the smoker to substitute between treatments and for policies to reduce treatment effectiveness. The SimSmoke computer simulation model is then used to examine policy effects on smoking rates and smoking attributable deaths. Results: The model of quit behaviour predicts a population quit rate of 4.3% in 1993, which subsequently falls and then increases in recent years to 4.5%. The policy model suggests a 25% increase in quit rates from a policy that mandates brief interventions and the coverage of all proven treatments. Smaller effects are predicted from policies that mandate more restricted coverage of treatments, especially those limited to behavioural treatment. These policies translate into small reductions in the smoking rate at first, but increase to as much as a 5% reduction in smoking rates. They also lead to substantial savings in lives.

Conclusions: Tobacco treatment policies, especially those with broad and flexible coverage, have the potential to increase smoking cessation substantially and decrease smoking rates in the short term, with fairly immediate reductions in deaths.

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Improved smoking cessation in smokers given ultrasound photographs of their own atherosclerotic plaques.

Bovet P; Perret F; Cornuz J; Quilindo J; Paccaud F. *Preventive Medicine* 34(2): 215-220, 2002. (44 refs.)

Background. We examined whether making smokers aware that they had developed peripheral atherosclerosis would improve smoking cessation. Methods. Smokers selected from the general population were randomly allocated to undergo high-resolution B-mode ultrasonography of their carotid and femoral arteries. All smokers received quit-smoking counseling. Smokers with greater than or equal to 1 atherosclerotic plaque were given two photographs of a plaque with a relevant explanation. Quit rates were assessed by telephone 6 months later. Results. Seventy-nine smokers did not undergo ultrasonography (A). Among the 74 smokers submitted to ultrasonography, 20 had no plaque (B) and 54 had greater than or equal to 1 plaque (C). Quit rates were, respectively, 6.3, 5.0, and 22.2% in groups A, B, and C. Quit rates were higher in smokers submitted to ultrasonography (B + C vs A, $P = 0.031$) and in those receiving photographs (C vs A + B; $P = 0.003$). Smoking cessation was independently associated with intervention C (OR = 6.2; 95% CI = 1.8-21) and a white-collar job but not with age or gender. Conclusions. Providing smokers with photographs demonstrating atherosclerosis on their own person was an effective adjunct to physician's advice to quit smoking. Since ultrasonography is used increasingly often in clinical practice for cardiovascular risk stratification, this can provide an additional opportunity and means to deter smokers from smoking.

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Accelerated metabolism of nicotine and cotinine in pregnant smokers.

Dempsey D; Jacob P III; Benowitz NL. *Journal of Pharmacology and Experimental Therapeutics* 301(2): 594-598, 2002. (43 refs.)

Cigarette smoking is the foremost modifiable risk factor for adverse pregnancy outcomes. Nicotine is a suspected fetal neuroteratogen. There is concern that nicotine may achieve toxic levels during pregnancy if nicotine replacement therapies are prescribed at doses used in the nonpregnant state. Ten healthy, volunteer, pregnant smokers received infusions of deuterium-labeled nicotine

and cotinine during pregnancy and again postpartum. From blood and urine measurements, the following were determined: clearance (renal and nonrenal) of nicotine and cotinine, clearance of nicotine via the cotinine pathway (an indicator of CYP2A6 activity), and daily intake of nicotine from smoking. The clearance of nicotine and cotinine was significantly higher (60 and 140%, respectively), and the half-life of cotinine was much shorter (8.8 versus 16.6 h, $P < 0.01$) during pregnancy. Although plasma levels of cotinine were lower during pregnancy (119 versus 202 ng/ml, $P < 0.05$), daily intake of nicotine from smoking was similar during pregnancy and postpartum. For a given level of intake, the pharmacologic and toxicologic effects of nicotine during pregnancy are anticipated to be less than expected from nicotine metabolism data in nonpregnant women. Our data indicate that no downward dose adjustment needs to be made for nicotine replacement therapy during pregnancy. Conversely, higher than usual doses of nicotine may be necessary to optimize efficacy. Lower cotinine levels observed during pregnancy do not necessarily reflect less smoke exposure, and cut-off levels used to classify nonsmokers, passive smokers, and active smokers need to be established for pregnancy.

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Mothers' attitudes and concerns about their children smoking: Do they influence kids?

Andersen MR; Leroux BG; Marek PM; Peterson AV Jr; Kealey KA; Bricker J et al.

Preventive Medicine 34(2): 198-206, 2002. (35 refs.)
Background. The effects of mothers' attitudes and concerns about tobacco use on whether their children take up smoking are largely unknown. This study examined the predictive effects of mothers' attitudes about tobacco and concerns about their children smoking. Methods. Self-reported data from a large number of 12th-grade students (2,736) and their mothers were used. Mothers' attitudes and concerns were assessed when their children were 3rd graders (age 8), at the start of the smoking acquisition period; their children were then followed prospectively (with attrition of only 5%) for 9 years to the end of the period (12th grade) for the assessment of smoking behavior. Results. In households in which both parents are nonsmokers, strong maternal antismoking attitudes are associated with a statistically significant approximately 50% reduction ($P < 0.05$) in the prevalence of smoking by adolescent children. In contrast, in households in which one or both parents are current smokers, there was no reduction in adolescent smoking associated with mothers' antismoking attitudes. Conclusions. Maternal antismoking

attitudes when their children are young predict adolescents' adoption of smoking at 12th grade, but only when parental behavior is consistent with these attitudes.

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Cigarette filter ventilation is a defective design because of misleading taste, bigger puffs, and blocked vents. (review).

Kozlowski LT; O'Connor RJ. *Tobacco Control* 11(Supplement): I40-I50, 2002. (145 refs.)

Objective: To review tobacco industry documents on filter ventilation in light of published studies and to explore the role of filter ventilation in the design of cigarettes that deliver higher smoke yields to smokers than would be expected from standard machine smoked tests (Federal Trade Commission (FTC), International Organization for Standardization (ISO)). Data sources: Searched from November 1999 to November 2000 internet databases of industry documents:

www.pmdocs.com, www.rirtdocs.com

www.lorillarddocs.com

www.bw.aalag.com www.cdc.gov/tobacco/industrydocs

www.tobaccodocuments.org

www.tobaccopapers.org,

www.hlth.gov.bc.ca/Guildford,

www.cctc.ca/nctn/Guildford

www.cctc.ca/nctn/Guildford2

for documents related to filter ventilation. Documents found dated from 1955 through 1994. Study selection: Those documents judged to contain the most relevant information or data on filter ventilation related to cigarette taste and compensatory smoking, while also trying to avoid redundancy from various documents deriving from the same underlying data. Data synthesis: Filter ventilation is a crucial design feature creating three main problems for lower tar cigarettes as measured by official smoking machine testing. Firstly, it misleadingly makes cigarettes taste lighter and milder, and, therefore, they appear less dangerous to smokers. Secondly, it promotes compensation mainly by facilitating the taking of larger puffs. Thirdly, for very heavily ventilated cigarettes (that is, > 65% filter air dilution), behavioural blocking of vents with lips or fingers is an additional contributor to compensatory smoking. These three effects are found in industry research as well as published re-search. Conclusions: Filter ventilation is a dangerous, defective technology that should be abandoned in less hazardous nicotine delivery systems. Health interest-ed groups should test cigarettes in a way that reflects compensatory smoking. Lower tar (vented filter) cigarettes should be actively counter-marketed.

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