

Nicotine exposure in breastfed infants.

Dahlstrom A; Ebersjo C; Lundell B. *Acta Paediatrica* 93(6): 810-816, 2004. (30 refs.)

Aim: To study exposure to nicotine in breastfed infants in relation to parental smoking habits. **Material and Methods:** Forty mother-infant pairs were studied. Twenty non-smoking mothers, 18 smoking (2-20 cigarettes per day) and two snuff-taking mothers were included. All infants were healthy, exclusively breastfed and their postnatal age was 6 wk. During a home visit, parental smoking habits were recorded, and the time of mothers' last smoke or taking of snuff and breastfeeding were recorded. Breast milk and infant urine samples were collected. Concentrations of nicotine and cotinine were analysed with gas chromatography. The amount of milk ingested during the home visit was calculated by weighing the infants. **Results:** Two non-smoking and non-snuff-taking women had milk containing nicotine (28 and 13 mug/1, respectively). Both had smoking spouses. In the smoking and snuff-taking group, the mean (SD) milk nicotine concentration was 44 (38) mug/1 (n = 36). When milk samples taken 7 h and 0.6 h after smoking were compared, the concentration of milk nicotine increased from 21 to 51 mug/1 (p < 0.01). The two snuff-taking mothers exposed their children to higher milk nicotine concentrations than all but two of the smokers. The concentrations of the metabolite cotinine in infant urine correlated with the dose of nicotine ingested during the home visit (r = 0.84, p < 0.01). **Conclusions:** Breastfed infants with a smoking or snuff-taking mother are exposed to nicotine in breast milk. The mean intake of nicotine via milk is 7 mug/kg/d. With a shorter time between the mothers' smoking and breastfeeding, the milk nicotine concentration will increase. Both passive smoking at home and snuff-taking were associated with measurable nicotine levels in milk. Healthcare personnel promoting breastfeeding should be aware of these factors influencing exposure to nicotine in the breastfed infant. Copyright 2004, Taylor & Francis.

Smoking stage of change is associated with retention in a smoke-free residential drug treatment program for women.

Haller DL; Miles DR; Cropsey KL. *Addictive Behaviors* 29(6): 1265-1270, 2004. (15 refs.)

Prochaska and DiClemente's Transtheoretical Model predicts dropout from substance-abuse treatment. However, it is not known whether readiness to quit

smoking is associated with attrition from drug treatment programs with smoking restrictions. This study examined the relationship between smoking characteristics, smoking stage of change, and both length of stay (LOS) and discharge type among 75 perinatal substance abusers attending a smoke-free residential treatment program. URICA scores predicted LOS (P= .0004) and discharge type (P = .01). Women in action and maintenance remained in treatment longer and were more likely to complete treatment compared to those in precontemplation. Findings were not accounted for by addiction severity. Women with little interest in quitting smoking may have difficulty adhering to smoking restrictions during treatment for other drug problems, resulting in increased attrition. Alternatively, smoking stage of change may be a "proxy" for overall readiness to change in this population. Copyright 2004, Elsevier Science Ltd.

Substitutes for tobacco smoking: A behavioral economic analysis of nicotine gum, denicotinized cigarettes, and nicotine-containing cigarettes.

Johnson MW; Bickel WK; Kirshenbaum AP. *Drug and Alcohol Dependence* 74(3): 253-264, 2004. (43 refs.)

Both pharmacological and nonpharmacological stimuli may be responsible for the reinforcement and maintenance of tobacco smoking. The present study examined the self-administration of nicotine gum, denicotinized cigarettes, and nicotine-containing cigarettes utilizing a behavioral economic design in order to investigate the pharmacological and nonpharmacological aspects of cigarette smoking. Cigarette-deprived, dependent smokers worked for cigarette puffs and nicotine gum in daily operant sessions. In one phase, nicotine-containing cigarettes were available at increasing unit prices across sessions. Three phases replicated these sessions with nicotine gum, denicotinized cigarettes, or both, concurrently available at a constant unit price. As nicotine-containing cigarette unit price increased, consumption decreased. However, as nicotine-containing cigarette unit price increased, nicotine gum and denicotinized cigarette consumption increased. Consumption of nicotine gum, but not denicotinized cigarettes, diminished when all three reinforcers were concurrently available. Concurrently available denicotinized cigarettes, but not nicotine gum, caused a statistically significant reduction in nicotine-containing cigarette consumption. In another phase,

denicotinized cigarettes were available at increasing unit prices across sessions while nicotine gum was concurrently available at a constant unit price. This phase demonstrated that nicotine content had no reliable effect on cigarette or nicotine gum consumption. These results suggest that denicotinized cigarettes are a more effective alternative reinforcer than nicotine gum, indicating that nonpharmacological stimuli of smoking merit attention in smoking cessation treatment. Furthermore, these findings indicate that alternative reinforcement would be most effective in smoking cessation treatment when combined with high prices for cigarettes. Copyright 2004, Elsevier Science Ireland Ltd.

Community tobacco control leaders' perceptions of harm reduction.

Joseph AM; Hennrikus D; Thoele MJ; Krueger R; Hatsukami D. *Tobacco Control* 13(2): 108-113, 2004. (16 refs.)

Objective: To investigate community tobacco control leaders' attitudes toward harm reduction approaches to tobacco use, in order to assess benefits and risks associated with these strategies. Design: Cross sectional design involving qualitative outcomes from nine structured focus groups. Subjects: 47 community tobacco control leaders in Minnesota working in the areas of public policy, clinical treatment of nicotine dependence and youth development participated. Outcome measures: Participants discussed definitions of harm reduction; benefits and risks of harm reduction methods; and how funds for tobacco control research and programmes should be allocated. Results: Results indicated inconsistency about the definition of harm reduction: most groups included a broad range of strategies that extended beyond those typically referenced in the scientific literature. Many participants stated that harm reduction might be beneficial, particularly for smokers who could not or would not quit. However, most also expressed concern about a number of risks, including delivering a mixed message about tobacco, inadvertently benefiting the tobacco industry, and causing unanticipated negative health effects. Participants were inclined to suggest public policy measures (for example, smoking bans, increased taxes) as means for reducing harm. Conclusions: Results indicate that even among tobacco control leaders there is a need for common terminology to describe harm reduction approaches and that public policy approaches to harm reduction are considered more dependable than strategies that involve pharmaceutical treatment or rely on the tobacco industry, such as product modification.

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Treating nicotine use and dependence of pregnant and parenting smokers: An update. (review).

Melvin CL; Gaffney CA. *Nicotine & Tobacco Research* 6(Supplement 2): S107-S124, 2004. (79 refs.)

A growing volume of research since 1975 has demonstrated that clinically proven, effective interventions exist to produce long-term or even permanent abstinence from tobacco for all smokers. Achieving cessation is important for all smokers but especially for pregnant and parenting smokers because their smoking poses risks not only for themselves but also for their pregnancies and children. Treatments for smokers in general apply to parenting smokers, but special considerations regarding treatment need to be made for pregnant women. Due to the harms associated with exposure to environmental tobacco smoke, or second-hand smoke (SHS), parents and caregivers of young children should receive treatment to achieve cessation or counseling on how to eliminate exposure of children to SHS. Despite the availability of these treatments, surveys show that fewer than half of all obstetricians caring for pregnant women in the United States actually provide such treatment. We review the recommendations made in 2000 regarding treatment for pregnant and parenting smokers, summarize recent findings that may affect treatment protocols, and make recommendations regarding further research in treatment approaches for pregnant and parenting smokers. We summarize recommended changes in treatment approaches for clinicians based on this review and describe the factors affecting clinician adoption and use of proven treatments and systems supports found to increase the likelihood of clinician use of these treatments. Copyright 2004, Taylor & Francis Ltd.

Developmental effects of exposure to environmental tobacco smoke and material hardship among inner-city children. (review).

Rauh VA; Whyatt RM; Garfinkel R; Andrews H; Hoepner L; Reyes A et al. *Neurotoxicology and Teratology* 26(3): 373-385, 2004. (102 refs.)

Because of the growing concern that exposures to airborne pollutants have adverse effects on fetal growth and early childhood neurodevelopment, and the knowledge that such exposures are more prevalent in disadvantaged populations, we assessed the joint impact of prenatal exposure to environmental tobacco smoke (ETS) and material hardship on the 2-year cognitive development of inner-city children, adjusted for other sociodemographic risks and chemical exposures. The put-pose was to evaluate the neurotoxicant effects of ETS among children experiencing different degrees of socioeconomic disadvantage, within a minority population. The sample did not include children exposed to active maternal

smoking in the prenatal period. Results showed significant adverse effects of prenatal residential ETS exposure and the level of material hardship on 2-year cognitive development, as well as a significant interaction between material hardship and ETS, such that children with both ETS exposure and material hardship exhibited the greatest cognitive deficit. In addition, children with prenatal ETS exposure were twice as likely to be classified as significantly delayed, as compared with nonexposed children. Postnatal ETS exposure in the first 2 years of life did not contribute independently to the risk of developmental delay, over and above the risk posed by prenatal ETS exposure. The study concluded that prenatal exposure to ETS in the home has a negative impact on 2-year cognitive development, and this effect is exacerbated under conditions of material hardship in this urban minority sample. Copyright 2004, Elsevier Science.

Prevention of smoking-related deaths in the United States.

Rivara FP; Ebel BE; Garrison MM; Christakis DA; Wiehe SE; Levy DT. *American Journal of Preventive Medicine* 27(2): 118-125, 2004. (73 refs.)

Background: Tobacco is the leading cause of death in the United States. The majority of people who smoke begin before age 18. Objective: Determine the number of smoking-attributable deaths and years of potential life lost (YPLL) in adults that might be saved through interventions to reduce smoking prevalence among children and adolescents. Methods: Calculation of the smoking-attributable mortality and years of potential life lost by age 85 among the cohort of people aged 18 in 2000. Results: By age 85, there would be 127,670 smoking-attributable deaths among women and 284,502 deaths among men, for a total 412,172 smoking-attributable deaths in the United States among the cohort of 3,964,704 people aged 18 years alive in 2000. Through large-scale multimedia campaigns and a \$1 increase in the price per pack of cigarettes, smoking prevalence could be reduced by 26% and would result in an annual savings of 108,466 lives and 1.6 million YPLL. Conclusions: Interventions to decrease smoking prevalence among children and adolescents can have large effects on adult mortality. Copyright 2004, Elsevier Science.

Effects of cigarette smoking history on cognitive functioning in healthy older adults.

Razani J; Boone K; Lesser I; Weiss D. *American Journal of Geriatric Psychiatry* 12(4): 404-411, 2004. (45 refs.)

Objective: The authors assessed the unique effect of smoking history on cognitive functioning after adjusting for demographic factors such as age, education, and gender, and presence of vascular illness. Methods: A sample of 127 healthy older adults (29 men, 98 women)

between the ages of 47 and 83 (mean: 669) were administered a comprehensive neuropsychological battery. Information regarding risk for vascular illness was assessed with a detailed self-report history and/or medical examination. Smoking history was gathered with a self-report questionnaire, and a composite score reflecting amount and duration of cigarette use was computed. From this composite score, three smoking groups were created: None-Light, Moderate, and Heavy smokers. Results: Analyses of covariance, using age, education, gender, and vascular status as the covariates, revealed that the heavy smokers performed significantly poorer than the other groups on two scores from a test assessing executive function/problem-solving (Wisconsin Card-Sorting Test), but not on any of the other cognitive tests. Conclusions: Consistent with previous findings, smoking history did not appear to have deleterious effects on most cognitive domains. Heavy smoking history, however, did appear to affect performance on a measure of executive functioning. Copyright 2004, American Association for Geriatric Psychiatry.

Consumption of cigarettes, alcohol, and marijuana among New York City residents six months after the September 11 terrorist attacks.

Vlahov D; Galea S; Ahern J; Resnick H; Boscarino JA; Gold J et al. *American Journal of Drug and Alcohol Abuse* 30(2): 385-407, 2004. (35 refs.)

Early analyses following the September 11 terrorist attacks on New York City showed an increase in cigarette, alcohol, and marijuana use, but it was unknown whether these increases would persist. A random-digit dial phone survey was conducted to estimate the prevalence of increased substance use among residents of New York City six to nine months after the attacks. Among 1570 adults, 9.9% reported an increase in smoking, 17.5% an increase in alcohol use, and 2.7% an increase in marijuana use compared to the month before September 11. These increases were comparable to increases reported in the first one to two months after September 11. Persons who increased use of cigarettes were more likely than those who did not to report symptoms consistent with posttraumatic stress disorder (PTSD) in the past month (4.3% and 1.2% respectively). Depression was more common among those who increased use of cigarettes (14.6% and 5.2% respectively), alcohol (11.8% vs. 5.2%), and marijuana (34.1% vs. 5.3%). Among residents living in Manhattan below One Hundred Tenth Street, the prevalence of PTSD and depression declined by more than half in the first six months after September 11, while the increase in substance use did not decline substantially. These results suggest that the increase in substance use after a disaster may be a cause for public health concern in the long-term. Copyright 2004, Marcel Dekker Inc.

Team sport participation and smoking: Analysis with general growth mixture modeling.

Rodriguez D; Audrain-McGovern J. *Journal of Pediatric Psychology* 29(4): 299-308, 2004. (42 refs.)

Objective: To assess the likelihood of smoking among adolescents with different patterns of team sport participation, grades 9-11. Methods Adolescents (N = 1,098) participating in a longitudinal study of the biobehavioral predictors of smoking adoption completed items assessing various health-related behaviors, including team sport participation and smoking practices. General growth mixture modeling (GGMM) was used to analyze the data. Results Four patterns of team sport participation were found. Adolescents with decreasing or erratic participation were nearly three times more likely than adolescents with high participation to be current smokers in eleventh grade. Nonwhites were at particular risk for decreasing and erratic patterns of participation, and later smoking. Females were at high risk for low team participation. Conclusion: Results suggest that multiple patterns of team sport participation can be identified with GGMM and that these patterns may be useful in characterizing individuals at particular risk for future smoking. Copyright 2004, Oxford University Press, Inc.

Reducing risk in smokers.

Westmaas JL; Brandon TH. *Current Opinion in Pulmonary Medicine* 10(4): 284-288, 2004. (54 refs.)

Purpose of review Tobacco smoking is a leading cause of lung cancer and chronic obstructive pulmonary disease. For smokers who want to quit, nicotine replacement therapy and bupropion are frequently recommended. Currently, disagreement surrounds the extent of risk reduction from quitting, the consequences of the change of nicotine replacement therapy to over-the-counter status, and the safety and efficacy of new tobacco products being marketed by tobacco companies. This article reviews the current evidence relevant to these and other developments in smoking interventions and describes the most effective strategies that smokers can use to reduce their risk. Recent findings: Although it may take approximately 10 to 30

years of abstinence for former smokers' risk of lung cancer to reach that of never smokers, quitting at any time is substantially less risky than continuing to smoke. Quitting after diagnosis also prolongs survival. Bupropion and nicotine replacement therapy are effective pharmacotherapies, doubling quit rates compared with self-quitting. However, many users of over-the-counter nicotine replacement therapy are using it inappropriately. More research is needed to determine the long-term health effects of modified tobacco products and their efficacy in helping smokers quit. Switching to "low tar" filter cigarettes to reduce lung cancer risk, however, is clearly ineffective. The most effective interventions for quitting continue to be a combination of behavioral and pharmacologic approaches. Summary: Health care practitioners should encourage all smokers to attempt cessation and emphasize pharmacotherapy as an important aid to quitting. Professionals who educate patients on the appropriate use of pharmacotherapy and follow-up on smokers' attempts to quit will help reduce the societal burden and personal risks of smoking. Copyright 2004, Lippincott, Williams & Wilkins.

Addressing tobacco among individuals with a mental illness or an addiction. (review).

Williams JM; Ziedonis D. *Addictive Behaviors* 29(6): 1067-1083, 2004. (109 refs.)

Tobacco dependence among individuals with a mental illness or an addiction is a tremendous problem that goes largely ignored. Studies of genetics, neuroimaging, and nicotinic receptors support a neurobiological link between tobacco use and alcohol dependence, drug dependence, schizophrenia, depression, attention-deficit hyperactivity disorder (ADHD), and anxiety disorders. This paper summarizes the recent literature on this topic and discusses how treatment for tobacco can no longer be ignored in mental-health and addiction-treatment settings. More research is needed as well as a national organized effort to address tobacco in this large segment of smokers. Copyright 2004, Elsevier Science Ltd.