

Library Watch on nicotine

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Helping surgical patients quit smoking: Why, when, and how.

Warner DO. *Anesthesia and Analgesia* 101(2): 481-487, 2005. (25 refs.)

Millions of cigarette smokers undergo elective surgery each year. Efforts to help them quit smoking could improve immediate perioperative outcomes, such as those related to the cardiac and respiratory systems, and the healing of surgical wounds. Perhaps more importantly, the scheduling of elective surgery represents an excellent opportunity for smokers to permanently quit, with great benefit to their long-term health. Although it is difficult for smokers to quit, there are now several interventions of proven benefit that can more than double the chances of success. These include simple physician advice to quit, brief behavioral interventions that can be provided by physicians or other clinicians, and pharmacotherapy with drugs such as nicotine. Although specific strategies tailored for the surgical patient remain to be developed, there are steps that anesthesiologists can implement into their practices now that can help their patients quit smoking. Copyright 2005, Lippincott, Williams & Wilkins

Smoking habits and obesity in young adults.

Zimlichman E; Kochba I; Mimouni FB; Shochat T; Grotto I; Kreiss Y et al. *Addiction* 100(7): 1021-1025, 2005. (25 refs.)

Aims: The aim of this work was to study the association between obesity and smoking habits in young adults. Specifically, we tested the hypothesis that obesity does not prevent young adults from smoking and conversely smoking does not protect against obesity. Design and setting Trained nurses interviewed participants concerning demographic data and health behaviors such as smoking. At the time of the interview, weight and height were measured. Data were analyzed retrospectively. Participants A representative sample of Israel Defense Force (IDF) personnel upon discharge from compulsory service, usually at the age of 20-21 years. Findings Overall, 29 745 participants were included during the 13-year study (16 363 males and 13 382 females). Smoking rates were higher among obese participants than among overweight and non-obese participants (34.9%,

37.1%, 43.6% for non-obese, overweight and obese, respectively; $P < 0.001$). Mean number of cigarettes smoked per day were also higher among smokers that were obese and overweight compared to the non-obese (15.2 +/- 9.2, 15.6 +/- 10.7, 18.0 +/- 9.8, respectively; $P < 0.001$). Overweight and obesity were associated with the father's lower academic educational level. In logistic regression analysis, obesity, year of study and parental academic education were correlated independently with smoking ($P < 0.001$). Conclusion The positive association between obesity and smoking suggests that obesity is not a deterrent to smoking and also that smoking does not help to prevent obesity. Copyright 2005, Society for the Study of Addiction to Alcohol and Other Drugs.

Changes in hospitality workers' exposure to secondhand smoke following the implementation of New York's smoke-free law.

Farrelly MC; Nonnemaker JM; Chou R; Hyland A; Peterson KK; Bauer UE. *Tobacco Control* 14(4): 236-241, 2005. (20 refs.)

Objective: To assess the impact on hospitality workers' exposure to secondhand smoke of New York's smoke-free law that prohibits smoking in all places of employment, including restaurants, bars, and bowling facilities. Design: Pre-post longitudinal follow up design. Settings: Restaurants, bars, and bowling facilities in New York State. Subjects: At baseline, 104 non-smoking workers in restaurants, bars, and bowling facilities were recruited with newspaper ads, flyers, and radio announcements. Of these, 68 completed a telephone survey and provided at least one saliva cotinine specimen at baseline. At three, six, and 12 month follow up studies, 47, 38, and 32 workers from the baseline sample of 68 completed a telephone survey and provided at least one saliva cotinine specimen. Intervention: The smoke-free law went into effect 24 July 2003. Main outcome measures: Self reported sensory and respiratory symptoms and exposure to secondhand smoke; self administered saliva cotinine specimens. Analyses were limited to subjects in all four study periods who completed a telephone survey and provided at least one saliva cotinine specimen. Results: All analyses were limited to participants who completed both an interview and a saliva specimen for all waves of data

collection (n = 30) and who had cotinine concentrations ≤ 15 ng/ml (n = 24). Hours of exposure to secondhand smoke in hospitality jobs decreased from 12.1 hours (95% confidence interval (CI) 8.0 to 16.3 hours) to 0.2 hours (95% CI -0.1 to 0.5 hours) ($p < 0.01$) and saliva cotinine concentration decreased from 3.6 ng/ml (95% CI 2.6 to 4.7 ng/ml) to 0.8 ng/ml (95% CI 0.4 to 1.2 ng/ml) ($p < 0.01$) from baseline to the 12 month follow up. The prevalence of workers reporting sensory symptoms declined from 88% (95% CI 66% to 96%) to 38% (95% CI 20% to 59%) ($p < 0.01$); there was no change in the overall prevalence of upper respiratory symptoms ($p < 0.16$). Conclusion: New York's smoke-free law had its intended effect of protecting hospitality workers from exposure to secondhand smoke within three months of implementation. One year after implementation, the results suggest continued compliance with the law. Copyright 2005, BMJ Publishing Group.

A meta-analysis of worldwide studies demonstrates an association between schizophrenia and tobacco smoking behaviors. (review).

de Leon J; Diaz FJ. *Schizophrenia Research* 76(2-3): 135-157, 2005. (111 refs.)

A meta-analysis of worldwide studies, found by a 10-year literature follow-up and/or by searching PubMed, was performed. Forty-two studies across 20 nations consistently demonstrated an association between schizophrenia and current smoking (weighted average odds ratio, OR=5.9; 95% confidence interval, CI 4.9-5.7). In 32 male studies across 18 nations, the weighted average OR was 7.2 (CI, 6.1-8.3). In 25 female studies across 15 nations, the weighted average OR was 3.3 (CI, 3.0-3.6). The association between schizophrenia and current smoking remained after using severe mentally ill controls (18 studies across 9 countries, weighted average OR was 1.9, CI 1.7-2.1) and controlling for other variables (3 studies, adjusted ORs ranged 2-3). Heavy smoking (6 studies across 4 countries, ORs ranged 1.9-6.4) and high nicotine dependence were more frequent in smokers with schizophrenia versus the general population. There was no consistent evidence that heavy smoking or high nicotine dependence was more frequent in smokers with schizophrenia versus severe mentally ill controls. Cessation rates were lower in schizophrenia smokers versus the general population. Schizophrenia patients had a higher prevalence of ever smoking than the general population (9 studies across 6 countries, weighted average OR=3.1, CI 2.4-3.8) and than severe mentally ill patients (5 studies across 5 countries, OR=2.0, CI 1.6-2.4). Moreover, in two studies

adjusting for confounders schizophrenia patients had an increased risk of starting daily smoking than controls. Thus, people who are going to develop schizophrenia have risk factors that make them more vulnerable to start smoking. Copyright 2005, Elsevier Science

Long-term stability of alcohol and other substance dependence diagnoses and habitual smoking - An evaluation after 5 years.

Culverhouse R; Bucholz KK; Crowe RR; Hesselbrock V; Nurnberger JI; Porjesz B et al. *Archives of General Psychiatry* 62(7): 753-760, 2005. (25 refs.)

Context: A major criterion to validate diagnoses is stability over time. Objective: To examine the stability of several classification systems for lifetime diagnosis of alcohol dependence, to identify characteristics predicting stability of alcoholism, and to study stability of lifetime assessments of habitual smoking (1 pack per day for at least 6 months) and other drug dependence. Design: Participants in the Collaborative Study on the Genetics of Alcoholism were interviewed using the Semi-Structured Assessment for the Genetics of Alcoholism and reevaluated 5 years later. Initial and follow-up interviews were available for 1728 individuals (641 index cases, 800 siblings, 287 controls) with lifetime diagnoses of alcohol dependence, other substance dependence (marijuana, cocaine, other stimulants, sedatives, opioids), or habitual smoking at first interview. The likelihood that an individual with a lifetime history of substance dependence or habitual smoking at the first interview retained this classification after 5 years was examined to assess stability of diagnosis. Results: Stability of a lifetime diagnosis of alcohol dependence varied among the subject groups of index cases, siblings, and community-based controls. Alcohol dependence as defined by DSM-III-R criteria was highly stable in the index cases (90.5% women, 94.7% men) but much less stable in the community-based controls (27.5% women, 64.7% men). The most important characteristic associated with stability of diagnosis of alcohol dependence was severity, defined by the number of alcohol-related symptoms. Other DSM-III-R substance dependence disorders varied in the stability of diagnosis over a 5-year period. Lifetime history of habitual smoking was highly stable in all subject groups (96.0% overall). Conclusions: Stability of lifetime assessment of alcohol dependence varies depending on severity of illness. Severe cases of alcohol dependence are more likely to be stable, whereas general population cases of alcohol dependence are less likely to have stable diagnoses. The stability of diagnosis for other substance

dependence varies from substance to substance. Copyright 2005, American Medical Association.

Offspring from families at high risk for alcohol dependence: Increased body mass index in association with prenatal exposure to cigarettes but not alcohol.

Hill SY; Shen S; Wellman JL; Rickin E; Lowers L. *Psychiatry Research* 135(3): 203-216, 2005. (53 refs.) The prevalence of overweight and obese children is increasing, a tendency that can be expected to increase the risk of adverse outcomes in adulthood. The aim of this study was to determine if prenatal exposure to alcohol, cigarettes, and street drugs would be associated with differences in body mass index (BMI) in childhood and adolescence in offspring from families at high and low genetic risk for developing alcohol dependence. Annual follow-up of offspring (N=288) provided 1200 height and weight assessments for analysis. Maternal substance use data were available for 235 offspring from families stratified for familial/genetic risk for alcohol dependence (high or low risk), providing the opportunity to assess prenatal exposure and familial/genetic risk in relation to BMI in the offspring. When data were grouped by the presence or absence of any prenatal cigarette exposure, a significant difference in offspring BMI was seen for 8- to 11-year-olds. Significant group differences were also seen at ages 12-15 and 16-18 years. A dose-response relationship between cigarette use by the mother and offspring BMI was also seen. With the strong tendency for individuals who are overweight in childhood and adolescence to become overweight adults, prenatal exposure to nicotine may be a harbinger of increased risk for numerous adult-onset, weight-related health problems. Copyright 2005, Elsevier Ireland.

Pharmacokinetics and metabolism of nicotine. (review).

Tutka P; Mosiewicz J; Wielosz M. *Pharmacological Reports* 57(2): 143-153, 2005. (95 refs.) Nicotine (NIC), the major constituent of tobacco, is responsible for the compulsive use of tobacco. Advances in understanding of the pharmacokinetics and metabolism of NIC have been made rapidly over the past decade. The application of highly sensitive gas chromatography/mass spectrometry led to the identification and quantitation of new NIC metabolites as well as characterization of new pathways of NIC biotransformation. This review summarizes findings from human and animal studies concerning NIC kinetics and biotransformation as well as describes the factors that influence these processes. Recently, large

individual, racial and species differences in the metabolism of NIC have been well documented. The differences in the metabolism of NIC may be a result of genetic, environmental, and developmental host influences. We review the scientific evidence from studies that supports a role for genetic mechanisms responsible for variability in the profile and the rate of the NIC metabolism. Actually, the majority of the genetic studies focus on the characterization of the CYP2A6 gene polymorphism, and on determining the relationship between the phenotype of NIC metabolism and the genotype of the CYP2A6 gene. There is good evidence that genetic polymorphisms associated with NIC metabolism are an important factor responsible for susceptibility to NIC dependence. It is anticipated that genetic findings can lead to the identification of individuals at a greater risk for tobacco addiction and will be used for more effective treatment and prevention strategies to reduce smoking. Copyright 2005, Polish Academy of Sciences Institute of Pharmacology.

The feasibility of smoking reduction: An update. (review).

Hughes JR; Carpenter MJ. *Addiction* 100(8): 1074-1089, 2005. (109 refs.)

Aim: To update conclusions of a previous review of smoking reduction on the extent to which (1) smokers spontaneously reduce their smoking, (2) smokers who try to quit and fail return to smoking less, (3) smokers can substantially reduce and maintain reductions via pharmacological and behavioral treatments and (4) smokers compensate when they reduce. Method Qualitative systematic review. Data Sources: Systematic computer searches and other methods. Study Selection Published and unpublished studies of smokers not trying to stop smoking. We located 13-26 studies for each of the four aims. Data Extraction The first author entered data with confirmation by second author. Data Synthesis: Due to the heterogeneity of methods and necessity of extensive recalculation, a meta-analysis was not feasible. Results: Few daily smokers spontaneously reduce. Among those who try to stop smoking and relapse, some return to reduced smoking but whether they maintain this reduction is unclear. Nicotine replacement (and perhaps behavior therapies) can induce smokers not interested in quitting to make significant reductions in their smoking and maintain these

over time. Some compensatory smoking occurs with reduction but significant declines in smoke exposure still occur. Conclusions These results indicate that reduction is feasible when aided by treatment. Whether reduction should be promoted will depend on the effect of reduction on health outcomes and future cessation. Copyright 2005, Society for the Study of Addiction to Alcohol and Other Drugs

Changes in substance use during the transition to adulthood a comparison of college students and their noncollege age peers.

White HR; Labouvie EW; Papadaratsakis V. *Journal of Drug Issues* 35(2): 281-305, 2005. (46 refs.)

This study examines transitions in alcohol, cigarette, and marijuana use and alcohol- and marijuana-related problems from late adolescence through young adulthood. Men and women who attend college are compared to their peers who do not to determine if the situational/socialization effects of college are unique during this developmental period. Prospective data from a community sample were collected at ages 18, 21, and 30 years. ANOVAs revealed that 18 year olds who transition out of high school, regardless of college status, reported higher levels of substance use than their peers who were still in high school. In addition, nonstudents compared to college students reported higher levels of cigarette and marijuana use in adolescence, emerging adulthood, and young adulthood and higher levels, of alcohol- and marijuana-related problems in adolescence and young adulthood. Latent growth curve analyses revealed that college status was related to lower levels of alcohol and marijuana problems at age 18, greater increases from ages, 18 to 21, and greater decreases from ages 21 to 30 even after controlling for level and growth in use. Overall, the findings suggest that nonstudents may be a more important target group than college students for drug use prevention

efforts during emerging adulthood. Copyright 2005, Journal of Drug Issues, Inc.

Effectiveness of hospital-based smoking cessation.

Fung PR; Snape-Jenkinson SL; Godfrey MT; Love KW; Zimmerman PV; Yang IA et al. *Chest* 128(1): 216-223, 2005. (23 refs.)

Study objectives: Smoking cessation for current smokers is a health-care imperative. It is not clear which approaches to smoking cessation are the most effective in the hospital setting and which factors predict long-term abstinence. We hypothesized that a hospital-based smoking cessation program involving behavioral modification and support would provide an effective intervention for smoking cessation. Design: Prospective cohort study. Setting: Smoking cessation clinics in a tertiary referral, cardiothoracic hospital. Patients or participants: Two hundred forty-three smokers and 187 never-smoker control subjects. Interventions: Smokers underwent specific sessions of individual counseling on behavioral modification, including written information, advice about quit aids, and support during the quit attempt. Abstinence was confirmed by exhaled carbon monoxide measurements. Measurements and results: Compared to never-smoker control subjects, smokers were more likely to have grown up with a smoking father or siblings, and to currently live or socialize with other smokers. Two hundred sixteen smokers attended at least two sessions of the smoking cessation program. Of these, 25% were unavailable for follow-up at 12 months and were assumed to be smoking. The point prevalence abstinence rate at 12 months was 32%. Independent factors associated with abstinence at 12 months were self-belief in quitting ability, having a heart condition, growing up without siblings who smoked, and increasing number of pack-years. Conclusions: This prospective study has demonstrated that this hospital-based smoking cessation program was as effective as programs in other settings. Social and psychological factors were associated with a greater chance of abstinence. Copyright 2005, American College of Chest Physicians.