

### **Interventions for tobacco cessation in the dental setting.**

Carr AB; Ebbert JO. *Cochrane Database of Systematic Reviews* 1: art CD005084, 2006. (89 refs.)  
Background Tobacco use has significant adverse effects on oral health. Oral health professionals in the dental office or community setting have a unique opportunity to increase tobacco abstinence rates among tobacco users. Objectives This review assesses the effectiveness of interventions for tobacco cessation offered to cigarette smokers and smokeless tobacco users in the dental office or community setting. Search strategy We searched the Cochrane Tobacco Addiction group Specialized Register (CENTRAL), MEDLINE (1966-2004), EMBASE (1988-2004), CINAHL (1982-2004), Healthstar (1975-2004), ERIC (1967-2004), PsycINFO (1984-2004), National Technical Information Service database (NTIS, 1964-2004), Dissertation Abstracts Online (1861-2004), Database of Abstract of Reviews of Effectiveness (DARE, 1995-2004), and Web of Science (1993-2004). Selection criteria We included randomized and pseudo-randomized clinical trials assessing tobacco cessation interventions conducted by oral health professionals in the dental office or community setting with at least six months of follow up. Data collection and analysis Two authors independently reviewed abstracts for potential inclusion and abstracted data from included trials. Disagreements were resolved by consensus. Main results Six clinical trials met the criteria for inclusion in this review. Included studies assessed the efficacy of interventions in the dental office or a school community setting. All studies assessed the efficacy of interventions for smokeless tobacco users, one of which included cigarettes smokers. All studies employed behavioural interventions and only one offered pharmacotherapy as an interventional component. All studies included an oral examination component. Pooling of the studies suggested that interventions conducted by oral health professionals increase tobacco abstinence rates (odds ratio [OR] 1.44; 95% confidence interval [CI]: 1.16 to 1.78) at 12 months or longer. Heterogeneity was evident ( $I^2 = 75\%$ ) and could not be adequately explained through subgroup or sensitivity analyses. Authors' tobacco use conducted by oral health

professionals incorporating an oral examination component in the dental office and community setting may increase conclusions. Available evidence suggests that behavioural interventions for tobacco abstinence rates among smokeless tobacco users. Differences between the studies limit the ability to make conclusive recommendations regarding the intervention components that should be incorporated into clinical practice. Copyright 2006, Wiley-Liss.

### **Influence of the ice-hockey environment on taking up snuff: An interview study among young males. (editorial).**

Rolandsson M; Hallberg LRM; Hugoson A. *Acta Odontologica Scandinavica* 64(1): 47-54, 2006. (40 refs.)

In Sweden, snuff-use is an established and accepted phenomenon in society, especially in connection with certain sports. The aim of this qualitative study was to analyze and describe the psychosocial environment influencing young male ice-hockey players into starting to use snuff. The study sample comprised 16 male participants between 15 and 32 years of age strategically selected for being active or having been active as ice-hockey players-snuff-users and non-users alike. A grounded theory design, including in-depth interviews, was used to generate a theory from data and thereby create theoretical concepts explaining social phenomena, human behavior, and process. An interview guide containing different themes was used to cover the study area. Five higher-order categories were developed and labeled: having a role model, residing in a consenting environment, experiencing performance demands, experiencing a sense of community and creating an image. Socialization in and through psychosocial norms of the ice-hockey environment was identified as a core category describing the central meaning of the informants' experiences of snuff in the ice-hockey environment. In the present study, the identified categories that integrate within the environment in which the young people reside and pursue their sports activities have been interpreted as factors enhancing the commencement of snuff-use. We suggest health promotion activities within the ice-hockey

environment based on a health psychology model of planned behavior. Copyright 2006, Taylor & Francis AS.

**Return to smoking following a smoke-free psychiatric hospitalization.**

Prochaska JJ; Fletcher L; Hall SE; Hall SM. *American Journal on Addictions* 15(1): 15-22, 2006. (36 refs.)

This study examined the smoking behaviors and motivations of 100 patients hospitalized in a smoke-free psychiatry unit. The sample averaged nineteen cigarettes per day and had a history of repeated failed quit attempts, yet 65% expressed interest in quitting. During hospitalization, nicotine replacement was provided to 70% of smokers to manage nicotine withdrawal. Provider counseling for smoking cessation, however, was rare, and all patients returned to smoking within five weeks of hospital discharge. The inpatient setting provides a potential site for initiating tobacco dependence treatment; however to maintain abstinence following hospital discharge, greater support is needed. Copyright 2006, American Academy of Psychiatrists in Alcoholism and Addictions.

**Smoking and wound healing problems in reduction mammoplasty: Is the introduction of urine nicotine testing justified?**

Chan LKW; Withey S; Butler PEM. *Annals of Plastic Surgery* 56(2): 111-115, 2006. (19 refs.)

Reduction mammoplasty has been shown to confer significant sustained health benefits for symptomatic sarcomata despite being defined somewhat an esthetic produce. An acceptable body mass index has become a prerequisite as obesity has been shown to significantly increase the complication rate after bilateral breast reduction. But what about cigarette smoking? Cigarette smoking has been shown to increase complications in facelifts and breast reconstruction, as well as significantly increasing postoperative morbidity after abdominoplasty. We therefore examined patients who underwent bilateral breast reductions to determine whether a significant relationship exists between cigarette smoking and wound healing problems to show the effect of stopping smoking before the procedure and to justify the implantation of urine nicotine testing preoperative. Previous research found that smokers developed as 3.2 fold increased chance of developing wound-healing problems than non-smokers after abdominoplasty. Cigarette smoking would interfere with wound healing through inhibition of capillary blood flow, and carbon dioxide which reduces oxygen-carrying capacity of blood. This study too found increase in wound-healing among smokers. For those who stopped smoking four weeks prior to surgery, there was a comparable rate of problems as

for non-smokers. (The rates of wound healing problems were 68% for still smokers, 68% those who stopped for less than 4 weeks, 53% for those who stopped less than 4 weeks, and 33% for those who had stopped more than 4 weeks prior to surgery. The authors conclude that smoking cessation ought to be "zealously" pursued, and objective verification used, to enable cost saving at post surgical aftercare as well as minimize morbidity in the form of delayed healing and unfavorable scarring, and general dissatisfaction. Copyright 2006, Lippincott, Williams & Wilkins.

**Cigarette smoking is related to a decrease in semen volume in a population of fertile men.**

Pasqualotto FF; Sobreiro BP; Hallak J; Pasqualotto EB; Lucon AM. *BJU International* 97(2): 324-326, 2006. (31 refs.)

OBJECTIVES: To evaluate the semen quality and hormonal levels in fertile men according to their level of cigarette smoking. SUBJECTS AND METHODS: We evaluated 889 fertile men who came for a vasectomy for sterilization purposes. The men included 522 non-smokers, 143 mild smokers (< 10 cigarettes/day), 154 moderate smokers (11-20/day), and 70 heavy smokers (> 20/day). We evaluated sperm concentration, motility, motion variables and hormonal levels in these men. RESULTS: There were no significant differences among the groups in sperm concentration or motility, or in levels of follicle-stimulating hormone, luteinizing hormone, or serum total testosterone. Also, sperm motion characteristics did not differ across the groups. Semen volume was the only semen variable which tended to decrease according to the number of cigarettes smoked. CONCLUSIONS: Cigarette smoking had no apparent effect on sperm concentration, motility or reproductive hormonal levels, but tended to reduce semen volume. Copyright 2006, Blackwell Publishing.

**Successes and failures of the teachable moment - Smoking cessation in cancer patients. (review).**

Gritz ER; Fingeret MC; Vidrine DJ; Lazev AB; Mehta NV; Reece GP. *Cancer* 106(1): 17-27, 2006. (61 refs.)

BACKGROUND. Successful cancer treatment can be significantly compromised by continued tobacco use. Because motivation and interest in smoking cessation increase after cancer diagnosis, a window of opportunity exists during which healthcare providers can intervene and assist in the quitting process. METHODS. The authors conducted a comprehensive literature review to discuss 1) the benefits of smoking cessation in cancer patients, 2) current knowledge regarding smoking cessation interventions targeted to cancer patients, and 3) treatment models and state-of

the-art guidelines for intervention with cancer patients who smoke. The authors present clinical cases to illustrate the challenging nature of smoking cessation treatment for cancer patients. **RESULTS.** Continued smoking after cancer diagnosis has substantial adverse effects on treatment effectiveness, overall survival, risk of second primary malignancies, and quality of life. Although some encouraging results have been demonstrated with smoking cessation interventions targeted to cancer patients, few empirical studies of such interventions have been conducted. A range of intervention components and state-of-the-art cessation guidelines are available that can be readily applied to cancer patients. Case illustrations highlight the crucial role of healthcare providers in promoting smoking cessation, the harmful impact of nicotine addiction manifested in delayed and failed reconstructive procedures, and unique problems encountered in treating patients who have particular difficulty quitting. **CONCLUSIONS.** Despite the importance of stopping smoking for all cancer patients, the diagnosis of cancer is underused as a teachable moment for smoking cessation. More research is needed to empirically test cessation interventions for cancer patients, and attention must be given to complex and unique issues when tailoring cessation treatment to these individuals. Copyright 2006, John Wiley & Sons.

#### **Prospective prediction of children's, smoking transitions: Role of parents' and older siblings' smoking.**

Bricker JB; Peterson AV; Leroux BG; Andersen MR; Rajan KB; Sarason IG. *Addiction* 101(1): 128-136, 2006. (50 refs.)

**Aims** To use a novel social epidemic probability model to investigate longitudinally the extent to which parents' and older siblings' smoking predict children's smoking transitions. **Design** Parents' and older siblings' smoking status was assessed when children were in 3rd grade (baseline). Three smoking transitions were assessed over the period of child/adolescent smoking acquisition (up to 12th grade): (1) transition from never smoking to trying smoking, (2) transition from trying to monthly smoking and (3) transition from monthly to daily smoking. **Setting** Forty Washington State school districts participating in the long term Hutchinson Smoking Prevention Project (HSPP). **Participants and measurements** Participants were the 5520 families for whom data on both parents' and older siblings' baseline smoking status, as well as on children's smoking transitions, were available. **Findings** The probability that a smoking parent influenced their child to make the first transition to trying smoking was 32% (95%

CI: 27%, 36%); to make the second transition from trying to monthly smoking, 15% (95% CI: 10%, 19%); and to make the third transition from monthly to daily smoking, 28% (95% CI: 21%, 34%). The probability that an older sibling influenced a child to make the first transition to trying smoking was 29% (95% CI: 17%, 39%); to make the second transition from trying to monthly smoking, 0% (95% CI: 0%, 8%); and to make the third transition from monthly to daily smoking, 20% (95% CI: 4%, 33%). **Conclusions:** In contrast to previous research, the results provide new evidence suggesting that family smoking influences both initiation and escalation of children's smoking. Results also quantify, in terms of probabilities, the importance of parents' and older siblings' smoking on children's three major smoking transitions. Parents' smoking, as well as older siblings' smoking, are important behaviors to target in preventing adolescents from making smoking transitions. Copyright 2006, Society for the Study of Addiction to Alcohol and Other Drugs.

#### **A randomized controlled trial of financial incentives for smoking cessation.**

Volpp KG; Levy AG; Asch DA; Berlin JA; Murphy JJ; Gomez A et al. *Cancer Epidemiology, Biomarkers & Prevention* 15(1): 12-18, 2006. (40 refs.)

**Background:** Although 435,000 Americans die each year of tobacco-related illness, only similar to 3% of smokers quit each year. Financial incentives have been shown to be effective in modifying behavior within highly structured settings, such as drug treatment programs, but this has not been shown in treating chronic disease in less structured settings. The objective of this study was to determine whether modest financial incentives increase the rate of smoking cessation program enrollment, completion, and quit rates in a outpatient clinical setting. **Methods:** 179 smokers at the Philadelphia Veterans Affairs Medical Center who reported smoking at least 10 cigarettes per day were randomized into incentive and nonincentive groups. Both groups were offered a free five-class smoking cessation program at the Philadelphia Veterans Affairs Medical Center. The incentive group was also offered \$20 for each class attended and \$100 if they quit smoking 30 days post program completion. Self-reported smoking cessation was confirmed with urine cotinine tests. **Results:** The incentive group had higher rates of program enrollment (43.3% versus 20.2%;  $P < 0.001$ ) and completion (25.8% versus 12.2%;  $P = 0.02$ ). Quit rates at 75 days were 16.3% in the incentive group versus 4.6% in the control group ( $P = 0.01$ ). At 6 months, quit rates in the incentive group were not significantly higher (6.5%) than in the control group (4.6%;  $P >$

0.20). Conclusion: Modest financial incentives are associated with significantly higher rates of smoking cessation program enrollment and completion and short-term quit rates. Future studies should consider including an incentive for longer-term cessation. Copyright 2006, American Association of Cancer Research.

### **Wheezing, asthma, hayfever, and atopic eczema in childhood following exposure to tobacco smoke in fetal life.**

Magnusson LL; Olesen AB; Wennborg H; Olsen J. *Clinical and Experimental Allergy* 35(12): 1550-1556, 2005. (66 refs.)

Prenatal maternal smoking has been associated with adverse respiratory effects in childhood such as lung deficits and wheezing, but results concerning asthma, hayfever, and atopic eczema are inconsistent. In the present study, we investigate the effects of maternal smoking in pregnancy on asthma, hayfever, atopic eczema, and wheezing in the offspring up to the age of 14-18. The study was based on a cohort of mothers enrolled during midwife visits around the 36th week of gestation in Odense and Aalborg, Denmark, 1984-1987. Singleton, live born children (n=11 144) were followed-up in 2002 to obtain a childhood history of atopic diseases, by means of questionnaires to the parents. Multivariate logistic regression analyses for medical diagnoses of asthma, hayfever, atopic eczema, and symptoms of wheezing before the age of 3, were carried out on 7844 children. After adjustment for confounders, late prenatal smoke exposure was associated with wheezing, with an odds ratio (OR) of 1.2, and a 95% confidence interval (CI) of 1.1-1.5. Furthermore, slightly reduced estimates for hayfever (OR 0.8, CI 0.7-1.0) and atopic eczema (OR 0.8, CI 0.7-0.9) were obtained for children exposed in late pregnancy compared with non-exposed. Late gestational smoke exposure was associated with wheezing but not with asthma, while null or even protective estimates were indicated for hayfever and atopic eczema. However, lack of control options for hereditary factors may have affected the results. Copyright 2005, Blackwell Publishing.

### **The effect of smoking cessation and subsequent resumption on absorption of inhaled insulin.**

Becker RHA; Frick AD; Sha S; Fountaine RJ. *Diabetes Care* 29(2): 277-282, 2006. (26 refs.)

OBJECTIVE - To assess the absorption profile of inhaled insulin in healthy, actively smoking subjects at baseline, after smoking cessation, and after smoking resumption and compare it with nonsmoking subjects. RESEARCH DESIGN AND METHODS - Insulin pharmacokinetics and glucodynamics were measured

in 20 male smoking subjects (10 - 20 cigarettes/day) and 10 matched nonsmoking subjects after receiving inhaled insulin (1 mg) or the approximate subcutaneous insulin equivalent (3 units) in a randomized cross-over fashion. All smokers then received inhaled insulin 12 h, 3 days, and 7 days into a smoking cessation period. They then resumed smoking for 2 - 3 days before again receiving inhaled insulin 1 h after the last cigarette. RESULTS - Before smoking cessation, maximum insulin concentration (C-max) and area under the curve (AUC) for insulin concentration time (AUC-Insulin(0-360)) with inhaled insulin were higher, and time to C-max (t(max)) shorter, in smokers than nonsmokers (C-max 26.8 vs. 9.7  $\mu$ U/ml; AUC-Insulin(0-360) 2,583 vs. 1,645  $\mu$ U (.) ml(-1) (.) min(-1); t(max) 20 vs. 53 min, respectively; all P < 0.05), whereas with subcutaneous insulin, systemic exposure was unchanged (AUC-Insulin(0-360) 2,324 vs. 2,269  $\mu$ U (.) ml(-1) (.) min(-1); P = NS). After smoking cessation, AUC-Insulin(0-360) decreased with inhaled insulin by up to 50% within 1 week and approached nonsmoker levels. C-max decreased and t(max) increased relative to baseline but were still not comparable with nonsmoker values. Smoking resumption completely reversed the effect of smoking cessation. Glucodynamics corroborated the observed findings in insulin pharmacokinetics. CONCLUSIONS - Cessation and resumption of smoking greatly altered the pharmacokinetics of inhaled insulin. As rapid changes in systemic insulin exposure increase hypoglycemia risk, inhaled insulin should not be used in people with diabetes who choose to continue smoking. This is consistent with recommendations that people With diabetes refrain from smoking altogether. Copyright 2006, American Diabetes Association.

### **The total lifetime health cost savings of smoking cessation to society.**

Rasmussen SR; Prescott E; Sorensen TIA; Sogaard J. *European Journal of Public Health* 15(6): 601-606, 2005. (26 refs.)

BACKGROUND: Smoking cessation has major immediate and long-term health benefits. However, ex-smokers' total lifetime health costs and continuing smokers' costs remain uncomparated, and hence the economic savings of smoking cessation to society have not been determined. METHODS: The economic effects of smoking cessation in a lifetime perspective have been examined by comparing the health costs of continuing smokers and ex-smokers by quantity of daily tobacco consumption, age, gender and disease group, while taking differences in life expectancy and the reductions in relative risks after cessation into

account. RESULTS: The total lifetime health cost savings of smoking cessation are highest at the younger ages. Although the economic savings vary with age at quitting, gender and quantity of daily tobacco consumption, all ex-smoking men and women who quit smoking at the age of 35 to 55 years generate sizeable total lifetime cost savings. At older ages, the total lifetime health cost savings of smoking cessation are of little economic consequence to the society. The total, direct and productivity lifetime cost savings of smoking cessation in moderate smokers who quit smoking at the age of 35 years are 24 800 , 7600 , and 17 200 in men, and 34 100 , 12 200 , and 21 800 in women, respectively. CONCLUSIONS: Lifetime health cost savings of smoking cessation to society are substantial at younger ages, in terms of both direct and productivity costs. Copyright 2005, Oxford University Press.

#### **Acute effect of isometric exercise on desire to smoke and tobacco withdrawal symptoms.**

Ussher M; West R; Doshi R; Sampuran AK. *Human Psychopharmacology: Clinical and Experimental* 21(1): 39-46, 2006. (26 refs.)

A brief bout of aerobic exercise (e.g. stationary bicycle) has been shown to result in an acute reduction in tobacco withdrawal symptoms and cravings in abstinent smokers. However, aerobic exercise is often not practical and it is of interest to examine whether non-aerobic exercise has a similar effect. We investigated whether isometric exercise (involving muscular contractions against resistance without movement, e.g. placing the palms of the hands together and pushing) reduces desire to smoke and tobacco withdrawal symptoms. Following overnight abstinence smokers were randomized to 5-min of: isometric exercises (n = 20), body scanning (focusing attention on sensations in different areas of the body, n = 20, control), or sitting passively (n = 20, control). Desire to smoke and tobacco withdrawal symptoms ('irritable', 'depressed', 'stressed', 'tense', 'I restless' and 'poor concentration') were rated at baseline, immediately post-intervention, and 5-, 10-, 15- and 20-min post-intervention. Isometric exercise produced a significantly greater reduction in desire to smoke versus passive control at immediate post-intervention and 5-min post-intervention, relative to baseline (p < 0.05). Most withdrawal symptoms were significantly moderated by exercise versus controls at some point between 5- to 20-min post-intervention, relative to baseline (p < 0.05). Brief isometric exercise has potential for offering immediate relief from a desire to smoke. Copyright 2006, John Wiley & Sons, Ltd.

#### **Internet-based smoking cessation programs.**

Etter JF. *International Journal of Medical Informatics* 75(1): 110-116, 2006. (38 refs.)

Objective: To present a smoking cessation website and a reflection on the use of the Internet as a smoking cessation tool. Methods: A Literature review and an Internet survey in 1506 current and former evaluation smokers. Results: The Internet may be the only form of smoking cessation support available to many smokers. There is a competition between hundreds of smoking cessation websites, many of which have a similar content. Smoking cessation websites are popular, but little scientific evidence is available on their efficacy. Neither do we know which components of these websites are most effective in motivating and helping smokers quit smoking and avoid relapse. Groups of current and former smokers form spontaneously in discussion forums on the Internet, this is a new feature in the field of addiction treatment. These discussion forums have not yet been the object of much scientific research. Conclusion: Research should be conducted to assess the efficacy of smoking cessation website, to identify which of their components are most effective, and to identify subgroups of current and former smokers for whom websites are most effective. Copyright 2006, Elsevier Science.

#### **Maternal smoking, drinking or cannabis use during pregnancy and neurobehavioral and cognitive functioning in human offspring. (review).**

Huizink AC; Mulder EJJ. *Neuroscience and Biobehavioral Reviews* 30(1): 24-41, 2006. (155 refs.) Teratological investigations have demonstrated that agents that are relatively harmless to the mother may have significant negative consequences to the fetus. Among these agents, prenatal alcohol, nicotine or cannabis exposure have been related, to adverse offspring outcomes. Although there is a relatively extensive body of literature that has focused upon birth and behavioral outcomes in newborns and infants after prenatal exposure to maternal smoking, drinking and, to a lesser extent, cannabis use, information on neurobehavioral and cognitive teratogenic findings beyond these early ages is still quite limited. Furthermore, most studies have focused on prenatal exposure to heavy levels of smoking, drinking or cannabis use. Few recent studies have paid attention to low or moderate levels of exposure to these substances. This review endeavors to provide an overview of such studies, and includes animal findings and potential mechanisms that may explain the mostly subtle effects found on neurobehavioral and cognitive outcomes. It is concluded that prenatal exposure to

either maternal smoking, alcohol or cannabis use is related to some common neurobehavioral and cognitive outcomes, including symptoms of ADHD (inattention, impulsivity), increased externalizing behavior, decreased general cognitive functioning, and deficits in learning and memory tasks. Copyright 2006, Elsevier Science Ltd.

**Medicaid reimbursement for prenatal smoking intervention influences quitting and cessation.**

Petersen R; Garrett JM; Melvin CL; Hartmann KE.

*Tobacco Control* 15(1): 30-34, 2006. (35 refs.)

Background: 40% of births in the USA are covered by Medicaid and smoking is prevalent among recipients. The objective of this study was to evaluate the association between levels of Medicaid coverage for prenatal smoking cessation interventions on quitting during pregnancy and maintaining cessation after delivery. Methods: Population based survey study of 7513 post-partum women from 15 states who: participated in Pregnancy Risk Assessment Monitoring System (PRAMS) during 1998 - 2000; smoked at the beginning of their pregnancy; and had Medicaid coverage. Participating states were categorised into three levels of Medicaid coverage for smoking cessation interventions during prenatal care: extensive (pharmacotherapies and counselling); some

(pharmacotherapies or counselling); or none. Quit rates among women who smoked before pregnancy and rates of maintaining cessation were examined. Results: Higher levels of coverage during prenatal care for smoking cessation interventions were associated with higher quit rates; 51%, 43%, and 39% of women quit in states with extensive, some, and no coverage, respectively. Compared to women in states with no coverage, women in states with extensive coverage had 1.6 times the odds of quitting smoking (odds ratio (OR) 1.58, 95% confidence interval (CI) 1.00 to 2.49). Maintenance of cessation after delivery was associated with extensive levels of Medicaid coverage; 48% of women maintained cessation in states with extensive coverage compared to 37% of women in states with no coverage. Compared to women in states with no coverage, women with extensive coverage had 1.6 times the odds of maintaining cessation (OR 1.63, 95% CI 1.04 to 2.56). Conclusions: Prenatal Medicaid coverage for both pharmacotherapies and counselling is associated with higher rates of quitting and continued cessation. This suggests policymakers can promote cessation by broadening smoking cessation services in Medicaid prenatal coverage. Copyright 2006, BMJ Publishing Group.