Library Watch on nicotine

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Pilot study of inducing smoking cessation attempts by activating a sense of looming vulnerability.
McDonald D; O'Brien J; Farr E; Haaga DAF. *Addictive Behaviors* 35(6): 599-606, 2010. (39 refs.)
Despite widespread knowledge of the negative health consequences of cigarette smoking, in 2007 a majority (60%) of daily smokers in the USA did not make a quit attempt lasting at least 24 h. Drawing on Riskind's looming cognitive vulnerability model of anxiety, we developed a guided imagery induction intended to increase smokers' perceived susceptibility to the consequences of continued smoking and thereby to increase quit attempts. In a pilot study of this induction, 72 adult daily smokers were randomly assigned to the looming imagery condition or to a control condition exposed to guided imagery that did not concern smoking or its dangers. Those in the looming condition reported significantly higher state anxiety and highly accessible negative outcome expectancies for smoking immediately after the induction, and a significantly lower smoking rate in the month after the experiment. Nonsignificant trends favored the looming condition also for increasing contemplation of quitting, self-efficacy for abstaining from cigarettes, intrinsic motivation to quit as a function of health concerns, and most importantly the likelihood of making a quit attempt in the month following the experiment. Further development and testing of the looming induction as a way to motivate quit attempts is warranted.

Reaching Spanish-speaking smokers: State-level evidence of untapped potential for quitline utilization.
Burns EK; Levinson AH. *American Journal of Public Health* 100(Supplement 1): S165-S170, 2010. (25 refs.)
Objectives. We examined the effects of a Spanish-language media campaign on the reach and outcomes of a state-sponsored QuitLine among Latino smokers. Methods. In this quasiexperimental (2-group, pre-post) study, we analyzed data from Colorado QuitLine callers before (April-August 2007) and during (September-November 2007) the media campaign. Call volume, service utilization, and quit rates at 7-month follow-up were compared between Latino (n=243) and non-Latino (n=527) callers. Results. QuitLine calls increased among Latinos during the campaign by 57.6% (1169 vs 1842 in 3-month periods). Compared with precampaign Latino study respondents, Latino respondents during the campaign were significantly younger (younger than 45 years), more often Spanish speaking, uninsured, and less educated. Among Latino enrollees, program completion and nicotine replacement therapy use were similar before and during the campaign, and quit rates during the campaign improved marginally to significantly (7-day abstinence: 29.6% vs 41.0%, P=.07; 6-month abstinence: 9.6% vs 18.8%, P=.04). Conclusions. A well-designed, statewide Spanish-language media campaign increased QuitLine reach and improved cessation outcomes among a young Latino population of low socioeconomic status. QuitLine-supported cessation can be increased among these smokers.

Health effects of light and intermittent smoking: A review.
Schane RE; Ling PM; Glantz SA. *Circulation* 121(13): 1518-1522, 2010. (61 refs.)
There is a widespread belief, based in part on truth (ie, the dose-response relationship between smoking intensity and some diseases, including cancer) and in part on successful tobacco industry marketing to "health-conscious smokers," that light and intermittent smoking are safer than heavier smoking. The fact remains, however, that even stable light smoking carries substantial health risks. Although a reduction in cigarette consumption can be an intermediate stage before a total stop and may increase the motivation of daily, heavier smokers without intention to quit to achieve eventual cessation, chronic light and intermittent smoking should not be presented to patients as a healthy long-term choice. Complete cessation is 1 of the most cost-effective interventions and provides a benefit nearly as large as, if not greater than, other widely used forms of treatment for the secondary prevention of cardiovascular disease.

Cessation is the only known primary therapy that can significantly reduce the risk of cancer and obstructive lung disease. Light and intermittent smokers often go undetected because many of them do not view themselves as smokers and will deny their habit when asked by family, friends, and healthcare providers. Clinical screening for light and intermittent smoking should be improved. Specifically, questions that rely on self-labeling such as "Are you a smoker?" should be abandoned in favor of questions that focus on smoking behavior such as "Do you use any tobacco products on a daily, weekly, or social basis?" Although this question has not been the subject of a formal clinical trial, it is more specific and recognizes behavioral triggers that are not normally assessed with the existing screening tools. Consequently, healthcare providers may capture many tobacco users who otherwise may not consider themselves smokers. Relying only on the current healthcare screening question of "Are you a smoker?" runs the risk of missing light and intermittent consumers who do not consider themselves tobacco users. Furthermore, biochemical markers, such as cotinine, may also serve as screening tools.

A thoracic surgeon-directed tobacco cessation intervention.

Kozower BD; Lau CL; Phillips JV; Burks SG; Jones DR; Stukenborg GJ. *Annals of Thoracic Surgery* 89(3): 926-930, 2010. (28 refs.)

Background. Thoracic surgeons receive little training in promoting tobacco cessation despite the impact of tobacco use on their patients. There are only a few prospective reports of tobacco cessation efforts involving thoracic surgeons in the scientific literature. The purpose of this study was to prospectively evaluate a brief tobacco cessation intervention offered by surgeons in an outpatient thoracic surgery clinic. Methods. Adult smokers from a single-institution thoracic surgery clinic were enrolled in a single-arm prospective pilot trial between January and December 2008. Patients received a 10-minute intervention including discussing their motivation for quitting, offering tobacco cessation medication, and promoting a free telephone quitline. The primary outcome was abstinence at 3 months. Univariate logistic regression identified factors associated with tobacco cessation. Results. Forty of 60 eligible smokers enrolled in the study. The mean age and standard deviation of participants was 52.1 +/- 12.6 years with a 39.9 +/- 11.2 pack-year smoking history. The 3-month quit rate was 35% (14 of 40). Fifty percent (20 of 40) of participants used at least one tobacco cessation medication. Only 7.5% (3 of 40) of patients called the quitline, but each of these participants quit smoking. Successful tobacco cessation was associated with a malignant diagnosis and being the only tobacco user in the home (odds ratio, 4.2; 95% confidence interval, 1.0 to 17.2; and odds ratio, 6.1; 95% confidence interval, 1.4 to 26.3, respectively). Conclusions. Thoracic surgeons can successfully implement a tobacco cessation program with an excellent rate of abstinence compared with reported cessation rates at 3 months from the literature. Further investigation with a larger sample size, longer follow-up, and improved utilization of the quitline is warranted.

Visual feedback of individuals' medical imaging results for changing health behaviour. (review).

Hollands GJ; Hankins M; Marteau TM. *Cochrane Database of Systematic Reviews* 1: CD007434, 2010. (42 refs.)

Background: Feedback of medical imaging results can reveal visual evidence of actual bodily harm attributable to a given behaviour. This may offer a particularly promising approach to motivating changes in health behaviour to decrease risk. Applicable behaviours include smoking cessation, skin self-examination, sun protection behaviour, dietary intake, physical activity and medication usage. The current review assembles and evaluates the evidence concerning the behavioural impact of showing and explaining images, in order to determine whether their communication is an effective intervention approach. Objectives: To assess the extent to which feedback to individuals of images of their own bodies created during medical imaging procedures increases or decreases a range of health behaviours. Selection criteria: Randomised or quasi-randomised controlled trials involving adult (18 years and over) non-pregnant individuals. The sole or principal component of included interventions is visual feedback of individuals' medical imaging results, defined as individuals being shown, and having explained, source images (still or moving images) of their bodies generated by the procedure. Main results: We included nine trials involving 1371 participants. Overall, results were mixed. Regarding five trials in clinical

populations, three assessed smoking cessation behaviours, all featuring arterial scanning procedures to assess cardiovascular risk, and reported a statistically significant effect favouring the intervention, producing a pooled odds ratio (OR) of 2.81 (95% confidence interval (CI) 1.23 to 6.41, P = 0.01). One of these trials also measured physical activity and reported no statistically significant difference between the groups. A further trial measured skin examination behaviour following a skin photography procedure for assessing moles, and reported a statistically significant increase in favour of the intervention, with an OR of 4.86 (95% CI 1.95 to 12.10, P = 0.0007). Among the four trials in non-clinical populations, all featuring ultraviolet (UV) photography to highlight UV-related skin damage, a statistically significant result favouring the intervention was found in one trial for reducing tanning booth use, producing a mean difference (MD) of -1.10 (95% CI - 1.90 to -0.30, P = .007) and one trial reported an outcome on which the control condition was favoured, with an MD of 0.45 (95% CI 0.04 to 0.86, P = 0.03) on intentional hours spent in the sun. In two further trials, no statistically significant behavioral effects were reported regarding time spent in the sun or sun protection behaviours. There was no evidence of significant adverse effects in the included trials, although this was not well reported. Authors' conclusions: Due to the limited nature of the available evidence and the mixed results that were found, no strong statements can be made about the effectiveness of communicating medical imaging results to change health behaviour. Only three trials in clinical populations were similar enough in term of setting, intervention and outcome to allow meta-analysis. We suggest, however, that targeted interventions using medical imaging technologies may be effective in certain contexts, or as applied to certain behaviours, but that this should be considered on an intervention by intervention basis, and not assumed as a general principle.

Denial of hepatic transplantation on the basis of smoking: Is it ethical? (review).

Bright RP. *Current Opinion in Organ Transplantation* 15(2): 249-253, 2010. (29 refs.)

Purpose of review: There is disagreement and inconsistency between liver transplant programs regarding the acceptance or rejection of smokers as candidates for transplantation. This article reviews the outcome data for transplanted smokers, the rate of maintained abstinence from cigarettes by smokers who have quit and the ethics of using tobacco use as a transplant selection criterion. Recent findings Consistent with earlier studies, recently published articles continue to demonstrate an increased risk of noncutaneous malignancies, higher rates of graft arterial thrombosis and a higher mortality rate in liver transplant patients who smoke as compared with nonsmokers. There is a significant rate of relapse to smoking after transplantation, and the rates are higher among patients with alcoholic liver disease. Recent studies have shown that 10-16% of patients with biochemical verification of active smoking deny their tobacco use when interviewed for transplant consideration. Although extensively, if not universally, used to exclude transplant candidates, a recent study of marijuana use showed no difference in mortality outcomes as compared with nonusers. Summary: With the exception of one recent study, there is substantial literature to support increased morbidity and mortality among posthepatic transplant smokers.

Is smoking in pregnancy an independent predictor of academic difficulties at 14 years of age? A birth cohort study.

O'Callaghan FV; Al Mamun A; O'Callaghan M; Alati R; Williams GM; Najman JM. *Early Human Development* 86(2): 71-76, 2010. (35 refs.)

Background. Studies of the effects of maternal smoking during pregnancy have reported inconsistent findings in relation to measures of offspring cognitive functioning Few studies, however, have examined learning outcomes in adolescents, as opposed to IQ Aim To examine the association between maternal smoking during pregnancy and academic performance among adolescent offspring Study design: Population-based birth cohort study. Subjects: 7223 mothers and children were enrolled in the Mater-University of Queensland Study of Pregnancy in Brisbane (Australia) from 1981 to 1984. Analyses were restricted to the 4294 mothers and children for whom all information was reported at 14-year follow-up Outcome measures Reports of academic performance of 14-year-old offspring in English. Science and Mathematics with different patterns of maternal smoking (never smoked, smoked before and/or after pregnancy but not during pregnancy, or smoked during pregnancy) Results. Low academic achievement was more common only in those whose mothers had smoked during pregnancy. Effect sizes were, however, small. The adjusted mean difference in total learning score for smoking before and/or after pregnancy but not during pregnancy, and for smoking during pregnancy were -0.18 (-0 58, 0 22) and -0 40 (-0 69, -0 12). Similarly, the adjusted odds ratios were 0.9 (0.65, 1.24) and 1.35(1 07, 1 70) Conclusion: Maternal

smoking during pregnancy is a preventable prenatal risk factor associated with small decrements in offspring academic performance that continue into adolescence.

Harm reduction policies for tobacco users. (editorial).

Gartner C; Hall W. *International Journal of Drug Policy* 21(2, Special Issue): 129-130, 2010. (17 refs.)

Tobacco harm reduction is a controversial policy due to the experience with filtered and 'light' cigarettes and concerns that the tobacco industry will use reduced harm products to undermine tobacco control strategies. The most promising harm reduction products are high dose pharmaceutical nicotine preparations and low nitrosamine smokeless tobacco, such as Swedish snus. However, despite widespread availability, existing pharmaceutical nicotine preparations have not been taken up by smokers as an alternative to smoking. In Sweden, increased snus use was associated with decreased cigarette smoking and mortality from tobacco-related disease. We suggest a graduated series of policies to explore of the public health costs and benefits of encouraging smokers to switch to these less harmful nicotine products.

Cigarette smoking is a risk factor for Alzheimer's disease: An analysis controlling for tobacco industry affiliation.

Cataldo JK; Prochaska JJ; Glantz SA. *Journal of Alzheimer's Disease* 19(2): 465-480, 2010. (115 refs.)

To examine the relationship between smoking and Alzheimer's disease (AD) after controlling for study design, quality, secular trend, and tobacco industry affiliation of the authors, electronic databases were searched; 43 individual studies met the inclusion criteria. For evidence of tobacco industry affiliation, http: legacy.library.ucsf.edu was searched. One fourth (11/43) of individual studies had tobacco-affiliated authors. Using random effects meta-analysis, 18 case control studies without tobacco industry affiliation yielded a non-significant pooled odds ratio of 0.91 (95% CI, 0.75-1.10), while 8 case control studies with tobacco industry affiliation yielded a significant pooled odds ratio of 0.86 (95% CI, 0.75-0.98) suggesting that smoking protects against AD. In contrast, 14 cohort studies without tobacco-industry affiliation yielded a significantly increased relative risk of AD of 1.45 (95% CI, 1.16-1.80) associated with smoking and the three cohort studies with tobacco industry affiliation yielded a non-significant pooled relative risk of 0.60 (95% CI 0.27-1.32). A multiple regression analysis showed that case-control studies tended to yield lower average risk estimates than cohort studies (by -0.27 +/- 0.15, P = 0.075), lower risk estimates for studies done by authors affiliated with the tobacco industry (by -0.37 +/- 0.13, P = 0.008), no effect of the quality of the journal in which the study was published (measured by impact factor, P = 0.828), and increasing secular trend in risk estimates (0.031/year +/- 0.013, P = 0.02). The average risk of AD for cohort studies without tobacco industry affiliation of average quality published in 2007 was estimated to be 1.72 +/- 0.19 (P < 0.0005). The available data indicate that smoking is a significant risk factor for AD.

Trajectories of cigarette smoking from adolescence to young adulthood as predictors of obesity in the mid-30s.

Brook DW; Zhang CS; Brook JS; Finch SJ. *Nicotine & Tobacco Research* 12(3): 263-270, 2010. (37 refs.)

The purpose of this longitudinal study was to examine the relationship between two major health problems, smoking and obesity, and to determine to what extent trajectories of cigarette smoking from early adolescence to young adulthood are related to obesity in the mid-30s. Participants (N = 806) were interviewed using a structured questionnaire at 6 points in time over a period of 23 years. Semiparametric group-based modeling and logistic regression analyses were used to analyze the data. The main outcome measure was obesity, assessed by body mass index in the mid-30s. Five distinct trajectories of tobacco use were identified (N = 806): heavy/continuous smokers, late starters, quitters/ decreasers, occasional smokers, and nonsmokers. Compared with nonsmokers, heavy/continuous smokers or late starters had a significantly lower likelihood of obesity. Also, compared with nonsmokers or occasional smokers, heavy/continuous smokers or late starters had a significantly lower likelihood of being overweight or obese. Smoking cessation programs should focus on weight control methods, such as physical exercise and learning healthy habits. In addition, weight control programs should incorporate smoking cessation efforts as integral components.