Alcohol, Other Drugs, and Health: Current Evidence

JANUARY–FEBRUARY 2011

INTERVENTIONS & ASSESSMENTS

Brief Interventions for Substance Use and Comorbid Health Conditions: What Is the Evidence?

Brief intervention (BI) decreases smoking and at-risk drinking in primary-care settings, but the utility of BI in other settings and in patients with comorbid conditions remains unclear. Researchers systematically reviewed the literature to assess the effect of BI for substance use in patients with comorbid physical- and mental-health conditions and to determine whether BI produced change in patients with dual substance use. Fourteen trials met inclusion criteria.* Brief interventions for substance use were delivered to patients with co-occurring mental-health conditions and substance use, co-occurring physical-health conditions and substance use, and dual substance use. Heterogeneity of the articles precluded quantitative synthesis.

- Eight trials reported on co-occurring mental-health and substance-use conditions. Most reported no effect of BI for substance use on either condition; none reported between-group differences in mental-health status, and all consistently reported reductions in substance use among patients in both BI and control conditions.
- Three trials including patients with co-occurring physical-health (hypertension or tuberculosis) and substance-use conditions reported improvements in both conditions after BI for substance use compared with controls.
- Three trials targeting more than 1 type of substance use reported null findings.

*Studied BI (defined as talk-based therapy to promote behavioral change); participants had a recognized comorbid physical or psychological condition; and experimental study design. Settings varied (psychiatric hospital, community sample, outpatient referral, primary care, hospital, police service). BI ranged from a 30–45 minute motivational intervention to multiple 15–60 minute sessions with 1–10 follow-ups.

Comments: This review suggests BI for substance use may be beneficial for patients with substance use and certain comorbid physical conditions but not for those with comorbid mental-health or dual-substance conditions. However, the 14 studies included in this review varied widely in quality, methodology (ranging from pilot studies to large-scale randomized clinical trials), duration, content of intervention, and follow-up period.

Jeanette M. Tetrault, MD

Reference: Kaner EFS, Brown N, Jackson K. A systematic review of the impact of brief interventions on substance use and co-morbid physical and mental health conditions. *Ment Health Subst Use.* 2011;4(1):38–61.

GPs Talk about Barriers to Implementing Screening and Brief Intervention

General practice would appear to be a natural setting for screening and brief intervention (SBI) for alcohol use disorders, yet implementation is not widespread. Researchers in Norway conducted semistructured group interviews with 40 general practitioners (GPs) from 7 Norwegian cities to gain a deeper understanding of barriers to implementation.

- Thematic analysis revealed 5 themes contributing to the low prevalence of SBI use in general practice—

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Barriers to SBI in Primary Care (continued from page 1)

1. Views of alcohol problems: alcohol use was difficult to bring up due to associated stigma. The GPs did not want to appear moralistic, and they were insecure about what constituted healthy versus unhealthy use.
2. Difficulty integrating SBI into practice: logistical and time constraints made SBI impractical. Also, screening was seen as problematic when patients came in for health problems unrelated to alcohol.
3. Views toward prevention: although prevention was seen as important, GPs saw their role mainly as treating illnesses. Compared with other preventive tasks (i.e., checking blood pressure or even screening for smoking), preventing alcohol use disorders was seen as outside their purview.
4. The patient-doctor relationship: SBI was seen as having the potential to overstep patient privacy, thus eroding trust.
5. Structure of the healthcare system: Norway's universal healthcare system has no billing codes for alcohol use disorders. Also, the GPs felt the country's workplace-based health centers were a more appropriate place for conducting SBI.

- General practitioners did show readiness to participate in alcohol-related disease prevention efforts if the authorities would initiate a public campaign focused on that subject.

Comments: The role of GPs as major actors in preventing alcohol problems needs to be reinforced. Practical and structural issues (e.g., screening by medical assistants and mechanisms for payment) also need to be addressed, since the reported burdens associated with SBI are likely to overcome the desire to implement it.

Nicolas Bertholet, MD, MSc

Reference: Nygaard P, Aasland OG. Barriers to implementing screening and brief interventions in general practice: findings from a qualitative study in Norway. *Alcohol Alcohol.* 2011;46(1):52–60.

Do Primary Care-based Interventions Decrease Alcohol Use in Older Drinkers?

The benefit of alcohol brief intervention (BI) for older drinkers is uncertain. Prior research showed efficacy but defined at-risk drinking narrowly and did not take into account risk factors more common to older drinkers such as interaction with medications or comorbidities. In this study, researchers randomized 631 at-risk* drinkers aged ≥55 years to intervention (advice from a primary-care provider, personalized printed information, educational material, and telephone follow-up with a health educator at 2, 4, and 8 weeks) or to a control group (educational material only). Participants were primarily male, white, and well-educated. Self-reported baseline consumption averaged 15 drinks per week.

- At 3 months, intervention-group participants reported fewer drinks per week (8.9 versus 10.7) and were less likely to be at-risk drinkers (50% versus 61%) than controls. However, only fewer drinks per week (9.4 versus 10.7 drinks) remained significant at 12 months.
- Attrition rates were higher in the intervention group (21% at 3 months and 29% at 12 months) than in the control group (4% at 3 months and 7% at 12 months).

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*Comorbidity Alcohol Risk Evaluation Tool (CARET) score of 1-7. The CARET is a validated instrument that assesses for alcohol-related high-risk comorbid conditions and medication use as well as risky patterns of consumption.

Efficacy of BI in Primary Care for Older Drinkers (continued from page 2)

Comments: The intervention may have decreased alcohol use, but given the significant difference in attrition, the observed benefit could also be the result of dropout by at-risk drinkers. Furthermore, the observation that drinking outcomes improved in both intervention and control groups at 3 and 12 months compared with baseline suggests a research-assessment effect, natural history, potential contamination at the study sites, and/or a stronger than expected effect from the educational materials given to controls. "Booster" follow-up sessions may need to extend beyond 8 weeks to maintain a positive effect in older drinkers.

Kevin L. Kraemer, MD, MSc

Reference: Moore AA, Blow FC, Hoffing M, et al. Primary care-based intervention to reduce at-risk drinking in older adults: a randomized controlled trial. *Addiction.* 2011;106 (1):111–120.

Naltrexone: Safe and Modestly Effective for Alcohol Dependence

The Cochrane Collaboration, which searches for and summarizes high-quality evidence from the medical literature, recently updated a 2005 review that included 29 trials of opioid antagonists for alcohol dependence. The current review analyzed 50 randomized double-blind controlled trials of opioid antagonists in 7793 patients. Forty-three studies tested oral naltrexone, 3 tested nalmefene, and 4 tested injectable extended-release naltrexone. Follow-up ranged from 4–52 weeks across studies.

- Naltrexone, compared with placebo,
  - reduced the risk for heavy drinking* (relative risk [RR], 0.83; 51% versus 61%, respectively),
  - reduced the risk for any drinking (RR, 0.96; upper limit of confidence interval, 1.00; 71% versus 74%, respectively),
  - was associated with an average of 4 fewer drinking days per month, and
  - reduced heavy drinking days, drinks per drinking day, and gamma glutamyltransferase levels.
- Side effects were 5% more common with naltrexone than with placebo and included abdominal discomfort, nausea, vomiting, anorexia, somnolence, fatigue, blurry vision, depression, decreased libido, and nightmares.
- Nalmefene and injectable naltrexone had similar efficacy to oral naltrexone, but injectable naltrexone appeared to cause more daytime sleepiness (risk difference=22% compared with placebo).
- In trials with 3 treatment arms that included acamprosate, naltrexone and acamprosate had similar efficacy, and combining them was not more efficacious than naltrexone alone.

*Defined as ≥5 standard drinks in a day for men (≥4 for women).

Comments: Opioid antagonists (mainly based on studies of oral naltrexone) have efficacy for treating alcohol dependence, although effects are small. Current studies indicate little benefit from combining them with other medications, however, too few such studies have been done to draw meaningful conclusions. Although the addition of opioid antagonists to psychosocial treatments is modestly superior to psychosocial treatment alone, available studies tell us very little about comparative efficacy with other medications.

Richard Saitz, MD, MPH

Reference: Rösner S, Hackl-Herrwerth A, Leucht S, et al. Opioid antagonists for alcohol dependence. *Cochrane Database Syst Rev.* December 8, 2010;12:CD001867.

Brief Motivational Intervention Reduces Heavy Episodic Drinking in Young Men

The efficacy of alcohol brief motivational intervention (BMI) in primary-care settings is well known. This randomized controlled study assessed the efficacy of BMI as a public-health intervention in a sample of 20-year-old men reporting for mandatory Swiss army conscription (N=418) regardless of how much they drank. Sixty-five percent of the sample met criteria for heavy episodic ("binge") drinking.* Interventions averaged 16 minutes and were delivered by trained counselors. Drinks per week and binge-drinking episodes per month were assessed at baseline and at 6 months. Eighty-nine percent of participants completed follow-up.

- Among men who reported binge drinking at baseline, mean drinks per week decreased by 1.5 in the BMI group but increased by 0.8 in the control group, while mean number of binge-drinking episodes decreased by 1.5 in the BMI group and by 0.8 in the control group.
- Among participants who did not report binge drinking at baseline, there was no significant difference in maintenance of lower-risk drinking between groups.

*Consumption of ≥60 g (5 standard US drinks) on a single drinking occasion ≥1 time per month.

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BMI for Heavy Episodic Drinking in Young Men (continued from page 3)

Comments: This population-based study showed BMI reduced hazardous drinking among young men who engaged in heavy episodic drinking. Although reaching all eligible participants with this intervention would be costly, these results provide additional evidence for the efficacy of BMI in non-treatment-seeking populations that have a high prevalence of binge drinking.

Hillary Kunins, MD, MPH, MS

Reference: Daeppen JB, Bertholet N, Gaume J, et al. Efficacy of brief motivational intervention in reducing binge drinking in young men: A randomized controlled trial. *Drug Alcohol Depend.* 2011;113(1):69–75.

Buprenorphine and Buprenorphine/Naloxone Soluble Films for Opioid Dependence

In 2010, the Food and Drug Administration approved a soluble film formulation of sublingual buprenorphine/naloxone (B/N) for the treatment of opioid dependence. Researchers conducted a randomized controlled trial of buprenorphine soluble film and B/N soluble film in 39 active heroin users to determine their effectiveness for suppressing withdrawal symptoms during buprenorphine induction. Subjects were maintained on subcutaneous morphine for 8 days prior to randomization to standardize opioid dependence. During that time, they underwent a naloxone challenge to confirm they could exhibit measurable withdrawal symptoms. After randomization, subjects received 12 mg buprenorphine or 12 mg/3 mg B/N soluble film in 3 divided doses on day 1 followed by 16 mg buprenorphine or 16 mg/4 mg B/N on days 2–5.

- Four subjects (2 in each group) dropped out after the first dose due to inadequate control of withdrawal symptoms.
- The remaining subjects had significant decreases in Clinical Opioid Withdrawal Scale (COWS) scores on day 1 that were sustained through days 2–5.
- No significant differences in COWS scores, pupil diameter changes, or withdrawal symptoms were found between groups.
- One subject (group assignment not reported) experienced elevated liver enzymes >3 times the upper limit of normal over the 5-day course of treatment.

Comments: In this study, both buprenorphine and B/N soluble film formulations reduced withdrawal symptoms during induction with no significant differences between groups. However, the study was sponsored by the maker of both tablet and film buprenorphine formulations, and no comparisons with induction onto tablet formulations were reported. Having another form of effective treatment for opioid dependence may increase accessibility, but marketing claims of patient preference, faster dissolve time, improved taste, child resistance, and portability of the soluble film over tablet form have not been confirmed in independent studies.

Alexander Y. Walley, MD, MSc

Reference: Strain EC, Harrison JA, Bigelow GE. Induction of opioid-dependent individuals onto buprenorphine and buprenorphine/naloxone soluble-films. *Clin Pharmacol Ther.* 2011;89(3):443–449.

Effect of Buprenorphine Exposure on Neonatal Abstinence Syndrome: Comparison with Methadone

Although methadone has been the mainstay of treatment for pregnant opioid-dependent women, in-utero exposure can result in neonatal abstinence syndrome (NAS), a serious complication in infants that often requires significant resources and prolonged hospitalization. In this double-blind double-dummy clinical trial, investigators randomized 175 opioid-dependent pregnant women (between 6 and 30 weeks gestation) from 8 international sites to either buprenorphine or methadone treatment and compared NAS outcomes between groups.

- Treatment was discontinued among 28 of 86 women in the buprenorphine group (33%) and 16 of 89 women in the methadone group (18%).
- Similar rates of NAS were seen in both the buprenorphine and the methadone groups (47% versus 57%, p=0.26). There were no differences in peak NAS score or infant head circumference between groups.
- Compared to neonates with NAS in the methadone group, those in the buprenorphine group required less morphine (1.1 mg versus 10.4 mg mean total dose), had a reduced length of hospital stay (10.0 days versus 17.5 days), and had a shorter duration of treatment (4.1 days versus 9.9 days).

Comments: Although neonates exposed to buprenorphine in utero were as likely to develop NAS as those exposed to methadone in this study, they required 89% less morphine for treatment and spent 43% less time in the hospital. Notably, despite apparent similarities in baseline characteristics, greater attrition was seen in the buprenorphine group, largely due to medication dissatisfaction. Reasons for this may have been inadequate withdrawal at the time of buprenorphine induction, inadequate dosing during induction, variable buprenorphine absorption in

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Buprenorphine, Methadone, and Incidence of NAS (continued from page 4)

pregnant women, and decreased potency compared with methadone at reducing opioid craving, especially among patients with significant opioid use prior to treatment.

Jeanette M. Tetrault, MD

Reference: Jones HE, Kaltenbach K, Heil SH, Stine SM, et al. Neonatal abstinence syndrome after methadone or buprenorphine exposure. *N Engl J Med.* 2010;363 (24):2320–2331.

Is Naltrexone More Effective in Alcohol-Dependent Patients with a Sweet Tooth?

Naltrexone has modest efficacy for alcohol dependence. Sweet preference may reflect endogenous opioid activity and predict the efficacy of naltrexone. A 32-week double-blind placebo-controlled trial examined the relationship between sweet preference and naltrexone efficacy among 78 alcohol-dependent subjects (45 were assigned to the naltrexone group). Subjects ranked 6 concentrations of sucrose solution, results of which were used to generate a "sweet score" based on the correlation between preference and sweetness (sucrose concentration).

- The effect of naltrexone on the number of relapses to heavy drinking* was significantly different for those with higher versus lower sweet scores. Higher sweet scores were associated with fewer relapses to heavy drinking in the naltrexone group but not in the placebo group: For every 1-unit increase in sweet score in the naltrexone group, there were 1.2 fewer relapses reported during the study period.
- The effect of naltrexone on weekly alcohol consumption and craving was not significantly affected by sweet preference.

*Defined as a) ≥5 drinks on at least 1 occasion in the 1–4 week period between follow-up visits, b) ≥5 drinking occasions per week since the previous follow-up visit, or c) arriving intoxicated to a follow-up visit.

Comments: It would have been useful if the article quantified the differential efficacy of naltrexone in participants with high versus low sweet scores. Although sweet scores did not seem to modify naltrexone's effect on craving or mean weekly consumption, results suggest naltrexone may reduce relapse in patients with a preference for sweets. Future study may clarify whether asking alcohol-dependent patients about sweet preference could help providers prescribe naltrexone to those more likely to benefit from it.

Christine Pace, MD† & Richard Saitz, MD, MPH

Reference: Laaksonen E, Lahti J, Sinclair JD, et al. Predictors for the Efficacy of Naltrexone Treatment in Alcohol Dependence: Sweet Preference. *Alcohol Alcohol.* January 25, 2011 (E-pub ahead of print).

†Contributing Editorial Intern and Fellow in General Internal Medicine, Clinical Addiction Research and Education (CARE) Unit, Boston University School of Medicine, Boston, MA.

HEALTH OUTCOMES

At What Alcohol Consumption Level Does Atrial Fibrillation Risk Increase?

Alcohol consumption increases the risk for atrial fibrillation (AF), but it is not known if this risk follows a dose-response pattern. To address this question, researchers conducted a meta-analysis of 14 cohort or case-control studies. The relative effect on AF of the highest category of alcohol consumption compared with the lowest was calculated for each individual study, pooled together, then analyzed with regression analyses that best fit the data (linear and "spline").

- The cut-off for the highest alcohol consumption category ranged from 1.5–6 drinks per day in the included studies.
- The pooled risk estimate for AF was 1.5 times greater for the highest alcohol consumption category compared with the lowest.
- Alcohol consumption ranged from 4.0–86.4 g per day in the 9 studies used to assess the dose-response relationship. In this analysis, the risk for AF increased by 8% for each additional 10 g alcohol consumed per day.

Comments: This meta-analysis indicated increasing risk for AF with increasing alcohol consumption. The article does not provide appropriate data to calculate "number needed to abstain" to prevent AF, nor does it provide an exact cut off. However, risk appeared to begin increasing even at levels generally considered to be low risk for health consequences. Although these results will aid alcohol risk discussions with patients, they are not strong enough to change current recommendations for less risky alcohol consumption levels.

Kevin L. Kraemer, MD, MSc

Reference: Kodama S, Saito K, Tanaka S, et al. Alcohol consumption and risk of atrial fibrillation: a meta-analysis. J *Am Coll Cardiol.* 2011;57(4):427–436.

"Problem" Drinkers Drink Less over Time

Alcohol dependence can be a chronic illness, and it is often thought that risky or "problem" use leads to dependence if not addressed. However, few reports using population-based data inform us as to how accurate this assumption is. Investigators conducted in-person interviews with 672 people in northern California identified as problem drinkers* via random-digit-dial telephone screening. Interviews took place in 7 waves over 11 years. Twenty percent of the sample met criteria for alcohol dependence. The mean age of participants was 35; 39% were female, 71% were white, and 40% were married.

- On average, drinking declined over time from 4 to 2 drinks per day for men and 2 to 1 drink per day for women. No more than 10% abstained. Most of the reduction occurred in the first year, with little or no change occurring in the last 6 years.
- Having a heavy-drinking network, suggestions to get help for drinking, and going into treatment were associated with *more* drinking, while having contact with community agencies and going to Alcoholics Anonymous were associated with less drinking.

*Defined as having 2 of the following: an alcohol-related social consequence, a symptom of alcohol dependence, or heavy drinking (5 drinks in a day monthly for men or 3 drinks in a day weekly for women).

Comments: Unfortunately, this paper did not report whether problem drinking (i.e., drinking too much with adverse consequences) decreased. It is unclear how much change was spontaneous, and the associations between selected exposures and changes in drinking are difficult to interpret (e.g., people may increase their drinking and end up in treatment rather than treatment leading them to drink more). Results do suggest that consumption decreases over time in people who drink too much and have consequences. We need to better understand why some of these people develop dependence, why some spontaneously remit, and why some do not.

Richard Saitz MD, MPH

Reference: Delucchi KL, Kaskutas LA. Following problem drinkers over eleven years: understanding changes in alcohol consumption. *J Stud Alcohol Drugs.* 2010;71(6):831–836.

Abuse of Other Drugs and Alcohol Common among Adolescents Who Abuse Prescription Opioids

Nonmedical prescription opioid (NMPO) abuse is a growing problem. This study evaluated NMPO and other substance use in a cohort of 912 emerging adults in the Pacific Northwest. Participants were interviewed at least annually from grades 1–2 through age 21. Investigators examined patterns of NMPO use over time, the extent of other drug use among NMPO users, and whether NMPO use between grade 10 and age 21 was associated with negative consequences.*

- Approximately one-third of respondents reported NMPO use between grade 10 and age 20. Of these, 11% were defined as "heavy users" (10 or more times in a year).
- Almost all heavy users had also used alcohol (100%), tobacco (92%), and marijuana (96%). Three-fourths had used cocaine, and two-thirds had used psychedelics, ecstasy, and amphetamines.
- In unadjusted analyses, NMPO use was associated with drug use disorders, mood disorders, being unemployed and not enrolled in school, poor/fair health, violent behavior, and committing property crimes.
- In analyses adjusted for gender and other substance use, only violent behavior was still associated with NMPO use.

*Drug use disorders, mood disorders, nonproductive behavior, poor physical health, violence, and/or property crimes.

Comments: This study demonstrates that there is a great deal of overlap between NMPO use and other substance use among adolescents and suggests that there are few unique negative consequences associated with to NPMO use alone. This does not rule out negative effects later in life. The association of NMPO use with violent behavior is of interest and should be studied further.

Darius A. Rastegar, MD

Reference: Catalano RF, White HR, Fleming CB, et al. Is nonmedical prescription opiate use a unique form of illicit drug use? *Addict Behav.* 2011;36(1–2):79–86.

Transition from Use to Dependence: Substance Type and Comorbidities Matter

To estimate the probability of developing substance dependence and identify predictors of transition from use to dependence, investigators used data from 30,000 respondents in the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) who reported lifetime use of nicotine, alcohol, cannabis, or cocaine. Actuarial methods and multivariable survival analyses were used to identify independent associations between psychiatric and substance-abuse comorbidities and dependence risk.

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Transition from Use to Dependence (continued from page 6)

- One-year, decade, and lifetime risks for transitioning to dependence after first use, respectively, were as follows:
  - 2%, 16%, and 68% for nicotine.
  - 2%, 11%, and 23% for alcohol.
  - 2%, 6%, and 9% for cannabis.
  - 7%, 15%, and 21% for cocaine.
- Having a comorbid mental-health or substance-use disorder increased the risk of transitioning to dependence (hazard ratios, 2–4).
- The transition to cocaine or cannabis dependence occurred more rapidly than the transition to alcohol or nicotine dependence: approximately half of all cases of cocaine dependence occurred 4 years after first use, half of all cases of cannabis dependence occurred 5 years after first use, half of all cases of alcohol dependence occurred 13 years after first use, and half of all cases of nicotine dependence occurred 27 years after first use.

Comments: Lifetime risks of transitioning to drug or alcohol dependence after first use are highly variable. Clinicians care for many patients with substance use but not dependence. These results may help clinicians better counsel patients with substance use about their risk for dependence, which could, in turn, motivate positive behavior change.

Hillary Kunins, MD, MPH, MS

Reference: Lopez-Quintero C, Cobos JP, Hasin DS, et al. Probability and predictors of transition from first use to dependence on nicotine, alcohol, cannabis, and cocaine: Results of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). *Drug Alcohol Depend.* December 7, 2010 (E-pub ahead of print).

Moderate or Higher Alcohol Intake: Increased Risk of Coronary Artery Disease in Men Presenting with Chest Pain or Abnormal ECG

A sample of Chinese men aged 36–84 years (N=1476) who presented sequentially for cardiac angiography due to chest pain or abnormal electrocardiograms (ECG) were evaluated for obstructive coronary artery disease (CAD) lesions according to their reported alcohol intake. Consumption categories included nondrinker (<1 drink per week), light drinker (1–6 drinks per week), moderate drinker (7–13 drinks per week), and heavy drinker (>13 drinks per week).

- Adjusted* odds ratios (AORs) for angiographically confirmed CAD among light, moderate, and heavy drinkers were 1.16 (95% confidence interval [CI], 0.68–1.94), 1.78 (95% CI, 1.35–2.27), and 2.18 (95% CI, 1.46–3.25), respectively.
- Compared with nondrinkers, AORs were 1.03 for those who had been drinking 0–15 years, 1.61 for those drinking 16–30 years, and 1.98 for those drinking >30 years.

*Analyses were adjusted for age, body mass index, hypertension, diabetes mellitus, hyperlipidemia, smoking, and physical activity. Duration ORs were not adjusted for quantity and/or frequency, nor were quantity/frequency adjusted for duration.

Comments: Although the authors concluded that moderate-to-heavy alcohol consumption and longer duration of drinking increases the risk of CAD in Chinese men, this study was based on a selected group of patients: those with chest pain or ECG changes. Other large population-based studies from China have shown that consumers of alcohol are less likely to develop coronary disease, results similar to those in most Western populations. Results do suggest, however, that even moderate drinking may increase the likelihood of coronary obstruction. The most important outcome regarding CAD is whether an association exists between alcohol and clinical events (e.g., myocardial infarction, cardiac death), which will require long-term follow-up studies.

R. Curtis Ellison, MD

Reference: Zhou X, Li C, Xu W, et al. Relation of alcohol consumption to angiographically proved coronary artery disease in Chinese men. *Am J Cardiol.* 2010;106(8):1101–1103.

Computer Duster-Spray Inhalation Common among Antisocial Adolescents

Inhalant abuse is a common and underappreciated problem among adolescents, particularly those who exhibit antisocial behavior. Computer duster spray (CDS) contains halogenated hydrocarbons, and there have been reports of its abuse among youth. To investigate this further, researchers analyzed data from 723 adolescents (ages 13–17, 87% male) housed in 32 Missouri Division of Youth Services residential treatment facilities in 2004 due to antisocial behavior.

- Approximately 1 in 7 youths (15%) reported prior CDS use. Of these, 91% reported that they "got high" when they inhaled CDS, and 13% reported using CDS over 100 times.
- Most of those who used CDS (59%) sprayed it directly into their mouths; 6% inhaled it from a bag, and 6% inhaled it from a saturated cloth.
- Compared with nonusers, CDS users were more likely to be older, white, and to live in a small town. They also had higher levels of lifetime suicidality, prior trauma, current psychiatric symptoms, and antisocial traits as well as more severe substance use problems.

Comments: This study suggests CDS inhalation may be a seri-

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CDS Inhalation among Youth (continued from page 7)

ous problem, particularly among rural youth who exhibit antisocial behavior. It is not clear to what extent this is an emerging problem versus a continuation of an old problem; i.e., the replacement of a previously abused inhalant, such as video-head cleaner, with a newly available one.

Darius A. Rastegar, MD

Reference: Garland EL, Howard MO. Inhalation of computer duster spray among adolescents: an emerging public health threat? *Am J Drug Alcohol Abuse.* 2010;36(6):320–324.

POLICY ALERTS

HHS Drops Proposed Changes to Alcohol Consumption Guidelines

In January, the US Department of Health and Human Services (HHS) decided not to go forward with a proposed revision to US dietary guidelines that could potentially have resulted in heavier drinking and an increase in alcohol-related health problems.

The proposed change to the *Dietary Guidelines for Americans 2010* based safe-consumption recommendations on weekly versus daily alcohol intake (no more than 14 drinks per week for men or 7 for women). Although people who consume small amounts daily would have stayed within the current recommended limit of 1–2 drinks per day, 75% of Americans drink only 2–3 days a week.

"The net effect of the proposed change amount[ed] to an endorsement for most men to consume up to 4 drinks and for most women to consume up to 3 drinks on days they actually consume alcohol," said Timothy S. Naimi, MD, MPH, a clinician and researcher at Boston University School of Medicine's Clinical Addiction Research and Education (CARE) unit.

Consistent with current scientific evidence, the guidelines remain at up to 1 drink per day for women and up to 2 drinks per day for men. For the first time, the guidelines also specifically define heavy and "binge" drinking and discuss their long-term negative health impacts.

The new dietary guidelines are available for download from the US Center for Nutrition Policy and Promotion website.

Expert Panel: 5 Ways to Improve Resident Substance-Abuse Training

Although substance use disorders can be reliably detected and effectively managed by primary-care physicians, evidence-based practices are underused, in part, due to lack of physician training.

To address this problem, the Betty Ford Institute sponsored a conference of medical-education and substance-abuse experts to develop guidelines aimed at improving substance-abuse training in residency programs. The panel made the following recommendations:

1. Integrate substance-abuse competencies into training.
2. Assign substance-abuse teaching the same priority as teaching about other chronic diseases.
3. Enhance faculty development (i.e., require faculty expertise in substance use disorders and addiction medicine).
4. Create addiction-medicine divisions or programs in academic medical centers.
5. Make substance-abuse screening and management a part of routine care in new models of primary care practice.

Details of these recommendations as well as suggestions for implementation appeared in the Jan. 4 issue of *Annals of Internal Medicine.*

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AIDS
Alcohol
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Alcoholism: Clinical & Experimental Research
American Journal of Drug & Alcohol Abuse
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American Journal of Psychiatry
American Journal of Public Health
American Journal on Addictions
Annals of Internal Medicine
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Lancet
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Preventive Medicine
Psychiatric Services
Substance Abuse
Substance Use & Misuse

Many others periodically reviewed (see www.aodhealth.org).

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