

A 21-year longitudinal analysis of the effects of prenatal alcohol exposure on young adult drinking.

Baer JS; Sampson PD; Barr HM; Connor PD; Streissguth AP. *Archives of General Psychiatry*. 60(4): 377-385, 2003. (48 refs.)

Prenatal alcohol exposure may be a risk factor for the development of alcohol problems in humans. The authors used data beginning with interviews of women in prenatal care at midpregnancy to predict alcohol use and alcohol-related problems in 433 offspring now aged 20.8-23.4 yrs. Maternal drinking, smoking, use of caffeine and other drugs, and demographic factors were assessed. Family history of alcohol problems was assessed from interviews with parents when offspring were 14 yrs old and updated when offspring were 21 yrs old. Measures of parental use of alcohol and other drugs and many aspects of the family environment were assessed 7 times, prenatally through 21 yrs. 433 21-yr-olds provided self-reports of drinking quantity and frequency and completed the Alcohol Dependence Scale as a measure of alcohol-related problems and dependence. Univariate, partial least squares, and regression analyses indicate that prenatal alcohol exposure is associated with alcohol problems at 21 yrs of age. The relationship persists independent of the effects of family history of alcohol problems, nicotine exposure, other prenatal exposures, and postnatal environmental factors including parental use of other drugs. Prenatal nicotine exposure was not associated with alcohol problems by offspring. Copyright 2003, American Medical Association.

A five-year prospective study of diagnostic orphans for alcohol use disorders.

Eng MY; Schuckit MA; Smith TL. *Journal of Studies on Alcohol* 64(2): 227-234, 2003. (16 refs.)

Objective: One consequence of the DSM-IV diagnostic system for substance abuse and dependence is that there are individuals who might endorse one or two of the criterion items for dependence but not meet criteria for abuse. These persons have been referred to as "diagnostic orphans." The aim of the analyses presented here is to further understanding about this potentially important group. Method: The DSM-IV categorical approach was used to determine alcohol-related diagnoses for 439 young

adult men. Structured face-to-face follow-up interviews were administered 5 years later. Results: At the beginning of the evaluation period, 14.6% (n = 64) of the men were alcohol dependent, 18.2% (n = 80) fulfilled criteria for alcohol abuse, 16.4% (n = 72) did not meet criteria for an alcohol use disorder but endorsed one or two of the dependence criteria and 50.8% (n = 223) reported none of the dependence items. At the initial interview, and again 5 years later, the diagnostic orphans reported alcohol and drug use histories that fell between the histories of those with dependence and those with no alcohol-related difficulties. The orphans were most similar to the men with abuse, although they had lower quantities and frequencies of alcohol use, endorsed fewer additional alcohol-related problems and reported less involvement with drugs compared with that group. Conclusions: Although the diagnostic orphans were more similar to the subjects with alcohol abuse than they were to those with dependence or no diagnosis, the data do not necessarily support combining the orphans with those with abuse. These diagnostic orphans do, however, constitute an important group that carries an enhanced risk for alcohol use disorders and should be closely followed.

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Association between childhood physical abuse, exposure to parental violence, and alcohol problems in adulthood.

Caetano R; Field CA; Nelson S. *Journal of Interpersonal Violence* 18(3): 240-257, 2003. (47 refs.)

This article examines the association of exposure to parental violence during childhood and childhood physical abuse with the development of alcohol-related problems in adulthood among Whites, Blacks, and Hispanics. A multistage area household probability sample of White, Black, and Hispanic couples (married or cohabiting), 18 or older, in the U.S. household population was interviewed in 1995. Analyses show an association between childhood physical abuse and exposure to parental violence and alcohol problems among White, Black, and Hispanic females and Hispanic males and an association between parental violence and alcohol problems among Black males. In sum, childhood physical abuse and exposure to parental violence are associated with the development of alcohol-related problems in adulthood. However this

association is ethnic and gender specific. Therefore, these violence-related experiences during childhood and adolescence have both immediate and long-term health consequences and should be addressed by health professionals in a variety of settings.

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Buprenorphine: How to use it right. (review).

Johnson RE; Strain EC; Amass L. *Drug and Alcohol Dependence* 70(2, Supplement 1): S59 - S77, 2003. (170 refs.)

The unique pharmacology of buprenorphine at the mu-opioid receptor (i.e. high affinity, low intrinsic activity and slow dissociation) results in buprenorphine having: (1) a good safety profile, (2) low physical dependence, and (3) flexibility in dose scheduling. Early studies assessed the effectiveness of buprenorphine for the treatment of opioid dependence using a sublingual solution formulation. More recently, a combination tablet (buprenorphine/naloxone in a 4:1 ratio) has been assessed with the goal of decreasing diversion and abuse. Controlled studies with buprenorphine solution, buprenorphine mono-tablet, and buprenorphine/naloxone combination tablet have uniformly demonstrated the effectiveness of buprenorphine for opioid dependence treatment and the combination tablet appears to decrease (but not eliminate) abuse potential. There is general agreement across studies regarding buprenorphine induction and maintenance dose schedules. The clinical effects of buprenorphine and buprenorphine/naloxone are similar and most patients can be treated initially with and maintained on a daily buprenorphine/naloxone dose of 4:1–24:6 mg. Dosing is possible on a less-than-daily schedule; however, multiples of the daily-dose should be administered to cover the increased interval between doses. If buprenorphine withdrawal is indicated, gradual dose reduction is recommended over a rapid dose reduction or abrupt cessation. Both tablet formulations are approved by the US FDA for opioid dependence treatment as Schedule III narcotics and are, therefore, available for use in office-based practice. The buprenorphine plus naloxone combination product should provide additional safeguards for use in office-based practice by decreasing risk of diversion, and office-based treatment should expand the availability of services to opioid dependent patients. Copyright 2003, Elsevier Science.

Changes in patterns of drug injection concurrent with a sustained reduction in the availability of heroin in Australia.

Topp L; Day C; Degenhardt L. *Drug and Alcohol Dependence* 70(3): 275-286, 2003. (88 refs.)

Between 1996 and 2000, heroin was the drug most frequently injected in Australia, and viable heroin markets existed in six of Australia's eight jurisdictions. In 2001, there was a dramatic and sustained reduction in the availability of heroin that was accompanied by a substantial increase in its price, and a 14% decline in the average purity of seizures analysed by forensic laboratories. The shortage of heroin constitutes a unique natural experiment within which to examine the impact of supply reduction. This paper reviews one important correlate of the shortage, namely changes in patterns of illicit drug injection. A number of studies have consistently suggested that between 2000 and 2001, there was a sizeable decrease in both prevalence and frequency of heroin injection among injecting drug users. These changes were accompanied by increased prevalence and frequency of stimulant injection. Cocaine was favoured in NSW, the sole jurisdiction in which a cocaine market was established prior to the heroin shortage; whereas methamphetamine predominated in other jurisdictions. Some data suggest that, at least in the short-term, some drug injectors left the market altogether subsequent to the reduced heroin availability. However, the findings that (1) some former heroin users switched their drug preference to a stimulant; and (2) subsequently attributed this change to the reduced availability of heroin, suggests that reducing the supply of one drug may serve to increase the use of others. Given the differential harms associated with the use of stimulants and opiates, this possibility has grave implications for Australia, where the intervention and treatment system is designed primarily to accommodate opiate use and dependence. Copyright 2003, Elsevier Scientific Publishers Ireland, Ltd.

Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The Adverse Childhood Experiences Study.

Dube SR; Felitti VJ; Dong M; Chapman DP; Giles WH; Anda RF. *Pediatrics* 111(3): 564-572, 2003. (111 refs.)

Objective. Illicit drug use is identified in Healthy People 2010 as a leading health indicator because it is associated with multiple deleterious health outcomes, such as sexually transmitted diseases, human immunodeficiency virus, viral hepatitis, and numerous social problems among adolescents and adults. Improved understanding of the influence of stressful or traumatic childhood experiences on initiation and development of drug abuse is needed. Methods. We examined the relationship between illicit drug use and 10 categories of adverse childhood experiences (ACEs) and total number of ACEs (ACE score). A retrospective cohort study of 8613 adults who

attended a primary care clinic in California completed a survey about childhood abuse, neglect, and household dysfunction; illicit drug use; and other health-related issues. The main outcomes measured were self-reported use of illicit drugs, including initiation during 3 age categories: less than or equal to 14 years, 15 to 18 years, or as an adult (greater than or equal to 19 years); lifetime use for each of 4 birth cohorts dating back to 1900; drug use problems; drug addiction; and parenteral drug use. Results. Each ACE increased the likelihood for early initiation 2- to 4-fold. The ACE score had a strong graded relationship to initiation of drug use in all 3 age categories as well as to drug use problems, drug addiction, and parenteral drug use. Compared with people with 0 ACEs, people with greater than or equal to 5 ACEs were 7- to 10-fold more likely to report illicit drug use problems, addiction to illicit drugs, and parenteral drug use. The attributable risk fractions as a result of ACEs for each of these illicit drug use problems were 56%, 64%, and 67%, respectively. For each of the 4 birth cohorts examined, the ACE score also had a strong graded relationship to lifetime drug use. Conclusions. The ACE score had a strong graded relationship to the risk of drug initiation from early adolescence into adulthood and to problems with drug use, drug addiction, and parenteral use. The persistent graded relationship between the ACE score and initiation of drug use for 4 successive birth cohorts dating back to 1900 suggests that the effects of adverse childhood experiences transcend secular changes such as increased availability of drugs, social attitudes toward drugs, and recent massive expenditures and public information campaigns to prevent drug use. Because ACEs seem to account for one half to two third of serious problems with drug use, progress in meeting the national goals for reducing drug use will necessitate serious attention to these types of common, stressful, and disturbing childhood experiences by pediatric practice. Copyright 2003, American Academy of Pediatrics.

Concurrent treatment for alcohol and tobacco dependence: Are patients ready to quit both?

Stotts AL; Schmitz JM; Grabowski J. *Drug and Alcohol Dependence* 69(1): 1-7, 2003. (38 refs.)

The prevalence of smoking among alcohol abusers is high, yet little is known about this dual-dependency. This study examines mechanisms involved in changing both alcohol and tobacco use concurrently using the transtheoretical model (TTM) measures of change. Alcohol and tobacco dependent outpatients (N = 115) entering a dual-substance dependence program were compared on baseline measures of motivation, self-initiated change activities, and self-efficacy associated with each substance use behavior.

Differences on these measures were expected for drinking versus smoking. Motivation to change each behavior was also examined as a potential predictor of retention in treatment. Results indicated that patients reported higher self-efficacy to abstain and lower temptation to use alcohol relative to cigarettes. Change activities were also initiated at higher levels for drinking compared with smoking. An interaction between drinking and smoking motivation for change was found in the prediction of treatment retention; those with higher motivation for changing their alcohol use and lower motivation to quit smoking remained longer in treatment, while those who were higher in motivation for changing both behaviors dropped out the earliest. Overall, participants in this dual-dependence program were more confident and active in changing their alcohol use. Initiating cessation of both behaviors equally and simultaneously may prove difficult for this population. This study initiates an understanding of the mechanisms involved in changing alcohol-tobacco dependence and may provide guidance for developing dual cessation interventions. Copyright 2003, Elsevier Scientific Publishers Ireland, Ltd.

Does cannabis use predict poor outcome for heroin-dependent patients on maintenance treatment? Past findings and more evidence against. (review).

Epstein DH; Preston KL. *Addiction* 98(3): 269-279, 2003. (98 refs.)

Aims: To determine whether cannabinoid-positive urine specimens in heroin-dependent out-patients predict other drug use or impairments in psychosocial functioning, and whether such outcomes are better predicted by cannabis-use disorders than by cannabis use itself. Design Retrospective analyses of three clinical trials: each included a behavioral intervention (contingency management) for cocaine or heroin use during methadone maintenance. Trials lasted 25-29 weeks; follow-up evaluations occurred 3, 6 and 12 months post-treatment. For the present analyses, data were pooled across trials where appropriate. Setting: Urban out-patient methadone clinic. Participants Four hundred and eight polydrug abusers meeting methadone-maintenance criteria. Measurements: Participants were categorized as non-users, occasional users or frequent users of cannabis based on thrice-weekly qualitative urinalyses. Cannabis-use disorders were assessed with the Diagnostic Interview Schedule III-R. Outcome measures included proportion of cocaine- and opiate-positive urines and the Addiction Severity Index (at intake and follow-ups). Findings: Cannabis use was not associated with retention, use of cocaine or heroin, or any other outcome measure during or

after treatment. Our analyses had a power of 0.95 to detect an $r(2)$ of 0.11 between cannabis use and heroin or cocaine use; the $r(2)$ we detected was less than 0.03 and non-significant. A previous finding, that cannabis use predicted lapse to heroin use in heroin-abstinent patients, did not replicate in our sample. However, cannabis-use disorders were associated weakly with psychosocial problems at post-treatment follow-up. Conclusions: Cannabinoid-positive urines need not be a major focus of clinical attention during treatment for opiate dependence, unless patients report symptoms of cannabis-use disorders. Copyright 2003, Society for the Study of Addiction to Alcohol and Other Drugs.

Exercise interventions for smokers with a history of alcoholism: Exercise adherence rates and effect of depression on adherence.

Patten CA; Vickers KS; Martin JE; Williams CD.

Addictive Behaviors 28(4): 657-667, 2003. (27 refs.)

This study examined the adherence rates and the effect of depression on adherence in two studies conducted among smokers with a past history of alcoholism. In both studies, subjects participated in a 12-session group-based exercise intervention for smoking cessation. The target quit date (TQD) was Session 8. Participants in Study 1 were 73 smokers (43% female). Exercise instructions began at Session 8 and continued through Session 12. Mean frequency and number of minutes of exercise decreased during the 4 weeks of exercise treatment ($P < .001$). Study 2, conducted with 18 smokers (50% female), examined the feasibility of commencing exercise at Session 1, well before the TQD. The mean number of minutes exercised increased from Sessions 1 to 12 ($P = .013$). In both studies, average session attendance was high (82%). Combining subjects from both studies, depressed smokers at baseline reported greater mean frequency of exercise per week than nondepressed smokers ($P = .05$). The results suggest that depressed smokers can be engaged in an exercise program. Further research is needed to determine if commencing exercise early during treatment, prior to the TQD, improves adherence. Copyright 2003, Elsevier Science Ltd.

Factors influencing treatment enrollment by pregnant substance abusers.

Haller DL; Miles DR; Dawson KS. *American Journal of Drug & Alcohol Abuse* 29(1): 117-131, 2003. (18 refs.)

Despite potentially devastating consequences to both mother and child, many pregnant substance abusers refuse treatment. To understand why, the present study compared women who enrolled in ($N=102$) vs declined ($N=23$) day treatment. Participants were primarily African American,

unemployed, high school graduates with a mean age of 27 years. Although demographic characteristics did not differ between groups, treatment enrollees had greater drug severity and were more likely to identify crack cocaine as their drug of choice. They also manifested more family and psychiatric problems, emotional distress, and Axis II psychopathology. In addition, treatment enrollees had greater legal severity and higher rates of criminal justice system involvement (46% vs 13%). The women who declined perinatal addiction services may have perceived less need for intensive treatment due to lower problem severity and less distress. Development of alternative treatment approaches, such as limited perinatal addiction services provided in conjunction with prenatal care, is warranted. Copyright 2000, Marcel Dekker, Inc. Used with permission.

Past anabolic-androgenic steroid use among men admitted for substance abuse treatment: An under-recognized problem?

Kanayama G; Cohane GH; Weiss RD; Pope HG.

Journal of Clinical Psychiatry 64(2): 156-160, 2003. (64 refs.)

Background: Recent reports suggest that anabolic-androgenic steroids (AAS) may cause mood disorders or dependence syndromes and may help to introduce some individuals to opioid abuse. At present, however, little is known about prior AAS use among men entering inpatient substance abuse treatment. Method: We assessed lifetime AAS use in 223 male substance abusers admitted to a substance abuse treatment unit primarily for treatment of alcohol, cocaine, and opioid dependence. Subjects reporting definite or possible AAS use were then asked to participate in a detailed semi-structured interview that covered demographics, drug use history, and symptoms experienced during AAS use and withdrawal, and whether AAS use had helped introduce the subject to other classes of drugs. Results: Twenty-nine men (13%) reported prior AAS use, but this history was documented on physicians' admission evaluations in only 4 cases. Among 88 men listing opioids as their drug of choice, 22 (25%) acknowledged AAS use, versus only 7 (5%) of the other 135 men ($p < .001$). Twenty-four (83%) of the 29 AAS users were interviewed in detail. Seven (29%) of the men interviewed, all with opioid dependence, reported that they first learned about opioids from friends at the gym and subsequently first obtained opioids from the same person who had sold them AAS. Eighteen (75%) of the men interviewed 7 reported that AAS were the first drugs that they had ever self-administered by injection, 4 (17%) reported severe aggressiveness or violence during AAS use, 1 (4%) attempted suicide during AAS withdrawal, and