

A randomized controlled trial of interim methadone maintenance.

Schwartz RP; Highfield DA; Jaffe JH; Brady JV; Butler CB; Rouse CO et al. *Archives of General Psychiatry* 63(1): 102-109, 2006. (31 refs.)

Context: Effective alternatives to long waiting lists for entry into methadone hydrochloride maintenance treatment are needed to reduce the complications of continuing heroin dependence and to increase methadone treatment entry. Objective: To compare the effectiveness of interim methadone maintenance with that of the usual waiting list condition in facilitating methadone treatment entry and reducing heroin and cocaine use and criminal behavior. Design: Randomized, controlled, clinical trial using 2 conditions, with treatment assignment on a 3:2 basis to interim maintenance-waiting list control. Setting: A methadone treatment program in Baltimore. Participants: A total of 319 individuals meeting the criteria for current heroin dependence and methadone maintenance treatment. Interventions: Participants were randomly assigned to either interim methadone maintenance, consisting of an individually determined methadone dose and emergency counseling only for up to 120 days, or referral to community-based methadone treatment programs. Main Outcome Measures: Entry into comprehensive methadone maintenance therapy at 4 months from baseline; self-reported days of heroin use, cocaine use, and criminal behavior; and number of urine drug test results positive for heroin and cocaine at the follow-up interview conducted at time of entry into comprehensive methadone treatment (or at 4 months from baseline for participants who did not enter regular treatment). Results: Significantly more participants assigned to the interim methadone maintenance condition entered comprehensive methadone maintenance treatment by the 120th day from baseline (75.9%) than those assigned to the waiting list control condition (20.8%) ($P < .001$). Overall, in the past 30 days at follow-up, interim participants reported significantly fewer days of heroin use ($P < .001$), had a significant reduction in heroin-positive drug test results ($P < .001$), reported spending less money on drugs ($P < .001$), and received less illegal income ($P < .02$) than the waiting list participants. Conclusion: Interim methadone

maintenance results in a substantial increase in the likelihood of entry into comprehensive treatment, and is an effective means of reducing heroin use and criminal behavior among opioid-dependent individuals awaiting entry into a comprehensive methadone treatment program. Copyright 2006, American Medical Association.

Drugs: Cannabis and psychosis.

Fergusson DM; Poulton R; Smith PF; Boden JM.

British Medical Journal 332(7534): 172-175, 2006. (23 refs.)

The United Kingdom is considering reclassifying cannabis because of concerns about links with mental health problems. This column deals with what the evidence does and does not show. It considers two areas of extensive research which have not been integrated. One is the link between cannabis and psychosis and the other is how cannabis affects neurochemical functioning. Among the evidence noted are (1) all studies have found that the use of cannabis is associated with increased risks of psychosis or psychotic symptoms and there is a dose-response relationship; and this relationship has been found with different measures for outcome and when confounded variables are controlled, as well as reverse causality. (2) The neurological pathways that link cannabis use and increased psychotic symptoms are not wholly clear. The most likely involve the effects of Δ^9 -tetrahydrocannabinol on the regulation of dopamine and serotonin, both of which are known to have a role in maintaining the psychotic state. It is noted that the use of cannabis accounts for about 10% of the cases of psychosis. At a policy level this leads to the confronting "a choice of evils: in which the rights of the majority who use cannabis without problem, are balanced against the risk for a minority who may incur serious health consequences. Copyright 2006, BMJ Publishing Group.

Efficacy of auricular acupuncture as an adjuvant therapy in substance abuse treatment: A pilot study.

Tian XW; Krishnan S. *Alternative Therapies in Health and Medicine* 12(1): 66-69, 2006. (10 refs.)

Context: Substance abuse and its related problems have become a serious public health issue, particularly

in under-served border and rural communities. Conventional therapies have not always been effective. Literature regarding the use of auricular acupressure in substance abuse treatment is limited. Objective: To examine the efficacy of auricular acupressure in addition to usual care in substance abuse treatment, which has been limited. Design and Setting: This placebo-controlled pilot study was carried out in a community mental health center in a US-Mexico border city (Las Cruces) in southwestern New Mexico. Participants: A majority were Hispanic males with an average age of 32.8 years. Participants reported an average lifetime use of drug of choice of 14 years. Intervention: In addition to usual care, participants received specific acupressure treatment and placebo acupressure treatment. The acupressure treatment was offered once a week for 6 consecutive weeks. Main Outcome Measures: The Hopkins Symptom Checklist (SCL-20) Depression Scale was administered before and after 6 weeks of treatment to assess changes in emotional distress. Brief Substance Craving Scale was used at baseline and weekly for 6 weeks to assess changes in craving. Results: Both specific and placebo acupressure groups showed a significant reduction in craving at the end of treatment, with the specific acupressure group having a greater and more steady reduction in craving. Both specific acupressure and usual-care-only groups demonstrated a significant reduction in emotional stress. Conclusion: Overall, there was a positive response to the specific auricular acupressure treatment on psychological distress, craving, and drug/alcohol use measures. These encouraging preliminary results need to be duplicated in studies with larger sample sizes and longer treatment phases. Copyright 2006, Innovision Communications.

Follow-up of 180 alcoholic patients for up to 7 years after outpatient treatment: Impact of alcohol deterrents on outcome.

Krampe H; Stawicki S; Wagner T; Bartels C; Aust C; Ruther E et al. *Alcoholism: Clinical and Experimental Research* 30(1): 86-95, 2006. (37 refs.)

Objective: (1) To perform a 9-year study of abstinence, lapse, and relapse in 180 chronic alcoholic patients, participants of the Outpatient Longterm Intensive Therapy for Alcoholics (OLITA); (2) To investigate the role of supervised alcohol deterrents (AD) in relapse prevention and as an adjunct for maintenance of long-term abstinence. Method: This prospective open treatment study evaluates the long-term course of drinking outcomes and AD use of 180 chronic alcoholics consecutively admitted from 1993

to 2002. Subsamples are compared for (1) sham-AD versus verum-AD (disulfiram/calcium carbimide), (2) coped lapses versus finally detrimental lapses versus malignant relapses, and (3) AD use for 13 to 20 versus > 20 months. Results: In this 9-year study, the cumulative probability of not having relapsed was 0.52, and that of not having consumed any alcohol was 0.26. Despite long-term use, disulfiram/calcium carbimide was well tolerated. Patients on sham-AD (due to contraindications to verum-AD) showed higher cumulative abstinence probability than patients on verum ($S = 0.86$ vs. $S = 0.49$, $p = 0.03$). Detrimental lapses and malignant relapses occurred earlier than successfully coped lapses ($p < 0.001$); patients with detrimental lapse and with malignant relapse had fewer days of AD intake and less subsequent days without AD than patients with coped lapse ($p < 0.001$). The cumulative abstinence probability was $S = 0.75$ for patients with long-term intake compared with $S = 0.50$ for patients who stopped AD between months 13 and 20 ($p < 0.001$). Conclusions: An abstinence rate of > 50% in this 9-year study strongly supports the concept of comprehensive, long-term outpatient treatment of alcoholics. Supervised, guided intake of AD, also over extended periods, can be used as a predominantly psychologically acting ingredient of successful alcoholism therapy. Copyright 2006, Research Society on Alcoholism. Used with permission.

A meta-analysis of voucher-based reinforcement therapy for substance use disorders. (review).

Lussier JP; Heil SH; Mongeon JA; Badger GJ; Higgins ST. *Addiction* 101(2): 192-203, 2006. (81 refs.)

Aims: To systematically investigate the effectiveness of voucher-based reinforcement therapy for the treatment of substance use disorders. Methods: Effect sizes and 95% confidence intervals were calculated for studies published between January 1991 and March 2004 that utilized voucher-based reinforcement therapy (VBRT) or related monetary-based incentives to treat substance use disorders (SUDs). Findings: Thirty studies involved interventions targeting abstinence from drug use using experimental designs where effects on treatment outcome could be attributed to the VBRT intervention. The estimated average effect size (r) for those studies was 0.32 (95% CI 0.26-0.38). Analyses of variables thought to moderate VBRT effect sizes revealed that more immediate voucher delivery and greater monetary value of the voucher were associated with larger effect sizes. Additional studies were identified wherein VBRT was used to target clinic attendance ($n = 6$) or medication

compliance ($n = 4$). VBRT studies targeting attendance produced average effect sizes of 0.15 (95% CI 0.02-0.28), while those that targeted medication compliance produced an average effect of 0.32 (95% CI 0.15-0.47). No significant moderators were identified for these 10 studies. Conclusions: Overall, VBRT generated significantly better outcomes than did control treatments. These results further support the efficacy of VBRT, quantify the magnitude of its effects, identify significant moderators and suggest potential directions for future research. Copyright 2006, Society for the Study of Addiction to Alcohol and Other Drugs.

Heroin maintenance treatment for chronic heroin-dependent individuals: A Cochrane systematic review of effectiveness. (review).

Ferri M; Davoli M; Perucci CA. *Journal of Substance Abuse Treatment* 30(1): 63-72, 2006. (42 refs.)

The provision of prescribed heroin to chronic heroin-dependent individuals failing other treatments has been supported during the last 70 years on the ground that the first goal of interventions on drug users is to keep them in treatment to protect them from criminal activities and to promote social integration. To assess heroin prescription effectiveness, we conducted a Cochrane systematic review of all relevant randomized controlled trials. We searched MEDLINE, EMBASE, CINAHL, and the Cochrane Library and contacted leading researchers for ongoing studies. We found 19 eligible studies, of which 4 met our inclusion criteria (577 patients). In 1 study, patients in the heroin arm remained in treatment longer than those in the methadone arm ($n = 96$, RR = 2.82, 95% CI = 1.70-4.68); in 2 studies, there was no difference; and in 1 study, patients given heroin left the study earlier than those given methadone ($n = 235$, RR = 0.79, 95% CI = 0.68-0.90). Heroin was more effective than methadone in refraining people from using street heroin in 2 studies ($n = 96$, RR = 1.10, 95% CI = 0.79-1.53; $n = 51$, RR = 0.33, 95% CI = 0.15-0.72). In 1 study, heroin reduced the risk of being charged (RR = 0.32, 95% CI = 0.14-0.78); 2 studies showed no difference, and another 2 studies adopted a multidomain outcome enclosing criminal offense and social functioning and found improvements with heroin + methadone over methadone only. It is unclear if heroin attracts people in treatment; those in treatment use less street heroin and are likely to have less criminal activities. This review systematizes and compares studies showing some inconsistencies between their aims, their adopted outcomes, and their conclusions drawn from results. Copyright 2006, Elsevier Science Ltd.

Inpatient initiation of buprenorphine maintenance vs. detoxification: Can retention of opioid-dependent patients in outpatient counseling be improved?

Caldiero RM; Parran TV; Adelman CL; Piche B. *American Journal on Addictions* 15(1): 1-7, 2006. (23 refs.)

Buprenorphine-naloxone is an office-based opioid agonist released in 2003 in the United States for the maintenance of heroin-and other opioid-dependent patients. Concern has been raised that the medication will distract or otherwise inhibit patients from participating in a holistic recovery program or abstinence-based counseling. Using a retrospective chart review, the first thirty opioid-dependent patients induced on buprenorphine maintenance therapy in an inpatient detoxification unit were compared to thirty age- and gender-matched patients who underwent detoxification (with a tramadol taper) and referral to intensive outpatient treatment. The clinical outcomes were a comparison of completion rates for an intensive outpatient program (IOP) and retention in treatment after twelve weeks of aftercare therapy. Patients induced on buprenorphine maintenance over three days had similar relief of withdrawal symptoms to patients detoxified from opioids over five days with tramadol. Patients maintained on buprenorphine had a markedly increased initiation of IOP and remained in outpatient treatment longer than patients who were detoxified (8.5 wks vs. 0.4 wks, $p < 0.001$). This study indicates that induction and maintenance on buprenorphine may be more effective than detoxification for engaging and retaining patients in abstinence-based comprehensive outpatient addiction treatment. Copyright 2006, American Academy of Psychiatrists in Alcoholism and Addictions.

Mental health outcomes of cocaine-exposed children at 6 years of age.

Linares TJ; Singer LT; Kirchner HL; Short EJ; Min MO; Hussey P et al. *Journal of Pediatric Psychology* 31(1): 85-97, 2006. (59 refs.)

OBJECTIVE: To assess 6-year-old cocaine- and noncocaine-exposed children's mental health outcomes controlling for potential confounders. **METHODS:** The sample consisted of 322 children [169 cocaine exposed (CE) and 153 noncocaine exposed (NCE)] enrolled in a longitudinal study since birth. At age 6, children were assessed for mental health symptoms using the Dominic Interactive (DI), a child self-report measure, and the Child Behavior Checklist (CBCL), a caregiver report of behavioral problems. **RESULTS:** CE children were more likely to self-report symptoms

in the probable clinical range for oppositional defiant disorder (ODD) and attention deficit hyperactivity disorder (ADHD). In contrast, prenatal cocaine exposure was not related to child behavior based on the CBCL. After control for exposure, CE children in adoptive or foster care were rated as having more problems with aggression, externalizing behaviors, and total behavioral problems than NCE children and CE children in maternal or relative care. Also, CE children in adoptive or foster care self-reported more externalizing symptoms than CE children in maternal or relative care and NCE children. Findings could not be attributed to caregiver intelligence or depressive symptoms, or to the quality of the home environment. CONCLUSIONS: CE children report more symptoms of ODD and ADHD than nonexposed children. Adoptive or foster caregivers rated their CE children as having more behavioral problems than did maternal or relative caregivers of CE children or parents of NCE children. Although further studies are needed to understand the basis for the more negative ratings by adoptive or foster caregivers of their CE children, the self-report of CE children indicates a need for psychological interventions. Copyright 2006, Oxford University Press.

Rates and predictors of relapse after natural and treated remission from alcohol use disorders.

Moos RH; Moos BS. *Addiction* 101(2): 212-222, 2006. (58 refs.)

Aims: This study examined the rates and predictors of 3-year remission, and subsequent 16-year relapse, among initially untreated individuals with alcohol use disorders who did not obtain help or who participated in treatment and/or Alcoholics Anonymous in the first year after recognizing their need for help. Design and measures: A sample of individuals (n = 461) who initiated help-seeking was surveyed at baseline and 1 year, 3 years, 8 years and 16 years later. Participants provided information on their life history of drinking, alcohol-related functioning and life context and coping. Findings: Compared to individuals who obtained help, those who did not were less likely to achieve 3-year remission and subsequently were more likely to relapse. Less alcohol consumption and fewer drinking problems, more self-efficacy and less reliance on avoidance coping at baseline predicted 3-year remission; this was especially true of individuals who remitted without help. Among individuals who were

remitted at 3 years, those who consumed more alcohol but were less likely to see their drinking as a significant problem, had less self-efficacy, and relied more on avoidance coping, were more likely to relapse by 16 years. These findings held for individuals who initially obtained help and for those who did not. Conclusions: Natural remission may be followed by a high likelihood of relapse; thus, preventive interventions may be indicated to forestall future alcohol problems among individuals who cut down temporarily on drinking on their own. Copyright 2006, Society for the Study of Addiction to Alcohol and Other Drugs.

Take-home naloxone to reduce heroin death. (review).

Baca CT; Grant KJ. *Addiction* 100(12): 1823-1831, 2005. (76 refs.)

Background: This paper reviews the relevant literature related to the distribution of take-home naloxone. Methods: A Medline search was conducted on articles published between January 1990 and June 2004 to identify scientific literature relevant to this subject. Those publications were reviewed, and from them other literature was identified and reviewed. Results: The prevalence, pathophysiology and circumstances of heroin overdose, and also bystander response are included in this review. Naloxone peer distribution has been instituted to varying degrees in the United States, Italy, Spain, Germany and the United Kingdom. Conclusion: At this point the evidence supporting naloxone distribution is primarily anecdotal, although promising. Although the distribution of naloxone holds promise for further reducing heroin overdose mortality, problems remain. Naloxone alone may be insufficient in some cases to revive the victim, and cardiopulmonary resuscitation (CPR), especially rescue breathing, may also be needed. A second dose of naloxone might be necessary. Complications following resuscitation from overdose may infrequently need in-hospital care. Mortality from injecting without anyone else present will be unaffected by take-home naloxone. Take-home naloxone should be studied in a rigorous scientific manner. Copyright 2005, Society for the Study of Addiction to Alcohol and Other Drugs.