

# Best Evidence Summaries of Topics in Mental Healthcare

**BEST** *in* **MH** *clinical question-answering service*

## Question

In adults with substance or alcohol addiction, how effective are psychedelic compounds as detoxification agents, or adjunct to psychotherapies, compared to any other intervention, in reducing substance or alcohol use?

## Clarification of question using *PICO* structure

*Patients:* Adults with substance or alcohol addiction  
*Intervention:* Psychedelic compounds as detoxification agents, or adjunct to psychotherapies  
*Comparator:* Any other intervention  
*Outcome:* Reducing substance or alcohol use

## Plain language summary

No firm conclusions can be made from the available evidence, only four articles found psychedelic compounds to be effective for reducing substance or alcohol abuse when used as detoxification agents, or adjunct to psychotherapies. The need for further research in this area was identified.

### **Clinical and research implications**

No definite clinical implications may be made based on the evidence presented in this BEST summary. The authors of a systematic review stated that more data are needed to determine whether lysergic acid diethylamide (LSD) may be beneficial or harmful in certain subgroups of individuals. It was also suggested that future trials should consider combining a range of doses of LSD with current evidence-based alcohol relapse prevention treatments.

### **What does the evidence say?**

#### ***Number of included studies/reviews (number of participants)***

Three randomised controlled trials (RCTs) (Krupitsky et al. 2002; 2007; Savage and McCabe 1973) and one systematic review (SR) (Krebs and Johansen 2012) met the inclusion criteria for this BEST summary.

#### ***Main findings***

One SR (Krebs and Johansen 2012) and one RCT (Savage and McCabe 1973) examined the use of lysergic acid diethylamide (LSD), either in alcoholics or narcotic addicts.

The SR found that a single oral dose of lysergic acid diethylamide (LSD) improved alcohol misuse compared to control groups (OR 1.96 [95% CI: 1.36 to 2.84],  $p=0.0003$ , 6 trials with 536 participants). The control groups included low-dose LSD (25 mcg or 50 mcg), d-amphetamine (60 mg), ephedrine sulphate (60 mg), or non-drug controls. This significant effect was maintained up to 6 months post-treatment, but not at 12 months post-treatment.

The RCT compared high-dose LSD (200 to 500  $\mu\text{g}$ ) treatment with an outpatient clinic programme which included daily urine monitoring and weekly group psychotherapy, on abstinence rates in narcotic addicts. The authors reported that 9/36 (25%) in the treatment group, compared with 2/37 (5%) in the control group, maintained total abstinence from narcotics for at least one year. There was no significant difference between the groups in global adjustment ratings.

Two RCTs (Krupitsky et al. 2002; 2007) evaluated the use of ketamine in patients addicted to heroin.

The earlier RCT evaluated the effectiveness of psychotherapy combined with either a high dose (2.0 mg/km im) or a low dose (0.2 mg/km im) of ketamine in 70 heroin addicted patients. Craving for heroin was significantly reduced in the high dose group compared with the low dose group ( $p<0.001$ ) immediately after treatment, as well as at one and three months after treatment, but not at 6, 12, 18 months or 24 months. No other outcomes evaluated were found to differ between the treatment groups, including anhedonia, anxiety, depression, personality features, locus of control, understanding the meaning and purpose of one's own life, spirituality, and non-emotional attitudes. Within both treatment groups, however, significant improvements were observed for many of the outcomes.

The later RCT compared a single session psychotherapy combined with ketamine (2.0 mg/km im) versus three sessions (carried out over one-month intervals) in 53 heroin addicted patients. The abstinence rate was significantly greater in the multiple KPT group compared with the single KPT

rate throughout the year of follow-up ( $p < 0.01$ ). No significant differences were observed between the groups for other outcomes, including depression, state and trait anxiety, craving for heroin, and understanding the meaning of life.

### **Authors conclusions**

Krebs and Johansen (2012) concluded that “a single dose of LSD, in the context of various alcoholism treatment programs, is associated with a decrease in alcohol misuse.” Consistent with this conclusion, Savage and McCabe (1973) stated that LSD therapy may improve rehabilitation in chronic heroin users.

Krupitsky et al. (2002) concluded that high dose ketamine therapy resulted in a significantly greater rate of abstinence in heroin addicts compared with low dose ketamine therapy, and Krupitsky et al. (2007) concluded that three sessions of psychotherapy combined with ketamine was more effective than a single session.

### **Reliability of conclusions/Strength of evidence**

The SR by Krebs and Johansen (2012) was well conducted and the results are likely to be reliable. The RCTs by Krupitsky et al. (2002; 2007) and Savage and McCabe (1973) had an unclear risk of bias due to a lack of methodological reporting, so that the reliability of these study results are uncertain.

### **What do guidelines say?**

Neither NICE nor SIGN guidelines comment on the use of psychedelic compounds during detoxification from alcohol or substance use.

**Date question received:** 01/02/2016

**Date searches conducted:** 09/02/2016

**Date answer completed:** 26/02/2016

## **References**

### **Systematic reviews**

Krebs, T.S., and Johansen, P. Ø. (2012) Lysergic acid diethylamide (LSD) for alcoholism: meta-analysis of randomized controlled trials. *Journal of Psychopharmacology* 26 (7) pp. 994-1002.

### **Randomised controlled trials**

Savage, C., and McCabe, O.L. (1973) Residential psychedelic (LSD) therapy for the narcotic addict: a controlled study. *Archives of General Psychiatry* 28 (6)

Krupitsky, E., Burakov, A., Romanova, T., Dunaevsky, I., Strassman, R., & Grinenko, A. (2002). Ketamine psychotherapy for heroin addiction: immediate effects and two-year follow-up. *Journal of substance abuse treatment*, 23(4) pp. 273-283.

Krupitsky, E. M., Burakov, A. M., Dunaevsky, I. V., Romanova, T. N., Slavina, T. Y., & Grinenko, A. Y. (2007). Single versus repeated sessions of ketamine-assisted psychotherapy for people with heroin dependence. *Journal of psychoactive drugs*, 39(1), 13-19.

## Results

### Systematic reviews

Author (year)	Search date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Krebs and Johansen 2012		<p><b>Participants:</b> Adults with alcoholism, excluding those with schizophrenia or psychosis.</p> <p><b>Intervention:</b> Lysergic acid diethylamide (LSD) (in the included studies, the patients received single oral doses of LSD ranged from approx. 210 mcg to 800 mcg).</p> <p><b>Comparator:</b> Any treatment including doses of up to 50 mcg LSD as an active control (in the included studies, control conditions were low-dose LSD [25 mcg or 50 mcg], d-amphetamine [60 mg], ephedrine sulphate [60 mg], or non-drug controls).</p> <p><b>Outcome:</b> Primary: Alcohol misuse, defined as alcohol use of consequences of alcohol use measured by interview or self-report. Secondary: alcohol misuse at short-term, medium-term and long-term follow up.</p> <p><b>Study design:</b> RCTs were eligible for inclusion.</p>	6 RCTs, N=536	<p>Meta-analysis of the 6 trials demonstrated an improvement in alcohol misuse in favour of the LSD group compared to the control group (OR 1.96 [95% CI: 1.36 to 2.84], <math>p=0.0003</math>). There was no statistical heterogeneity between the trials (<math>I^2=0\%</math>). The authors observed significant beneficial effects at short- (2-3 months post-treatment) and medium- term follow-up (6 months post-treatment), but not in the long-term (12 months post-treatment).</p> <p>Five trials reported a total of 8 acute adverse reactions to LSD, without lasting harmful effects.</p>	Low

**Randomised controlled trials**

<b>Author (year)</b>	<b>Inclusion criteria</b>	<b>Number of participants</b>	<b>Summary of results</b>	<b>Risk of bias</b>
Savage and McCabe (1973)	<p><b>Participants:</b> Male heroin addict inmates from Maryland correction institutions, aged between 21 and 50 years with at least 18 months remaining before the expiration of sentence (parole).</p> <p><b>Intervention:</b> Psychedelic therapy (incorporating one high-dose LSD administration) during a six week residence in a halfway house type of facility.</p> <p><b>Comparator:</b> Outpatient clinic program including daily urine monitoring and weekly group psychotherapy.</p> <p><b>Outcome:</b> Evaluative assessments (including daily urine surveillance) following discharge into the community.</p>	N=74 (37 in both intervention and control groups)	The authors reported that 9/36 (25%) in the treatment group compared with 2/37 (5%) in the control group maintained total abstinence from narcotics for at least one year. There was no significant difference between the groups in global adjustment ratings.	Unclear
Krupitsky et al. (2002)	<p><b>Participants:</b> Inpatient, heroin-addicted adults (according to ICD-10/DSM-IV, aged 18-30 years) at a drug and alcohol treatment centre in St. Petersburg.</p> <p><b>Intervention:</b> High dose ketamine therapy (2.0mg/kg im). 10 hours of psychotherapy was provided before ketamine session and 5 hours after.</p>	N=70 (high dose group n=35, low dose group n=35)	<p>Craving for heroin was significantly reduced in the high dose group (3.97) compared with the low dose group (5.04), <math>p &lt; 0.001</math> immediately after treatment, as well as at one and three months after treatment, but not at 6, 12, 18 months or 24 months.</p> <p>There were no significant differences between the treatment groups for three components of the syndrome of anhedonia</p>	Unclear

















	<p><b>Comparator:</b> Low dose ketamine therapy (0.2 mg/kg im). 10 hours of psychotherapy was provided before ketamine session and 5 hours after.</p> <p><b>Outcome:</b> Depression (ZDS), anxiety (SAS), craving severity (VASC), severity of anhedonia (SA), personality features (MMPI), perception of control ability (LCS), nonverbal unconscious emotional attitudes (CTA).</p>		<p>(affective, cognitive and behavioural subscales), anxiety, depression, personality features, understanding the meaning and purpose of one's own life, locus of control, spirituality, and non-emotional attitudes. Within each treatment group however, significant improvements were observed for many of these outcomes, including the syndrome of anhedonia, anxiety, depression, understanding the meaning and purpose of one's own life, locus of control, and some non-emotional attitudes.</p> <p>One side effect noted in all participants was an acute increase in blood pressure.</p>	
Krupitsky et al. (2007)	<p><b>Participants:</b> Adults inpatients with heroin-dependencies (according to ICD-10/DSM-IV) from an addiction centre in St. Petersburg.</p> <p><b>Intervention:</b> Three ketamine doses (separate sessions) of 2 mg/kg injected intramuscularly, after 2 addiction counselling sessions.</p> <p><b>Comparator:</b> Single ketamine therapy session after 2 addiction counselling sessions.</p> <p><b>Outcome:</b> Depression (ZDS), anxiety (SAS), craving for heroin (VASC) and understanding of their lives (PLT).</p>	N=53 (multiple KPT group n=26, single KPT group n=27)	<p>The abstinence rate was significantly greater in the multiple KPT group compared with the single KPT rate throughout the year of follow-up (<math>p &lt; 0.01</math>). (data only presented in a graph)</p> <p>There were no significant differences between the groups for depression, state and trait anxiety, craving for heroin, and understanding the meaning of life. Symptom intensity for these outcomes was, however, significantly improved in both groups after the first treatment.</p> <p>One side effect noted in all participants was an acute increase in blood pressure.</p>	Unclear

## Risk of bias


### Systematic reviews


Author (year)	RISK OF BIAS				
	Inclusion criteria	Searches	Review process	Quality assessment	Synthesis
Krebs and Johansen 2012					

### Randomised controlled trials

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Savage and McCabe (1973)			NA			
Krupitsky et al. (2002)						
Krupitsky et al. (2007)			NA			

 Low risk

 High risk

 Unclear risk



## Search details

Source	Search Strategy	Number of hits	Relevant evidence identified
<i>Guidelines</i>			
NICE	Psychedelic Substance Alcohol Drug Detoxification	1012	0
<i>Systematic Reviews</i>			
MEDLINE	Lysergic Acid Diethylamide/ (4713) 2 Psilocybine/ or Street Drugs/ or Hallucinogens/ (13788) 3 Mescaline/ (1034) 4 Ibogaine/ (351) 5 Salvia/ (764) 6 N,N-Dimethyltryptamine/ (336) 7 (LSD or (lysergic adj2 acid)).ab,kf,kw,ot,ti. (5385) 8 mescaline.ab,kf,kw,ot,ti. (759) 9 (peyote or mescaline or psilocybin or ibogaine or salvia or DMT or ayahuasca or dimethyltryptamine).ab,kf,kw,ot,ti. (5898) 10 (psychedlic* or hallucinogen*).ab,kf,kw,ot,ti. (2898) 11 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 (26118) 12 (therap* or detox*).ab,kf,kw,ot,ti. (2212596) 13 Therapeutics/ (8180)	133	

	<p>14 Psychiatric Rehabilitation/ or Rehabilitation/ (17060)</p> <p>15 "rehab*".ab,kf,kw,ot,ti. (125269)</p> <p>16 12 or 13 or 14 or 15 (2320000)</p> <p>17 11 and 16 (2195)</p> <p>18 (systematic\$ review\$ or meta-analytic\$ or metanalysis or metaanalysis or meta analysis or meta?synthesis or meta synthesis or meta?regression or meta regression).ab,ti. (128839)</p> <p>19 ((synthes\$ adj3 (literature or evidence)) or integrative review or data synthesis or research synthesis or narrative synthesis or systematic study or systematic studies or systematic comparison\$ or systematic overview\$ or evidence based review or comprehensive review or critical review or quantitative review or structured review or realist review or realist synthesis).ab,ti. (49656)</p> <p>20 exp Meta-Analysis/ (61052)</p> <p>21 meta-analysis.ab,ti,pt. (90654)</p> <p>22 18 or 19 or 20 or 21 (183336)</p> <p>23 (medline or pubmed or Cochrane or embase or cinahl or psyc?lit or psyc?info).ab. (112981)</p> <p>24 ((literature adj3 search\$) or (database\$ adj3 search\$) or (bibliographic adj3 search\$) or (electronic adj3 search\$) or (electronic adj3 database\$) or (computeri?ed adj3 search\$) or (internet adj3 search\$) or included studies or (inclusion adj3 studies) or inclusion criteria or selection criteria or predefined criteria or predetermined criteria).ab. (133228)</p> <p>25 ((assess\$ adj3 (quality or validity)) or (select\$ adj3 (study or studies)) or (data adj3 extract\$) or extracted data or (data adj2 abstracted) or (data adj3 abstraction) or published intervention\$ or ((study or studies) adj2 evaluat\$) or (intervention\$ adj2 evaluat\$) or confidence interval\$ or heterogeneity or pooled or pooling or odds ratio\$ or Jadad or coding).ab. (811634)</p> <p>26 23 or 24 or 25 (933313)</p> <p>27 review.pt. (2060034)</p>		
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	<p>28 26 and 27 (143877)</p> <p>29 26 and 27 (143877)</p> <p>30 (review\$ adj4 (papers or trials or studies or evidence or intervention\$ or evaluation\$)).ab,ti. (120405)</p> <p>31 22 or 26 or 28 or 29 (1011474)</p> <p>32 (letter or editorial or comment).pt. (1453213)</p> <p>33 31 not 32 (1003684)</p> <p>34 Animals/ (5755985)</p> <p>35 Humans/ (15632861)</p> <p>36 34 not 35 (4148637)</p> <p>37 33 not 36 (914638)</p> <p>38 17 and 37 (133)</p>		
EMBASE	<p>1 Lysergic Acid Diethylamide/ (4714)</p> <p>2 Psilocybine/ or Street Drugs/ or Hallucinogens/ (13815)</p> <p>3 Mescaline/ (1034)</p> <p>4 Ibogaine/ (352)</p> <p>5 Salvia/ (768)</p> <p>6 N,N-Dimethyltryptamine/ (337)</p> <p>7 (LSD or (lysergic adj2 acid)).ab,kf,kw,ot,ti. (5391)</p> <p>8 mescaline.ab,kf,kw,ot,ti. (759)</p> <p>9 (peyote or mescaline or psilocybin or ibogaine or salvia or DMT or ayahuasca or dimethyltryptamine).ab,kf,kw,ot,ti. (5911)</p> <p>10 (psychedlic* or hallucinogen*).ab,kf,kw,ot,ti. (2901)</p> <p>11 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 (26162)</p> <p>12 rehabilitation/ (17052)</p>	9	

	<p>13 exp drug detoxification/ (0)</p> <p>14 ((drug* or alcohol*) adj2 (therap* or rehab* or therap*)).ti,ot,ab. (53348)</p> <p>15 12 or 13 or 14 (70364)</p> <p>16 11 and 15 (159)</p> <p>17 (systematic\$ review\$ or systematic\$ literature review\$ or meta-analytic\$ or meta?analysis or metanalysis or meta analysis or meta?synthesis or meta synthesis or meta?regression or meta regression).ab,ti. (131977)</p> <p>18 ((synthes\$ adj3 literature) or (synthes\$ adj3 evidence) or (synthes\$ adj2 qualitative) or integrative review or data synthesis or research synthesis or narrative synthesis or systematic study or systematic studies or systematic comparison\$ or systematic overview\$).ab,ti. (27841)</p> <p>19 ((systematic adj2 search\$) or systematic\$ literature research\$ or (review adj3 scientific literature) or (literature review adj2 side effect\$) or (literature review adj2 adverse effect\$) or (literature review adj2 adverse event\$) or (evidence-based adj2 review) or (evidence-based adj2 review)).ab,ti. (15328)</p> <p>20 (comprehensive review or critical review or critical analysis or quantitative review or structured review or realist review or realist synthesis or (pooled adj2 analysis) or (pooled data adj6 (studies or trials)) or (medline and (inclusion adj3 criteria)) or (search adj (strateg\$ or term\$))).ab,ti. (63548)</p> <p>21 exp "systematic review"/ (0)</p> <p>22 meta analysis/ (61543)</p> <p>23 (Medline or pubmed or Cochrane or embase or cinahl or psyc?lit or psyc?info or lilacs or (literature adj3 search\$) or (database\$ adj3 search\$) or (bibliographic adj3 search\$) or (electronic adj3 search\$) or (electronic adj3 database\$) or (computeri?ed adj3 search\$) or (internet adj3 search\$)).ab. (153315)</p> <p>24 ((inclusion adj3 studies) or inclusion criteria or selection criteria or predefined criteria or predetermined criteria or (assess\$ adj3 (quality or validity)) or (select\$ adj3 (study or studies)) or (data adj3 extract\$) or extracted data or (data adj2 abstracted)).ab. (164965)</p> <p>25 ((data adj3 abstraction) or published intervention\$ or ((study or studies) adj2 evaluat\$) or (intervention\$</p>		
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	<p>adj2 evaluat\$) or confidence interval\$ or heterogeneity or pooled or pooling or odds ratio\$ or (Jadad or coding) or evidence-based).ab. (777760)</p> <p>26 17 or 18 or 19 or 20 or 21 or 22 (211226)</p> <p>27 23 or 24 or 25 (981504)</p> <p>28 review.pt. (2064794)</p> <p>29 27 and 28 (157915)</p> <p>30 review.ti. (303391)</p> <p>31 27 and 30 (65674)</p> <p>32 (review\$ adj10 (papers or trials or trial data or studies or evidence or intervention\$ or evaluation\$ or outcome\$ or findings)).ab,ti. (279216)</p> <p>33 (retriev\$ adj10 (papers or trials or studies or evidence or intervention\$ or evaluation\$ or outcome\$ or findings)).ab,ti. (13178)</p> <p>34 26 or 29 or 31 or 32 or 33 (488880)</p> <p>35 (letter or editorial).pt. (1296219)</p> <p>36 34 not 35 (483450)</p> <p>37 exp animal/ (19847717)</p> <p>38 nonhuman/ (0)</p> <p>39 37 or 38 (19847717)</p> <p>40 human/ (15660680)</p> <p>41 39 not 40 (4187037)</p> <p>42 36 not 41 (467834)</p> <p>43 ("cochrane database of systematic reviews\$" or "the cochrane database of systematic reviews").jn. (11827)</p> <p>44 42 not 43 (456194)</p>		
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	<p>45 conference abstract.pt. (0)</p> <p>46 44 not 45 (456194)</p> <p>47 16 and 46 (9)</p>		
PsycINFO	<p>1 (LSD or psilocybin or mescaline or peyote or ibogaine or salvia or DMT OT ayahuasca or dimethyltryptamine).ab,ot,ti. (1230)</p> <p>2 exp Mescaline/ (34)</p> <p>3 (psychedlic* or hallucinogen*).ab,ot,ti. (1273)</p> <p>4 (detox* or therap* or rehab*).ab,ot,ti. (288724)</p> <p>5 exp Detoxification/ (1336)</p> <p>6 exp Drug Rehabilitation/ or exp Rehabilitation/ (52849)</p> <p>7 4 or 5 or 6 (310897)</p> <p>8 exp Lysergic Acid Diethylamide/ or exp Hallucinogenic Drugs/ (1997)</p> <p>9 1 or 2 or 3 or 8 (3319)</p> <p>10 7 and 9 (479)</p> <p>11 (Cochrane\$ or review or overview or (review adj2 literature) or (synthes\$ adj3 (literature\$ or research or studies or data))).ti. (109187)</p> <p>12 (meta analysis or literature review or systematic review).md. (113821)</p> <p>13 (pooled analys\$ or ((data adj2 pool\$) and studies) or ((hand or manual\$ or database\$ or computer\$ or electronic\$) adj2 search\$) or ((electronic\$ or bibliographic\$) adj2 (database\$ or data base\$))).ab,ti. (9414)</p> <p>14 exp Meta Analysis/ (3517)</p> <p>15 11 or 12 or 13 or 14 (196036)</p> <p>16 (comment reply or editorial or letter or review book or review media).dt. (229195)</p> <p>17 (electronic collection or dissertation abstract or encyclopedia).pt. (302228)</p> <p>18 (rat or rats or mouse or mice or hamster or hamsters or animal or animals or dog or dogs or cat or cats or</p>	45	

	bovine or sheep).ab,sh,ti. (209098) 19 16 or 17 or 18 (700646) 20 15 not 19 (123205) 21 10 and 20 (45)		
<i>Primary Studies</i>			
MEDLINE	Lysergic Acid Diethylamide/ (4713) 2 Psilocybine/ or Street Drugs/ or Hallucinogens/ (13788) 3 Mescaline/ (1034) 4 Ibogaine/ (351) 5 Salvia/ (764) 6 N,N-Dimethyltryptamine/ (336) 7 (LSD or (lysergic adj2 acid)).ab,kf,kw,ot,ti. (5385) 8 mescaline.ab,kf,kw,ot,ti. (759) 9 (peyote or mescaline or psilocybin or ibogaine or salvia or DMT or ayahuasca or dimethyltryptamine).ab,kf,kw,ot,ti. (5898) 10 (psychedlic* or hallucinogen*).ab,kf,kw,ot,ti. (2898) 11 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 (26118) 12 (therap* or detox*).ab,kf,kw,ot,ti. (2212596) 13 Therapeutics/ (8180) 14 Psychiatric Rehabilitation/ or Rehabilitation/ (17060) 15 "rehab*".ab,kf,kw,ot,ti. (125269) 16 12 or 13 or 14 or 15 (2320000) 17 11 and 16 (2195) 18 "randomized controlled trial".pt. (405742)	154	

	<p>19 (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab. (887418)</p> <p>20 (retraction of publication or retracted publication).pt. (8484)</p> <p>21 18 or 19 or 20 (980647)</p> <p>22 (animals not humans).sh. (4148637)</p> <p>23 ((comment or editorial or meta-analysis or practice-guideline or review or letter or journal correspondence) not "randomized controlled trial").pt. (3524621)</p> <p>24 (random sampl\$ or random digit\$ or random effect\$ or random survey or random regression).ti,ab. not "randomized controlled trial".pt. (56271)</p> <p>25 21 not (22 or 23 or 24) (727826)</p> <p>26 17 and 25 (154)</p>		
EMBASE	<p>1 Lysergic Acid Diethylamide/ (8686)</p> <p>2 Psilocybine/ or Street Drugs/ or Hallucinogens/ (10708)</p> <p>3 Mescaline/ (1923)</p> <p>4 Ibogaine/ (539)</p> <p>5 Salvia/ (1382)</p> <p>6 N,N-Dimethyltryptamine/ (745)</p> <p>7 (LSD or (lysergic adj2 acid)).ab,kf,kw,ot,ti. (6516)</p> <p>8 mescaline.ab,kf,kw,ot,ti. (847)</p> <p>9 (peyote or mescaline or psilocybin or ibogaine or salvia or DMT or ayahuasca or dimethyltryptamine).ab,kf,kw,ot,ti. (8757)</p> <p>10 (psychedlic* or hallucinogen*).ab,kf,kw,ot,ti. (3687)</p> <p>11 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 (29708)</p> <p>12 rehabilitation/ (66177)</p> <p>13 exp drug detoxification/ (4060)</p>	32	



	<p>14 ((drug* or alcohol*) adj2 (therap* or rehab* or therap*)).ti,ot,ab. (74321)</p> <p>15 12 or 13 or 14 (143927)</p> <p>16 11 and 15 (398)</p> <p>17 (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab. (1165492)</p> <p>18 RETRACTED ARTICLE/ (7893)</p> <p>19 17 or 18 (1173191)</p> <p>20 (animal\$ not human\$).sh,hw. (3977451)</p> <p>21 (book or conference paper or editorial or letter or review).pt. not exp randomized controlled trial/ (4304277)</p> <p>22 (random sampl\$ or random digit\$ or random effect\$ or random survey or random regression).ti,ab. not exp randomized controlled trial/ (69223)</p> <p>23 19 not (20 or 21 or 22) (904449)</p> <p>24 16 and 23 (32)</p>		
PsycINFO	<p>1 (LSD or psilocybin or mescaline or peyote or ibogaine or salvia or DMT OT ayahuasca or dimethyltryptamine).ab,ot,ti. (1230)</p> <p>2 exp Mescaline/ (34)</p> <p>3 (psychedlic* or hallucinogen*).ab,ot,ti. (1273)</p> <p>4 (detox* or therap* or rehab*).ab,ot,ti. (288724)</p> <p>5 exp Detoxification/ (1336)</p> <p>6 exp Drug Rehabilitation/ or exp Rehabilitation/ (52849)</p> <p>7 4 or 5 or 6 (310897)</p> <p>8 exp Lysergic Acid Diethylamide/ or exp Hallucinogenic Drugs/ (1997)</p> <p>9 1 or 2 or 3 or 8 (3319)</p> <p>10 7 and 9 (479)</p>	28	

	11 (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab. (150277) 12 (animals not humans).sh. (3383) 13 exp Clinical Trials/ (9298) 14 random*.mp. (134170) 15 13 not 14 (3973) 16 11 not (12 or 15) (149707) 17 10 and 16 (28)		
CENTRAL	#1 MeSH descriptor: [Hallucinogens] explode all trees 161 #2 MeSH descriptor: [Lysergic Acid Diethylamide] explode all trees 52 #3 MeSH descriptor: [Psilocybine] explode all trees 30 #4 MeSH descriptor: [Mescaline] explode all trees 7 #5 MeSH descriptor: [Ibogaine] explode all trees 1 #6 MeSH descriptor: [Salvia] explode all trees 114 #7 MeSH descriptor: [Banisteriopsis] explode all trees 11 #8 MeSH descriptor: [N,N-Dimethyltryptamine] explode all trees 22 #9 mescaline or peycote or ibogaine or salvia or ayahuasca or DMT or LSD 798 #10 lysergic ADJ2 acid 1 #11 hallucinogen* or psychedelic* 324 #12 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 1086 #13 (drug* or alcohol* or substance*) ADJ3 (detox* or rehab* or therap*) 1732 #14 #12 and #13 24	24	

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