



# Response of cluster headache to LSD and psilocybin



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## ABSTRACT:

**OBJECTIVE:** TO DESCRIBE THE USE OF PSILOCYBIN AND LYSERGIC ACID DIETHYLAMIDE (LSD) FOR TREATMENT OF CLUSTER HEADACHE.

**METHODS:** PATIENTS, RECRUITED BY ONLINE INTERNET SURVEYS AND INTEREST GROUPS, WERE QUESTIONED ABOUT THEIR USE OF PSILOCYBIN AND LSD TO TREAT THEIR CLUSTER HEADACHES. OF 383 PATIENTS IDENTIFIED, 53 CONSENTED TO INTERVIEWS AND PROVIDED MEDICAL RECORDS.

**RESULTS:** 52 PARTICIPANTS HAD USED PSILOCYBIN AND NINE HAD USED LSD TO TREAT THEIR CLUSTER HEADACHES. TWENTY-TWO (85%) OF 26 PSILOCYBIN USERS REPORTED THAT PSILOCYBIN HAD ABORTED ATTACKS; 25 (52%) OF 48 PSILOCYBIN USERS AND SEVEN (88%) OF 8 LSD USERS REPORTED TERMINATION OF AT LEAST ONE CLUSTER PERIOD; AND 18 (95%) OF 19 PSILOCYBIN USERS AND FOUR (80%) OF FIVE LSD USERS REPORTED EXTENSION OF THEIR REMISSION PERIOD. TWENTY-TWO (42%) PSILOCYBIN USERS AND TWO (22%) LSD USERS EXPERIENCED THERAPEUTIC EFFECTS WITH SUB-HALLUCINOGENIC DOSES.

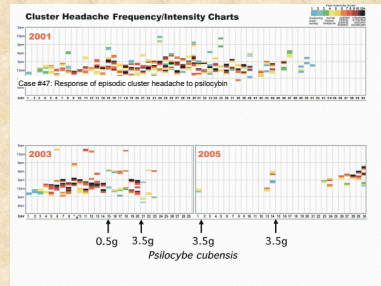
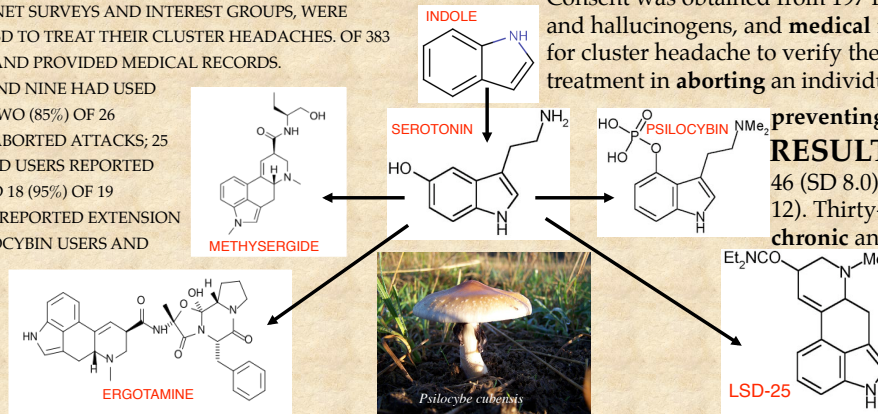
**CONCLUSIONS:** LSD AND PSILOCYBIN MAY BE EFFECTIVE IN TREATING CLUSTER ATTACKS, TERMINATING CLUSTER PERIODS AND EXTENDING REMISSIONS, POSSIBLY BY A MECHANISM UNRELATED TO THEIR HALLUCINOGENIC PROPERTIES.

**METHODS:** 120 cases were recruited from the Clusterbusters website, 242 from an online survey on quality of life hosted by Erowid and 21 who contacted us via email.

Consent was obtained from 197 for an interview regarding use of medications and hallucinogens, and **medical records** obtained from 53 who met ICHD-2 criteria for cluster headache to verify the diagnosis. Patients rated the effectiveness of each treatment in **aborting** an individual attack, **terminating** a cluster period and

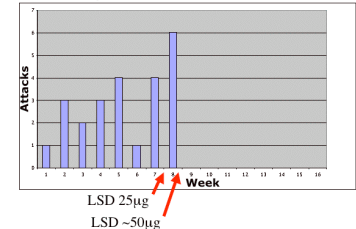
**preventing future clusters or extending the remission period.**

**RESULTS:** There were 11 women and 42 men, mean age 46 (SD 8.0), with mean age of cluster headache onset 31 (SD 12). Thirty-two had **episodic** cluster headaches, 7 had **primary chronic** and 13 had **secondary chronic** cluster headaches. 52 used **psilocybin** to control their headaches, and nine had used **LSD**. Three patients (6%) found psilocybin **ineffective**. Twenty-five (48%) rated it as 100% effective (termination of cluster period) and 20 (38%) partially effective. Of the 26 people who took psilocybin during an attack, 22 (85%) found it **aborted the attack**. The psilocybin effectively extended the remission



Demographics				Conventional Medications				Psilocybin treats...				LSD treats...		OFF meds?										
#	Age	Sex	onset	Type	Frequency	Intensity	Day	Propranolol	Amisulpride	Oxygen	Verapamil	Prednisone	Lithium	Triptan	Attack	Period	Remission	hallocinogenic?	Attack	Period	Remission	hallocinogenic?	Or why not?	Recreational?
1	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
2	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
3	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
4	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
5	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
6	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
7	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
8	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
9	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
10	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
11	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
12	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
13	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
14	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
15	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
16	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
17	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
18	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
19	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
20	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
21	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
22	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
23	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
24	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
25	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
26	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
27	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
28	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
29	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
30	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
31	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
32	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
33	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
34	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
35	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
36	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
37	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
38	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
39	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
40	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
41	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
42	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
43	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
44	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
45	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
46	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
47	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
48	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
49	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
50	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
51	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes
52	24	Male	13	Episodic	1	10	1/4	---	---	---	---	---	---	---	Yes	100%	Effective	Yes	---	---	---	---	Yes	Yes

Case #31: Response of chronic cluster headache to LSD



**INTRODUCTION:** Cluster headache is generally considered to be the **most painful** headache that exists, described as feeling like a **hot poker** or awl slowly driven through the **eyeball**. It affects predominantly **men** (0.4% versus 0.08% of women) in their third decade, and is divided into two categories:

- episodic:** attacks for a four- to eight-week cluster period once or twice a year with a **pain-free remission period**.
- chronic:** attacks constantly for more than a year with **no remission period greater than two weeks**.

Ten percent of episodic cluster headaches ultimately evolve into the chronic form. Each cluster is marked by **periodic stabbing headaches** that increase in intensity over five to ten minutes, last 45 minutes to two hours, then die away. They typically will occur one to three times a day, usually at **strikingly predictable times** (often two hours after the patient falls **asleep**) but can occur as often as every two hours. The intensity of the pain is severe enough that patients have been known to **commit suicide**.



period in 18 (95%) of 19. Twenty-two (42%) took the psilocybin in a **sub-psychedelic dose**; of these, 19 (86%) found it >75% effective, comparable to the 20 (67%) of 30 taking a psychedelic dose who reported similar efficacy. Of the eight who took LSD to **terminate a cluster**, seven (88%) felt that it was **100% effective**. One LSD user found that it aborted an attack, and four (80%) of five ingested remission extension when they took LSD between periods. Only two ingested a sub-psychedelic dose of LSD, but it was still effective.

**CONCLUSION:** LSD and psilocybin may be **effective treatment** for cluster attacks and cluster periods and may **prophylax** against future cluster periods with a single dose, a quality shared by no other medication. A randomized placebo-controlled trial is warranted.

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