This is your brain on LSD, literally

Medical benefits of LSD touted in study

By James Griffiths CNN

POSTED: 12:22 AM PDT Apr 12, 2016
UPDATED: 02:00 AM PDT Apr 12, 2016

(CNN) - Scientists have for the first time visualized the effects of LSD on the human brain.

Using brain scanning and other techniques, researchers at Imperial College London were able to show what happens when someone takes the popular (and illegal) psychedelic, scientific-name Lysergic acid diethylamide.

The findings may indicate how the drug produces the complex visual hallucinations often associated with its use.

"Under normal conditions, information from our eyes is processed in a part of the brain at the back of the head called the visual cortex," the researchers said in a statement.

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Images of the brain under a hallucinogenic state showed almost the entire organ lit up with activity.

"Our results suggest that this effect underlies the profound altered state of consciousness that people often describe during an LSD experience," said Dr. Robin Carhart-Harris, from the Department of Medicine at Imperial.

"It is also related to what people sometimes call 'ego-dissolution,' which means the normal sense of self is broken down and replaced by a sense of reconnection with themselves, others and the natural world. This experience is sometimes framed in a religious or spiritual way -- and seems to be associated with improvements in well-being after the drug's effects have subsided."

Rethinking LSD

First manufactured in Switzerland in 1938 for the treatment of psychiatric disorders, LSD's subsequent popularity as a recreational psychedelic saw it criminalized in much of the world.

In both the United States and United Kingdom, LSD is a schedule 1 drug, the most restrictive classification.

However, in recent years, many scientists and others have advocated for a rethink of the drug's status, particularly its use for treating psychiatric disorders, alcoholism and depression.

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Professor David Nutt, former chairman of the UK Advisory Council on the Misuse of Drugs and senior researcher on the study, has long argued for more research into how psychedelics affect the brain and how they could be put to medical uses.

"Scientists have waited 50 years for this moment -- the revealing of how LSD alters our brain biology," Nutt said.

"For the first time we can really see what's happening in the brain during the psychedelic state, and can better understand why LSD had such a profound impact on self-awareness in users and on music and art. This could have great implications for psychiatry, and helping patients overcome conditions such as depression."

Amanda Feilding, Director of the Beckley Foundation, which took part in the study, said: "We are finally unveiling the brain mechanisms underlying the potential of LSD, not only to heal, but also to deepen our understanding of consciousness itself."

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