25I-NBOMe N-bomb

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Received date: November 02, 2017; Accepted date: February 05, 2018; Published date: February 12, 2018

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Abstract

In January of 2014 the National Institute on Drug Abuse released a report on new and growing trends in drug use. Among those listed is a compound known to users as N-bomb. This highly dangerous, hallucinogenic substance, although relatively new, is already wreaking havoc on those who choose to use it. Even the smallest amounts can have a variety of deadly side effects. This highly volatile compound has laid claim to multiple victims within the last year, yet its use continues to spread. Its use has become so widespread it has even caught the attention of the Drug Enforcement Agency. On November 15, 2013 the DEA illegalized 25I-NBOMe, as well as two other variants, 25C-NBOMe and 25B-NBOMe. Even still this drug is easily acquired, via the internet and other illicit channels. What is this new drug and why has it become so popular? What effect might it have on its users, in both the short and long term? These are only a few of the questions about N-bomb that need to be addressed. It is also important that we educate ourselves, as well as others, about the dangers involved should one choose to utilize this drug.

Keywords: Drug abuse; Drug; Hallucinogenic compounds; Phenethylamine compound

Introduction

Throughout history mankind has used a variety of hallucinogenic compounds for different reasons. Some sought them out for medicinal purposes; others utilized them due to religious beliefs. Yet as with other drugs, many choose to partake of them for no other reason than to experience their effects; in an effort to get high. This can be seen throughout history in drugs such as laudanum and cocaine. Like so many other drugs these were initially marketed for their medicinal benefits. So understandably one would assume that the chemical compound 25I-NBOMe would have come about in a similar manner. This is not the case. 25I, as well as its other variants, have not been approved for medical use in any way, nor has it been approved to be safe for human consumption. So what exactly is this compound? Among the drug using culture it is known by a variety of names, such as "Smiles, N-Bomb, Legal Acid, and others. To the average user, these seemingly harmless sounding names do little to prepare them for what is to come. The high that users of this drug experience is many times more powerful than that of LSD or Mescaline.

Composition and History

25I-NBOMe is a chemical derivative of the phenethylamine compound. It was first discovered in 2003 by Heim [1]. Developed as a tool to be used in positron emission topography, it was soon discovered to have severe psychedelic side effects [2,3]. 25I was made popular through Nichols [4] use of the compound. Wanting to map the distribution of 5-HT2A receptors, Nichols used a radioactive compound along with 25I-NBOMe in scans of the brain. As it binds to the 5-HT2A receptor, which has shown to be associated with hallucinogenic activity [3], it prevents the reuptake of serotonin. It is this build-up of serotonin that many believe are responsible for the psychedelic side effects that accompany the drug. Like so many other drugs that research scientists introduce, this drug was never meant to be publicly available. These highly volatile, untested chemical compounds create an ever growing threat to users worldwide. Nichols [4] addresses this in a paper he published about the misuse of research chemistry. We never test the safety of the molecules we study, because that is not a concern to us. He goes on to elaborate about the fact that while aware that it is his publications that many of these designer drugs are based off of, it was never his intention. Since it first hit the market in 2007, it has been responsible for at least ten overdoses, of which three were fatal [2]. One such death occurred when 21 year Clayton Otwell ingested the compound while attending a festival in New Orleans [5]. In a city known for its party environment, Otwell and friends found the drug on the streets with relative ease. "The people had bottles and bottles of it". This is not an isolated incident. Accidental overdoses involving 25I are occurring throughout the United States. From Louisiana to Alaska, cases of young people being admitted to hospitals due to the drug are becoming more frequent. On April 10, 2013 the Bartlett Regional Hospital, in Juneau Alaska, released a statement warning about the existence and signs and symptoms of someone under the influence of 25I [6]. While doctors are aware of the drug and the implications of its use, most teens and young adults do not understand the depth of the dangers involved in using it.

Signs and Symptoms of Use

As previously stated, 25I binds to the 5-HT receptor in the brain. The 5-HT plays an important role in many of the body's important functions. Some of these include memory, anxiety, cognition, mood and others that serve important roles in our daily life [7]. As that everyone's brain chemistry is different, so too are the amount of receptors located within the brain. This makes it difficult to predict how the drug will interact with the brain of each individual who utilizes it [8]. Yet even with the differences, there are still common factors we can associate with all hallucinogenic drugs. Drugs such as LSD, Mescaline and Psilocybin affect an individual's perceptions. How they see, feel, taste and touch become distorted. Other aspects of a
Hallucinogenic high or “Trip” as users sometimes call it are extreme euphoria. Colours can look more intense and sounds are louder. Some users report feeling of their body merging with other objects and sometimes even floating [9]. Other side effects include dilated eyes, rapid heart rate, loss of appetite, and nausea and vomiting. Users can also experience other symptoms. Some users report dizziness as well as tremors and shaking. Stomach pain and cramps occur when one takes this drug. Other physical side effects include numbness of mouth and/or body, cold chills and/or hot flashes, and the risk of miscarriage in users who are pregnant [8]. Not only do these types of drugs have a long list of physical side effects, there are many mental side effects as well. Users often experience episodes of depression, violent outbursts, extreme anxiety and panic attacks [10]. According to Vollenwieder [11], the effects of these drugs on the mental state of an individual can be compared to that of a schizophrenic. In his article, Brain Mechanisms of Hallucinogens and Entactogens, he states, “Thus, the present evidence suggests that hallucinogen-induced ASC share many common phenomenological features with the early acute stages of schizophrenic disorders [12]”. With such a long list of both physical and mental side effects, one would think that the use of this drug would be limited. Yet this is not the case. Just within the United States alone, over 30 million individuals have purportedly utilized some form of the drug has left the system. This can occur anytime. It has even been known to take place years after a user has stopped taking the drug. Other long-term side effects can include both physical and psychological dependence, as well as episodes of severe depression.

Conclusion

Everyday research chemists around the world develop new drugs. These drugs are normally intended to benefit mankind. Yet, there will always be those that wish to profit at the expense of others. Just as we seek to stem the flow of illicit substances onto the streets, they wish to bring forth more and more substances to line their pockets. They browse the internet, scouring over research article after research article, looking for the next big thing. They care little for what effect it may have on the users in long term. Their only concern is will it create a strong enough effect on the user to get the word out about the new compound. It is our job as counsellors to not only understand that this is occurring, but to match their dedication and tenacity with our own. We need to understand what these drugs are and how they might affect users in both the short as well as the long term. We then must share this knowledge with others, so that when people do encounter these substances, they have a base understanding of what they may be getting into. There will always be new drugs out there, and we will never be able to catch them all. But it is all of our jobs to try. 25i-NBOME is not the first, and will not be the last designer drug to victimize our young people. No amount of legislation passed will prevent users from acquiring the highs that they seek. Yet with enough information and research we just might prevent anymore unnecessary deaths from occurring.

References

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