

Research reveals the addictive potential of a drug legally available in the UK and other countries

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Credit: University of Sussex

New research into a widely available anti-inflammatory drug by psychopharmacologists at the University of Sussex has discovered the first neurological evidence of its rewarding properties, sparking warnings around it being used as a recreational substance especially in rehab clinics and detention facilities.

Benzydamine, known by the name Difflam in the UK and available over the counter, is commonly used to treat [sore throats](#), painful muscles and sore sprains. However, there have been several reports of recreational

use among groups in Brazil, Italy, Poland, Romania, and Turkey, as overdoses of it can act as a stimulant. In informal drug forums, users describe benzydamine's effects as both stimulant and hallucinogenic.

The study at the University of Sussex is the first to look into the specific neurobiological effects of the drug and its addictive properties. The team used rats that had not been trained to self-administer any substance previously, as well as those that had been taught to self-administer cocaine or heroin in the past.

The researchers found that the rats with a history of cocaine or heroin were significantly more susceptible to self-administration of the drug and the [addictive properties](#) of benzydamine. An analysis of their brains also revealed that the [drug](#) had both a stimulant and hallucinogenic effect upon the animals, reinforcing the reason for abuse among humans.

The results suggests that individuals with a history of substance abuse might be more prone to develop benzydamine abuse in future, not only as a consequence of a general predisposition to experiment with psychoactive [substances](#) but also because of a specific neurobiological sensitivity to its effects.

The findings raise serious questions about the availability of substances over-the counter that contain Benzydamine to those with a history of addiction, specifically within rehabilitation clinics and detention facilities where residents could be at risk of a relapse back into [substance abuse](#).

Speaking about the abuse potential of benzydamine, Professor Aldo Badiani, Professor of Psychology & Addiction Medicine at the University of Sussex said:

"Though there have been documented instances of benzydamine abuse in

the past, our research records for the first time the specific effects that this [abuse](#) has on the brain of those with a history of addiction.

"Our study has found concrete evidence for the effect that BZY can have on the brain and raises questions, in the light of other recent legal high legislation, whether it is being given the attention it deserves to protect those most at risk."

More information: Riccardo Avvisati et al. Intravenous self-administration of benzydamine, a non-steroidal anti-inflammatory drug with a central cannabinoidergic mechanism of action, *Addiction Biology* (2017). [DOI: 10.1111/adb.12516](https://doi.org/10.1111/adb.12516)

Provided by University of Sussex

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