# Article information:

Retraction | Science
<https://www.science.org/doi/10.1126/science.301.5639.1479b>

# Article summary:

1. The authors of a 2003 Science article have retracted their report due to the discovery that the drug used to treat all but one animal in the study was actually (+)-methamphetamine instead of (±)MDMA.

2. The original report presented results from multiple studies demonstrating that a novel systemic dose regimen of MDMA produced severe dopamine neurotoxicity in two species of nonhuman primates, in addition to previously reported serotonin neurotoxicity.

3. It remains possible that certain dose regimens of MDMA produce dopamine neurotoxicity in primates, although this possibility remains uncertain until further research is conducted.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

This article is generally reliable and trustworthy, as it provides an honest account of the authors' retraction due to their discovery that the drug used in their original study was not what they had intended. The article also provides evidence for this claim by noting that three independent laboratories found the sample to consist of MDMA, with no evidence of even trace amounts of methamphetamine, and by analyzing frozen brains from two animals which were found to contain methamphetamine and its metabolite amphetamine, neither of which are metabolites of MDMA.

The article does not appear to be biased or one-sided, as it presents both sides equally and acknowledges that while lasting effects of MDMA on dopaminergic function in humans have been reported, it remains uncertain whether certain dose regimens can produce dopamine neurotoxicity in primates until further research is conducted. Additionally, there are no unsupported claims or missing points of consideration; rather, the authors provide a detailed explanation for why they believe their original findings were incorrect and acknowledge potential risks associated with MDMA use.

In conclusion, this article appears to be reliable and trustworthy overall; however, further research should be conducted before any definitive conclusions can be made about the potential dopamine neurotoxic effects of MDMA in primates.

# Topics for further research:

* MDMA neurotoxicity in primates
* MDMA dose regimens and dopamine neurotoxicity
* MDMA effects on dopaminergic function
* MDMA metabolites in frozen brains
* MDMA and methamphetamine comparison
* Long-term effects of MDMA on dopamine

# Report location:

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