

Childhood trauma can make people like morphine more

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People who have experienced childhood trauma get a more pleasurable 'high' from morphine, new research suggests.

University of Exeter scientists compared the effects of morphine on 52 healthy people—27 with a history of childhood abuse and neglect, and 25 who reported no such experiences in childhood.

Those with [childhood trauma](#) liked morphine (an [opioid drug](#)) more, felt more euphoric and had a stronger desire for another dose.

Those with no childhood trauma were more likely to dislike the effects and feel dizzy or nauseous.

"There are high rates of childhood trauma in people with addictions. Our findings show that these sorts of experiences can actually change how certain drugs feel," said lead author Dr. Molly Carlyle, who conducted this research at Exeter and is now at the University of Queensland.

"To our knowledge, this is the first study to link childhood trauma with the effects of opioids in people without histories of addiction, suggesting that childhood trauma may lead to a greater sensitivity to the positive and pleasurable effects of opioids."

"This may explain the link between childhood trauma and vulnerability to opioid use disorder, with implications for treatments and the prescribing of opioids medically."

One possible explanation for the differing responses to morphine is that childhood trauma affects the development of the endogenous opioid system (a pain-relieving system that is sensitive to chemicals including endorphins—our natural opioids).

"It's possible that childhood trauma dampens that system," Carlyle explained.

"When a baby cries and is comforted, endorphins are released—so if loving interactions like this don't happen, this system may develop differently and could become more sensitive to the rewarding effects of opioid drugs."

Professor Celia Morgan, of the University of Exeter, who leads the research group, said: "Our findings that people who have been traumatized as children are more likely to enjoy morphine might help to reduce stigma around heroin use.

"Many opioid addicts are people who were traumatized in early childhood, but it is still widely believed that addiction is a weakness and that addicts simply lack self-control.

"This research may be a step towards treating heroin addicts with more compassion, as we would children with histories of trauma.

"Our study also highlights the importance of interventions aimed at high-risk children and adolescents to protect against [opioid](#) use."

The study's participants, aged 18-65, had either reported experiencing severe childhood trauma (abuse or neglect, as measured by the Childhood Trauma Questionnaire) or reported no [childhood](#) trauma.

They each attended two sessions, a week apart, and received either an active dose of morphine (0.15mg/kg) or a negligible control dose (0.01mg/kg) in a randomized, double-blind crossover design.

People's experiences of morphine were measured by asking them a set of questions eight times—once before the morphine injections, then at regular intervals afterwards.

Pain was also measured by placing a hand in cold water and recording how long it took people to find this painful and how long they could tolerate leaving their hand in the water.

Morphine increased pain threshold and tolerance, but this did not differ between the trauma and non-[trauma](#) groups.

There was also a computerized button-pressing task that measured effort to obtain more morphine by button pressing for either a theoretical amount of money or [morphine](#). No differences were found between the two groups during this task.

This may have been because money is highly rewarding in non-addicted groups and was not a suitable comparator for this task.

More information: Molly Carlyle et al, A randomised, double-blind study investigating the relationship between early childhood trauma and the rewarding effects of morphine, *Addiction Biology* (2021). [DOI: 10.1111/adb.13047](#)

Provided by University of Exeter

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