

## **How Are Opioids Abused?**

Opioids can be taken orally, or the pills may be crushed and the powder snorted or injected. A number of overdose deaths have resulted from the latter routes of administration, particularly with the drug OxyContin, which was designed to be a slow-release formulation. Snorting or injecting opioids results in the rapid release of the drug into the bloodstream, exposing the person to high doses and causing many of the reported overdose reactions.

**How Do Opioids Affect the Brain?** 

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are nonbenzodiazepines that act at a subset of the benzodiazepine receptors and appear to have a lower risk for abuse and addiction.

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they can slow both heart rate and respiration, which can be fatal.

## What Happens When You Stop Taking CNS Depressants?

Discontinuing prolonged use or abuse of high doses of CNS depressants can lead to serious withdrawal symptoms. Because the drug works by slowing the brain's activity, when one stops taking a CNS depressant, this activity can rebound to the point that seizures can occur. Someone who is either thinking

increase blood pressure and heart rate, constrict blood vessels, increase blood glucose, and open up the pathways of the respiratory system. Historically, stimulants were prescribed to treat asthma and other respiratory problems, obesity, neurological disorders, and a variety of other ailments. As their potential for abuse and addiction became apparent, the prescribing of stimulants by physicians began to wane. Now, stimulants are prescribed for treating only a few health conditions, most notably ADHD, narcolepsy, and, in some instances, depression that has not responded to other treatments.

## **How Are Stimulants Abused?**

Stimulants may be taken orally, but some abusers crush the tablets, dissolve them in water, and then inject the mixture; complications can arise from this because insoluble fillers in the tablets can block small blood vessels. Stimulants have been abused for both "performance enhancement" and recreational purposes (i.e., to get high).

## How Do Prescription Stimulants Affect the Brain?

Stimulants have chemical structures that are similar to key brain neurotransmitters called monoamines, including dopamine and norepinephrine. Their therapeutic effect is achieved by slow and steady increases of dopamine that are similar to the natural production of this chemical by the brain. The doses prescribed by physicians start low and increase gradually until a therapeutic effect is

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Depending on the patient's situation, the first step in treating prescription stimulant addiction may be to decrease the drug's dose slowly and attempt to treat withdrawal symptoms (mood changes, sleep and appetite disturbances). This process of detoxification could then be followed with one of many behavioral

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past-year nonmedical use of Vicodin and OxyContin. For Vicodin, past-year nonmedical use has remained stable at high levels for each grade since its inclusion in the survey.

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