

# Naloxone



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Overdose deaths surpassed car accidents in 2016 as the leading cause of preventable death in the United States. In 2021, the U.S. experienced more than 100,000 overdoses. That is twice the capacity of most major college football stadiums, and every single overdose is preventable. While research shows that there are many ways to reduce overdoses and overdose deaths, the most effective is access to naloxone.

## What is naloxone?

Naloxone is a medicine that temporarily reverses opioid overdoses. It has been hailed as a lifesaver. It is sometimes called the “Lazarus drug” because of its incredible capacity for bringing people back to life. Naloxone is only effective at reversing overdoses from opioids. That means it is useful against drugs like oxycodone, heroin, and codeine.

## What is an opioid overdose?

Opioids are a class of drugs known as central nervous system depressants. Opioid use causes a person’s heart rate and blood pressure—and more importantly, breathing—to be depressed or slowed down. In the case of an opioid overdose, a person completely stops breathing. At its core, an opioid overdose is actually a respiratory problem.

## What are the signs of an opioid overdose?

To respond to an overdose, one must first be able to identify an overdose. The typical signs of an opioid overdose include unconsciousness, small or dilated pupils, slow or shallow breathing, inability to speak, pale skin, blue or purple lips and fingernails, faint heartbeat, and/or vomiting.

## How does naloxone work?

Naloxone is an opioid antagonist, which means it works by counteracting opioids. Molecules of naloxone have a higher affinity for opioid receptors than most opioids. In other words, when naloxone enters the bloodstream, it replaces the opioids that are occupying the receptor sites. This allows a person to begin breathing again.

However, it is important to note that naloxone often only temporarily reverses an opioid overdose. This is because, even as the naloxone has replaced the opioids on the receptors, there are likely still opioid molecules flowing in the affected person’s bloodstream. Therefore, people who have been revived by naloxone are at risk of re-overdosing later. For this reason, first responders make every effort to take overdose victims to the hospital for monitoring. If necessary, victims can also receive naloxone through an IV.

## Who should carry naloxone?

Overdose can happen anywhere at any time, and anyone who has access to opioids is at risk of opioid overdose, including young children and older adults. If you or a loved one is prescribed opioid medication, you should have naloxone on hand. Also, if you or a loved one is using illicit opioids, including heroin, fentanyl, or prescription drugs that were not prescribed to you, you should have naloxone. Some businesses have begun installing NaloxBoxes that, similarly to automated external defibrillators, provide easy access to the tools needed to save a life—in this case, by making naloxone readily available.

## Where can I get naloxone?

Initially, naloxone was only available by prescription. But in 2023, the FDA approved over-the-counter access to naloxone so that a prescription is no longer necessary. Alternatively, overdose response trainings may be available at local treatment centers or public health agencies. These entities frequently apply for grants to teach overdose response trainings and provide free naloxone to the public.

Naloxone comes in different forms. Its original formulation required bystanders to inject naloxone with a syringe. This made some people uncomfortable and less likely to help. More recently, the FDA approved a nasal spray applicator for naloxone. This user-friendly applicator allows bystanders to easily spray naloxone into the nose. It is important to note that a person does not need to be breathing for naloxone to work. The naloxone will still be easily absorbed through the mucous membrane.

## Is naloxone safe?

Naloxone has no known side effects. In other words, if naloxone is accidentally given to a person who is not actually experiencing an opioid overdose, it has no effect. Regardless, Kentucky has a Good Samaritan law that says those who give naloxone in good faith, believing the victim is experiencing an opioid overdose, are shielded from liability. This law is one of many efforts to encourage fellow community members to act when they see an overdose.

Drug overdose is preventable, and access to naloxone is the most effective way to reduce the likelihood that you or a loved one will experience a fatal overdose. Naloxone is for everybody, even if you or your loved ones do not have an opioid use disorder. Research shows that laypersons, or members of the general public, are more likely to reverse an overdose with naloxone than first responders. Carry naloxone so you can save a life!

## References

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