



# The Dangers of Opioids in the Construction Industry

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Rescue One *training for life*

# Intra-Nasal Naloxone

# Objectives

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- The Problem
- Risk Factors
- Identify common Opioids
- Identify pertinent assessment findings before and after administration
- Recognize need for personal safety equipment and scene awareness
- Naloxone (Narcan)
  - Indications /Contraindications
  - Side/adverse effects
  - Administration / Dosages
  - Mechanisms of drug action / Signs of Improvement
- Resources
- Questions

# The Problem

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Opioid use in the construction industry is largely due to what main cause?

On the job Injuries, and need for pain management

# The Problem



- 2020 Construction & Extraction Industry

- The rate per workers was reported as 162.6 per 100,000 workers.<sup>1</sup>
- Isolating the construction industry from the extraction industry, the rate is 130.9 per 100,000 workers.<sup>1</sup>
- The overdose death rate for construction is almost three times higher than the rate of suicide for the construction industry reported as 45.3 per 100,000 workers.<sup>1</sup>

<sup>1</sup> “Drug Overdose Mortality by Usual Occupation and Industry: 46 U.S. States and New York City, 2020.”

# The Problem



- 2020 Centers for Disease Control (CDC) <sup>3</sup>
  - Nearly 70,000 opioid-related overdose deaths <sup>3</sup>
  - 36% increase from previous year <sup>3</sup>
  - Construction workers had the highest drug overdose rate <sup>4</sup>

<sup>3</sup> Drug Overdose Deaths in the U.S. Up 30% in 2020. CDC/National Center for Health Statistics. 2021.

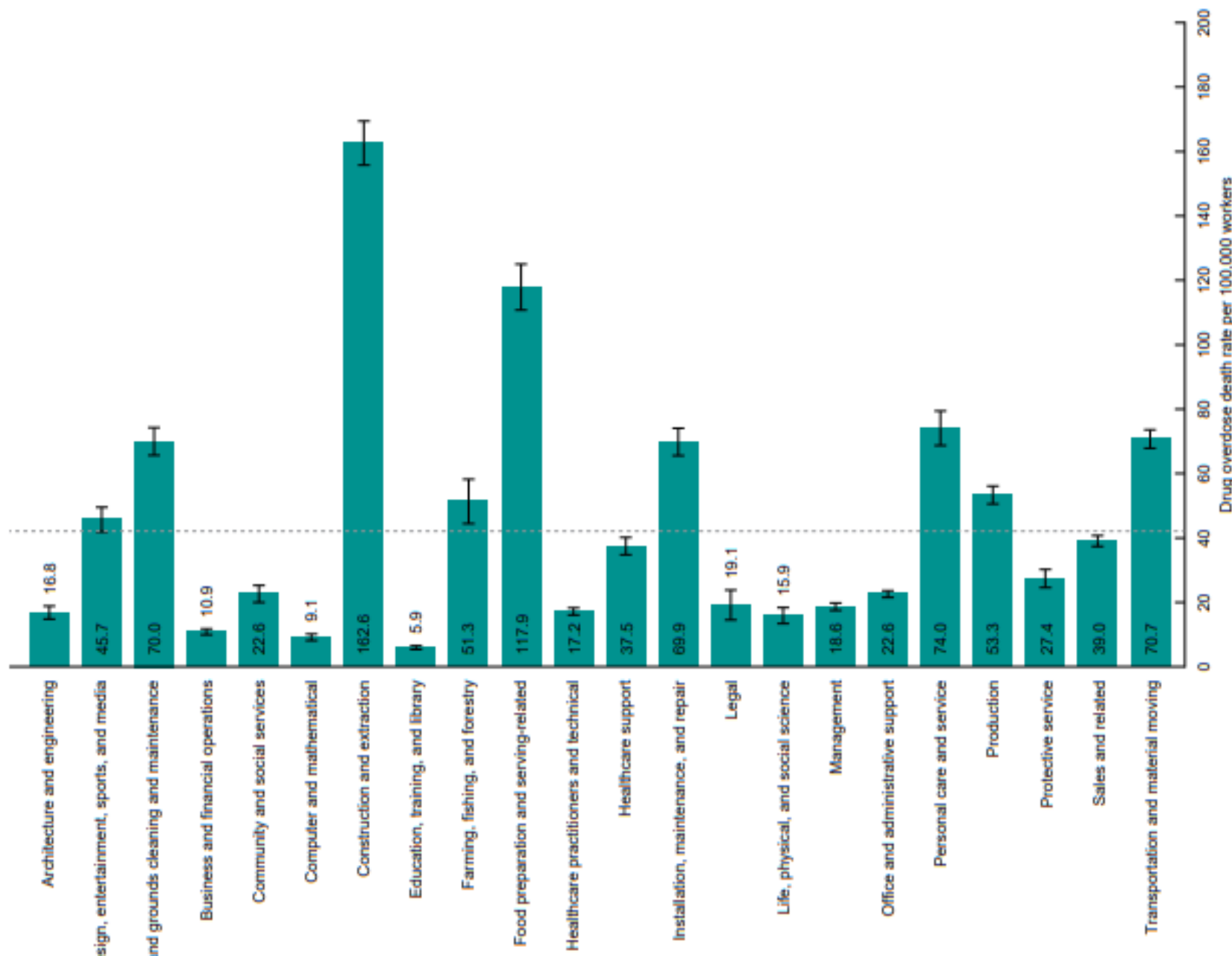
<sup>4</sup> Drug Overdose Mortality by Usual Occupation and Industry: 46 U.S. States and New York City, 2020 National Vital Statistics Reports Volume 72, Number 7 August 22, 2023 (cdc.gov)

# The Problem



- 2021
  - The 9<sup>th</sup> consecutive annual increase of workplace and/or jobsite fatalities from unintentional overdose from nonmedical use of drugs and alcohol. <sup>2</sup>
  - Accounts for over 8% of all occupational fatalities <sup>2</sup>

<sup>2</sup> Based on annual Census of Fatal Occupational Injuries (CFOI) from the Bureau of Labor Statistics



NOTES: The overall drug overdose death rate among 2000 decedents aged 16–64 in 46 states and New York City with paid civilian usual occupations is shown as a vertical line at 42.1 deaths per 100,000 workers. Death rates are directly standardized for age using 10-year age categories. See Technical Notes in this report for more information.  
 SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality, 2020.

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## 2024



National Vital Statistics Report  
 Vol. 72 number 7  
 August 22, 2023



# Risk Factors



## Musculoskeletal Injuries

## Prescription Medications

- The overdose death rate for construction is almost three times higher than the rate of suicide for the construction industry reported as 45.3 per 100,000 workers <sup>1</sup>.

<sup>1</sup>“Drug Overdose Mortality by Usual Occupation and Industry: 46 U.S. States and New York City, 2020.”

# Common Causative

## Most commonly used opioids

- Heroin
- Codeine
- Demerol
- Morphine
- Darvocet
- Fentanyl
- Dilaudid
- Methadone
- Opium
- Hydrocodone
- Oxycodone
- Levorphanol
- Vicodin
- OxyContin
- Tylenol 3
- Tylox
- Percocet
- Percodan



# Opioid Subcategories

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**Natural opioids** include morphine and codeine.

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**Semi-synthetic opioids** include oxycodone, hydrocodone, hydromorphone, and oxymorphone.

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**Methadone** is a synthetic opioid that is usually categorized on its own in official data.

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**Synthetic opioids** other than methadone include tramadol and fentanyl.

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**Heroin** is an illegally manufactured synthetic opioid made from morphine.

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# Things to know about an Overdose

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- Naloxone/Narcan is **only effective** for an opioid overdoses
- Narcan has no effect for an overdose caused by non-opioid drugs such as cocaine, benzodiazepines (i.e. xanax, klonopin & valium), methamphetamines, or alcohol.

# Things to know about an Overdose

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- Narcan administered to a person dependent on opioids may produce withdraw symptoms.
- Withdrawal, although uncomfortable, is not usually life-threatening.

# Things to know about Narcan

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- Call '911' anytime that Narcan is going to be administered.
- It is strongly recommended that anyone receiving Narcan be transported to the hospital by EMS.
- With some long-lasting opioids, a single 4mg dose of intra-nasal narcan may wear off resulting in the opioid symptoms returning. An additional 4 mg Intra-Nasal dose of Narcan should be administered.

# Signs of a Serious Opioid Overdose

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- Breathing slow and shallow (less than 10 breaths per minute which equals 1 breath every 6 seconds) or has stopped
- Blue or grayish lips and fingernails
- Skin may turn gray, blue
- An overall blue or grayish appearance
- Pulse (heartbeat) is slow, erratic, or not present
- Constricted Pupils

# Constricted Pupils

- Commonly called “Pinpoint Pupils”
- Look for pupils  $< 3\text{mm}$ 
  - 1mm = about the width of the side of a dime





# Signs of an Opioid Overdose



By themselves, most previously listed signs are not reason enough to administer Narcan

Must be a reason to suspect opioid overdose in conjunction with the signs listed

Narcan indicated only when opioid OD suspected, AND the victim is unconscious

# Reasons to Suspect Opioid Overdose

- Opioid drugs found on scene
- Drug paraphernalia found on scene (needles, syringes, a burnt or charred spoon)
- Witnesses state victim was taking some sort of opioid prior to OD
- Known heroin user location



# Personal Safety

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- Body substance isolation with use of personal protective equipment
- Be aware that IV drug users may be carrying unsafe sharps in pockets
- Narcotic patches may transfer medication to your skin if exposed for an extended period of time
  - Heat and moisture also increase transfer
- Exercise caution while engaged in physical contact

# Intra-Nasal Naloxone (Narcan)

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One 4mg Intra-Nasal  
Narcan Spray is a single  
dose

# Naloxone (Narcan)



## NALOXONE (Narcan)

### **ACTION: Narcotic Antagonist**

- Antagonizes effects of opiate narcotic agents by competing at the receptor site resulting in reversal of respiratory depression associated with opiate overdoses.

### **INDICATIONS:**

- Altered Mental Status in the presence of suspected narcotic overdose, or coma of unknown etiology.

### **CONTRAINDICATIONS:**

- Patients with hypersensitivity to the drug.
- Neonate in the setting of opiate dependence.

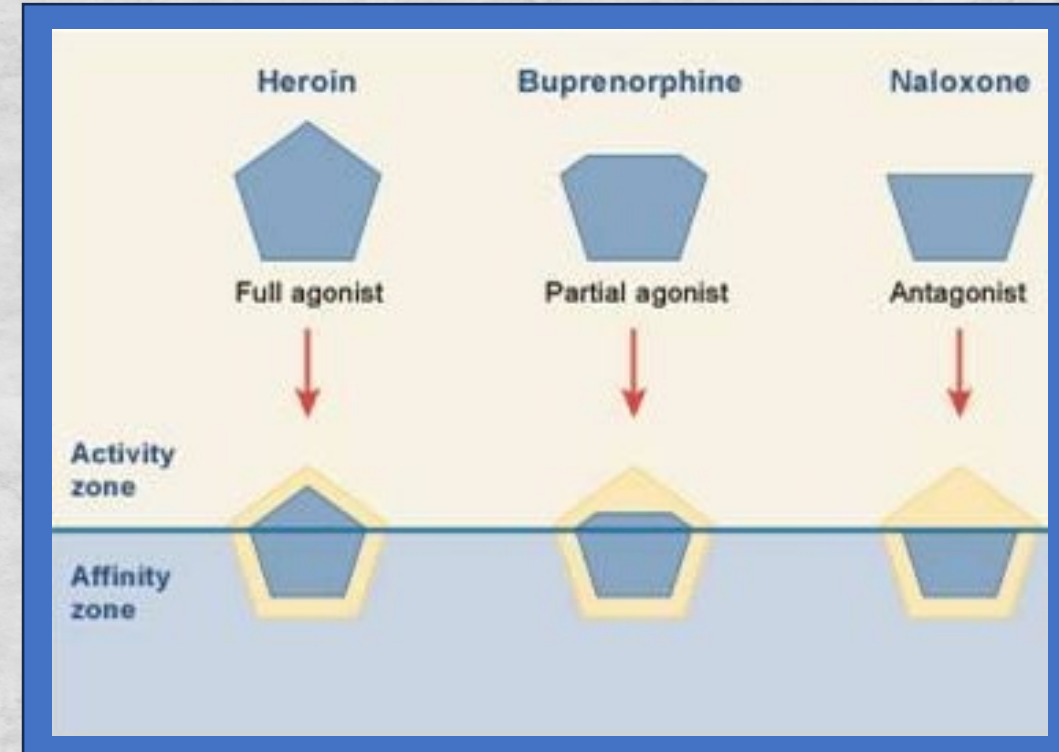
### **POTENTIAL SIDE EFFECTS:**

- Rapid administration can cause projectile vomiting.
- May precipitate withdrawal in chronic narcotic users.
- Patients may become agitated or violent after drug is administered.

# Naloxone (Narcan)



- Drugs that block or reduce the action of another drug are called **antagonists**.
  - Naloxone is an opioid antagonist
  - “Antagonizes effects of opiate narcotic agents by competing at the receptor site resulting in reversal of respiratory depression associated with opiate overdoses.”
  - Half-life of Narcan is shorter than opiates and symptoms can recur.



# Naloxone (Narcan)



- The Intra-Nasal route is very quick and easy for anyone to administer.
- It can be sprayed in either nostril.
- The Intra-Nasal plunger (colored red) must be placed in the nostril and then pressed in hard and fast to administer the spray.

# Naloxone (Narcan)



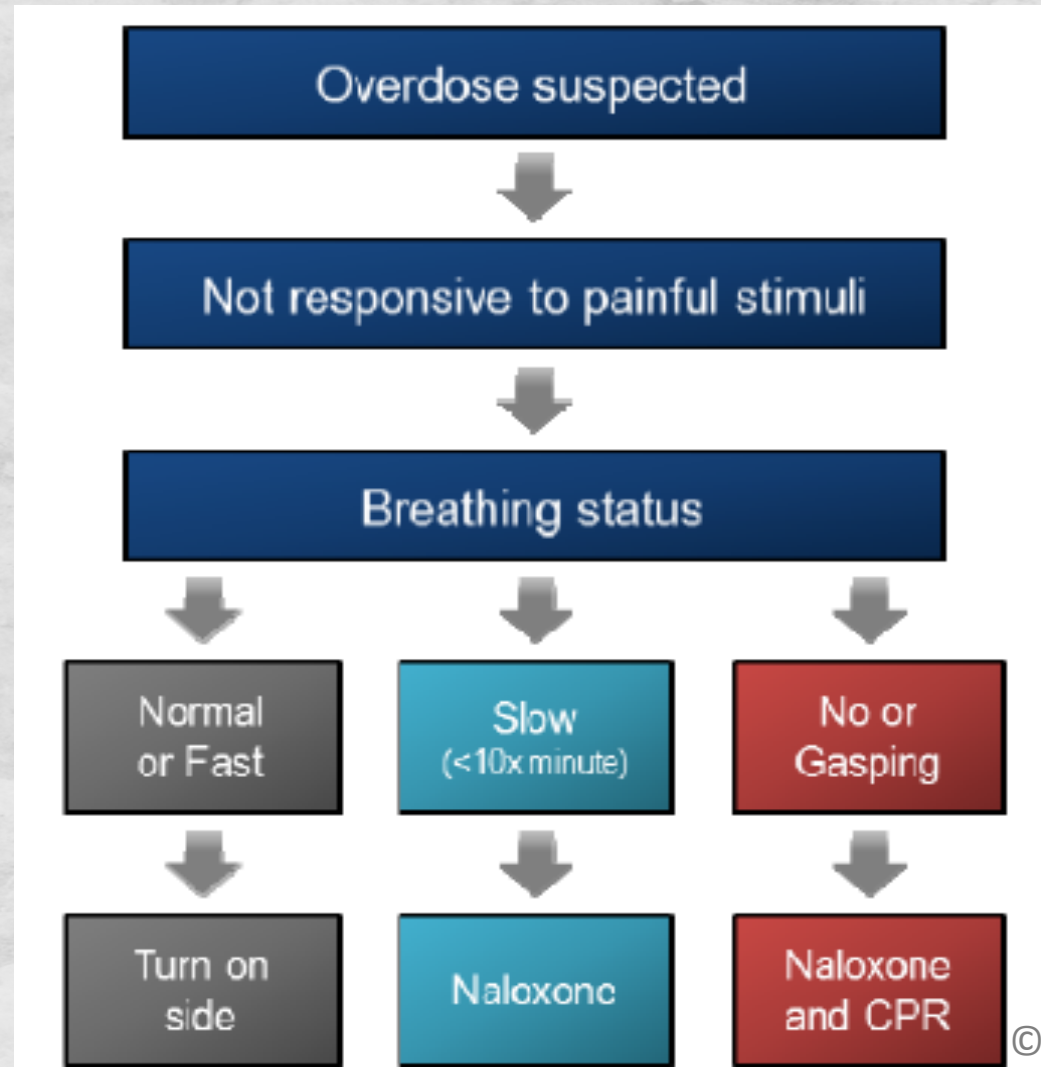
- There may be times that a second dose may be necessary if:
  - The patient initially responds to the medication and then reverts back to unconscious and breathing slowly.
  - The patient does not improve from the first dose and remains unconscious and breathing slowly.



# When to Use Narcan



- Check responsiveness
  - Not conscious or alert
- Check breathing status
  - Must be slow or absent
- Remember: check & manage ABCs (airway, breathing & circulation)



# Intra-Nasal Narcan



**NARCAN<sup>®</sup> (naloxone HCl)  
NASAL SPRAY**


### QUICK START GUIDE

*Opioid Overdose Response Instructions*






Use NARCAN Nasal Spray (naloxone hydrochloride) for known or suspected opioid overdose in adults and children.  
**Important: For use in the nose only.**  
Do not remove or test the NARCAN Nasal Spray until ready to use.

- 1 Identify Opioid Overdose and Check for Response**

Ask person if he or she is okay and about name.  
Shake shoulders and firmly rub the middle of their chest.  
Check for signs of opioid overdose:  
• will not wake up or respond to your voice or touch  
• breathing is very slow, irregular, or has stopped  
• pupils are very small, sometimes called "pinpoint pupils"  
Lay the person on their back to receive a dose of NARCAN Nasal Spray.


- 2 Give NARCAN Nasal Spray**

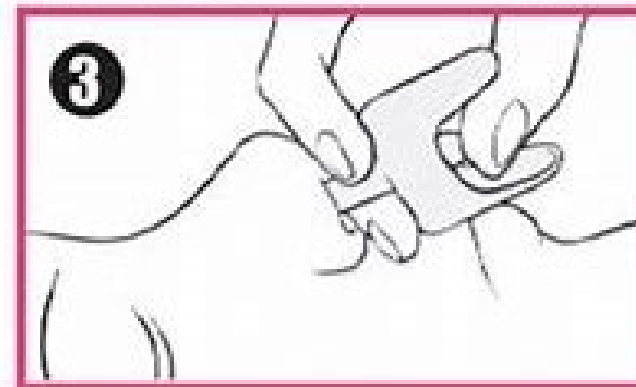
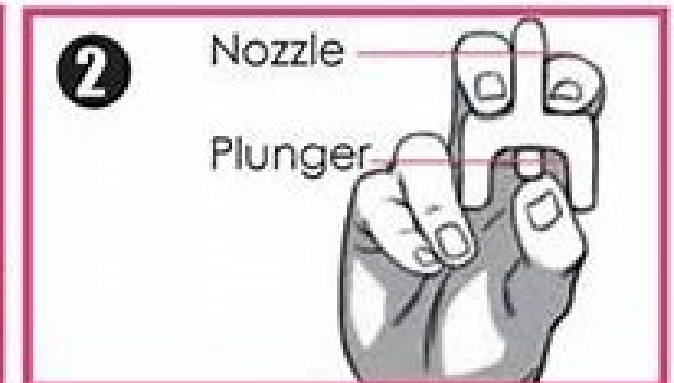
Remove NARCAN Nasal Spray from the box.  
Peel back the tab with the circle to open the NARCAN Nasal Spray.  
Hold the NARCAN Nasal Spray with your thumb on the bottom of the plunger and your first and middle fingers on either side of the nozzle.  
Gently insert the tip of the nozzle into either nostril.  
• Tilt the person's head back and provide support under the neck with your hand. Gently insert the tip of the nozzle into one nostril, until your fingers on either side of the nozzle are against the bottom of the person's nose.  
Press the plunger firmly to give the dose of NARCAN Nasal Spray.  
• Remove the NARCAN Nasal Spray from the mouth after giving the dose.  
Get emergency medical help right away.  
Move the person on their side (recovery position) after giving NARCAN Nasal Spray.  
Watch the person closely.  
If the person does not respond by waking up, to voice or touch, or breathing normally another dose may be given. NARCAN Nasal Spray may be used every 2 to 3 minutes, if available.  
Repeat Step 2 using a new NARCAN Nasal Spray to give another dose in the other nostril. If additional NARCAN Nasal Sprays are available, repeat step 2 every 2 to 3 minutes until the person responds or emergency medical help is received.


- 3 Call for emergency medical help, Evaluate, and Support**

For more information about NARCAN Nasal Spray, go to [www.NarcanNasalSpray.com](http://www.NarcanNasalSpray.com), or call 1-844-6NARCAN (1-844-662-7326).

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## How to administer Narcan Nasal Spray



# Side Effects



- Patient may become agitated or violent after narcan is administered.
  - Maintain a safe distance after narcan administration
- Rapid administration may cause vomiting.
  - Consider BSI
- May precipitate withdrawal in chronic narcotic users.

# What to Expect After Administering Narcan

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- Each victim will react differently
  - Most will wake up simply confused and disoriented
  - Side effects may include but are not limited to; rapid heart rate, nausea and vomiting, sweating, blurred vision, and opiate withdrawal
  - Can become combative

# What to Expect After Administering Narcan

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- Use extreme caution with combative victims
  - Call “911” prior to administration of narcan
    - Strongly recommended that anyone receiving narcan be transported to the hospital by EMS
- Most victims are also disoriented and confused
- May not listen to commands

# Signs of Improvement



## Respiratory

- Breathing returns
- Reverts from irregular/inadequate to normal breathing

## Circulation

- Pulse present and normal
- Skin tone improving, paleness and bluish tint go away

**Consciousness improves and victim becomes more alert**

# Learn/Implement CPR

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- A patient may be in cardiac arrest and necessitate chest compressions and the use of an AED.
- Use of a barrier device as to provide rescue breathing is essential to prevent a potential contact reaction to the patient's opioid overdose.
- Consider the use of latex free gloves and eye protection to prevent cross contamination.

# Resources



## Centers for Disease, Stats

<https://www.cdc.gov/opioids/data/index.html>

## Opioids and Overdose Deaths in the Construction Industry a Call to Action

<https://www.forconstructionpros.com/business/business-services/coaching-consulting/article/22880153/opioids-and-overdose-deaths-in-the-construction-industry-a-call-to-action>

## Opioid Awareness Training Program

<https://www.cpwr.com/research/research-to-practice-r2p/r2p-library/other-resources-for-stakeholders/mental-health-addiction/opioid-resources/opioid-awareness-training-program/>



# Resources

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Center for Construction Research and Training (CPWR): Resources to Prevent Opioid Deaths in Construction.

<https://www.cpwr.com/research/research-to-practice-r2p/r2p-library/other-resources-for-stakeholders/mental-health-addiction/opioid-resources/>

National Center for **Drug Abuse Statistics**

<https://drugabusestatistics.org/drug-overdose-deaths/>

# Resources

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Narcan.Com

<https://www.Narcan.com>



Narcan.com Educational Kit

<https://narcan.com/education-kit>

# Questions

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Any questions or comments,  
please contact:

[jgruber@rescue-one.com](mailto:jgruber@rescue-one.com)

# End

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