Naloxone: Frequently Asked Questions

What is naloxone?
Naloxone, or Narcan®, is an antidote to opioid overdose. Taking too much of opioid drugs (e.g. morphine, heroin, methadone, oxycodone, and fentanyl) can make breathing slow down or stop. Naloxone reverses this, restoring normal breathing and consciousness. Giving naloxone can prevent death or brain damage from lack of oxygen during an opioid overdose. It does not work for non-opioid overdoses (e.g. cocaine, ecstasy, GHB or alcohol). However, if an overdose involves multiple substances, including opioids, naloxone helps by temporarily removing the opioid from the equation.

How is naloxone given?
You can give naloxone by injection (e.g. into a muscle, vein, or under the skin). You can inject naloxone through clothing into the muscle of the upper arm, upper leg, or buttock. Safety needles are ideal to provide with naloxone in order to avoid needle-stick injuries, and facilitate safe needle disposal.

Is the intramuscular injection of naloxone different from the sterile injection technique?
Yes, administering naloxone (a lifesaving drug) is for opioid overdose emergencies; therefore, the sterile injection technique is not necessary. The injection can be administered through clothing into the muscle of the upper arm, upper leg, or buttock.

How does naloxone work?
Both naloxone and opioids bind to the same sites in the brain, and these sites affect breathing. However, naloxone binds more tightly than the opioids, knocking the opioids off the receptors
and restoring breathing. Naloxone acts fast (usually within 5 minutes), and the protective effect lasts for 30 to 90 minutes. The body will have broken down some of the opioids over time, but naloxone does not destroy the opioids. So, if large doses, strong opioids (e.g. fentanyl), or long-acting opioids (e.g. methadone) are involved, or the individual has liver damage, another dose of naloxone may be needed. It is recommended to use two doses of naloxone, and it is always important to call 911 when someone overdoses.

Can naloxone be harmful or be abused?
Naloxone has been used in Canada for over 40 years and is on the World Health Organization List of Essential Medicines. Naloxone does nothing in someone that has not taken opioids, since all it does is block the effects of opioids in the brain. Naloxone cannot get a person high, and does not encourage opioid use. While naloxone is a very safe drug, it may cause individuals dependent on opioids to go into withdrawal. However, the small doses available in community pharmacy settings should minimize this risk.

Are there risks associated with using naloxone?
The only contraindication to naloxone is hypersensitivity. Naloxone may cause opioid withdrawal in those with opioid dependence. Withdrawal symptoms include pain, high blood pressure, sweating, agitation and irritability. In addition, it can be unsettling to come out of an overdose unaware of what has happened. Finally, people with health conditions (e.g. heart, liver, respiratory etc.) and/or who have taken other substances need additional medical attention. For these reasons, calling 911 is an important component of the overdose response.

What does overdose education and naloxone training involve?
It is important to provide education and training on an appropriate response to an opioid overdose; this includes calling 911, performing rescue breathing, placing someone in the recovery position (if you have to leave them, or if breathing has been restored), and administering naloxone. These skills are not a substitute for professional medical care, but can help keep someone alive until an ambulance arrives.

Do you need to be a medical professional to recognize opioid overdose and administer naloxone?
Research and experience show, with basic training laypeople can recognize an overdose and administer naloxone just as well as a medical professional. Furthermore, community based overdose prevention programs are empowering. They give peers, friends, and families of
people who use opioid drugs the chance to save a life. However, the availability of naloxone in community pharmacies does not replace the need for emergency care or minimize the importance of calling 911.

**If people who use opioid are given naloxone, will they continue using more opioids?**
Research has shown that having naloxone available does not increase risk-taking behaviour, or cause people to use more opioids. The goal of distributing naloxone and training laypeople to prevent, recognize and respond to overdose is to prevent death and reduce brain injury or brain damage. Other goals such as getting people into treatment are only possible if people are alive.

**Why is it important to stay with an individual after giving them naloxone?**
Some longer acting opioids (e.g. methadone) may last longer in the body than naloxone, so an overdose could return. To make it less likely that an overdose will return, it is important to make sure that the individual knows not to take more drugs for several hours. In addition, you may need to tell them what happened, as they may be confused. Finally, it is important to tell emergency first responders everything you know about the situation so they can provide the best treatment.

**Why give breaths in opioid overdoses?**
Cardiopulmonary resuscitation may involve giving breaths and/or chest compressions. Breaths serve to re-oxygenate a person’s blood while chest compressions help circulate blood while the person’s heart is not beating. The Heart and Stroke Foundation changed their guidelines for resuscitation of sudden cardiac arrest to chest compressions only. This is because in the case of sudden cardiac arrest, the blood is well oxygenated as the lungs supply oxygen to the blood until the heart suddenly stops.

Opioids bind to receptors in the area of the brain responsible for breathing. After binding, they decrease the rate of breathing, which can slow to a point where a person stops breathing. When a person who is not in cardiac arrest stops breathing and is unconscious because of an opioid overdose, the appropriate course of action is to **CALL 911** and give breaths to that person. Because the heart is still beating, giving breaths helps increase the oxygen in the person’s blood and supply it to oxygen sensitive tissues, such as the brain, preventing brain injury and death. While better than doing nothing, performing only chest compressions on a person experiencing an opioid overdose will simply move blood in the body that is not
oxygenated, causing vital organs to continue to be deprived of oxygen. Therefore, giving
breaths to a person who has overdosed on opioids can help prevent that person from going
into cardiac arrest, and has the potential to save their life.

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