

The following information outlines why it is important to give breaths for someone experiencing an opioid overdose.

WHAT HAPPENS DURING AN OPIOID OVERDOSE

Opioids bind to areas of the brain responsible for breathing. In an opioid overdose the rate and depth of breaths decrease which deprives the brain of oxygen. Lack of oxygen can cause a person to become unconsciousness, breathing stops and brain damage and death occur in minutes.

WHY ARE BREATHS IMPORTANT IN AN OPIOID OVERDOSE?

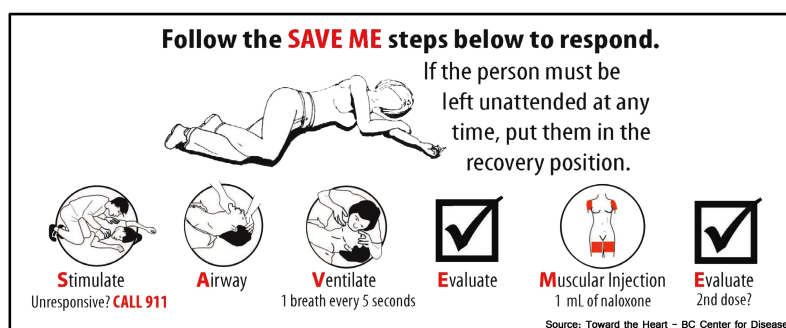
Ventilation or "giving breaths" is a crucial component of response to an opioid overdose to restore breathing, get oxygen into the blood, and to keep the brain alive.

There is a little evidence in the literature describing the most appropriate management of an opioid overdose. BC has extensive experience of witnessed overdoses, including more than 25,000 events of take-home-naloxone given in the community and thousands of overdose responses at supervised consumption and overdose prevention sites, which support the SAVEME protocol. Thus community responders are encouraged to focus on airway management and giving breaths over chest compressions when an overdose is witnessed.

RESPONDING TO A WITNESSED OPIOID OVERDOSE

If you witness someone having an opioid overdose or a recent overdose is highly suspected, the BCCDC recommends:

1. Call 911 immediately
2. Follow the SAVE ME steps outlined below (further details at: [Toward the Heart](#))



ARE PEOPLE WILLING TO GIVE BREATHS?

Reluctance to give breaths to a stranger is often given as a reason to recommend chest compressions. However, information from BC's Take Home Naloxone program shows that a majority (55%) of by-standers responding to an overdose provide rescue breathing. A disposable face-mask with a one-way valve is provided in Take Home Naloxone kits to prevent the person giving breaths from potential exposure to vomitus or saliva

Why Give Breaths

WHEN TO USE CHEST COMPRESSIONS

During an overdose, breathing is affected first and the heart stops beating after a longer period of oxygen deprivation. Breaths re-oxygenate a person's blood, while chest compressions help circulate blood if a person's heart is not beating or beating ineffectively. Therefore chest compressions are recommended for a person who has a sudden cardiac arrest or is found unconscious and it is not known how long ago the breathing stopped.

WHY ARE THERE CONCERNS ABOUT CHEST COMPRESSIONS?

Rib and sternal fractures are a painful and common side effect.² Many individuals who are at risk of an opioid overdose remain at high risk with subsequent opioid use, so the recommendation of routine chest compressions in response to an opioid overdose increases the risk of re-fracture. Other adverse outcomes associated with CPR include a potential reluctance to address the pain appropriately in people who use opioids, the risk of opioid induced hyperalgesia, and the risk of precipitating an opioid withdrawal by initiating a sympathetic storm during the stimulation of chest compressions.

RESPONDING TO SOMEONE WHO IS NOT BREATHING AND UNRESPONSIVE

The BCCDC recommendations in the case of finding someone who is not breathing and unresponsive for an **extended or unknown period of time**:

1. **Call 911 immediately**
2. **If trained to do so**, proceed with follow the Basic Life Support algorithm for cardiac arrest; this includes chest compressions and rescue breathing and naloxone administration if an overdose is suspected
3. **If untrained or uncertain of CPR skills**, immediately begin chest compression only CPR and naloxone administration if an overdose is suspected

This recommendation is based on the understanding that an individual found to be unresponsive for an unknown or extended period of time, regardless of initial cause, will be more likely to be in cardiac arrest and benefit from the administration of CPR.

1. Schumacher, MA, Basbaum, AI and Way, WL. Opioid Analgesics & Antagonists. [book auth.] BG Katzung, SB Masters and AJ Trevor. Basic & Clinical Pharmacology. 12th ed. New York : McGraw-Hill, 2012.

2. World Health Organization. Community management of opioid overdose. World Health Organization. [Online] 2014. [Cited: August 29, 2019.] <http://www.drugs.ie/resourcesfiles/ResearchDo>.

3. Toward the Heart. Training Manual: Overdose Prevention, Recognition and Response. Toward the Heart Naloxone Training. [Online] [Cited: August 29, 2019.] <https://towardtheheart.com/assets/uploads/1498514967PSAevW07SnLq5jld0kb7Rr3YNBTMxd4jhysYRl1.pdf>.

4. Heart and Stroke Foundation of Canada. Highlights of the 2015 American Heart Association Guidelines Update for CPR and ECC. Ottawa : s.n., 2015.

5. Ontario Agency for Health Protection and Promotion (Public Health Ontario), Leece P. Evidence brief: Evidence on rescue breathing or chest compressions in local naloxone programs. Toronto, ON : Queen's Printer for Ontario, 2016.

6. Hands-only (compression-only) cardiopulmonary resuscitation: A call to action for bystander response to adults who experience out-of-hospital sudden cardiac arrest. Sayre, MR, et al., et al. 16, April 22, 2008, Circulation, Vol. 117, pp. 2162-7.