Naloxone

Harm Reduction Manual

Updated: July 10, 2026

First Nations Health Authority
Health through wellness

BC Centre for Disease Control
Provincial Health Services Authority

Table of Contents

Introduction 4

Background 4

What is Naloxone? 5

Types of Naloxone 7

Comparing IM injectable and Nasal Naloxone 8

Choosing Between Nasal and IM injectable Naloxone 10

Naloxone Considerations 13

Pregnancy 13

Overweight and Obesity 13

Naloxone Adverse Effects 14

Anaphylaxis (Severe Allergic Reaction) 14

Precipitated Opioid Withdrawal 14

Noncardiogenic Pulmonary Edema 15

Naloxone Distribution Programs in BC 16

List of Naloxone Distribution Programs in BC 16

How to Participate in BCCDC Naloxone Programs 20

Drug Poisoning Response (Overdose) Training 21

Provincial Drug Poisoning (Overdose) Response Training Programs 23

THN Distribution Guidance 25

Resources 28

Glossary 29

Acknowledgements 31

References 32

How to cite this document

British Columbia Centre for Disease Control & First Nations Health Authority. *Naloxone – Harm Reduction Manual.* 2026.

Introduction

Background

This section explains how naloxone works, provincial naloxone programs, where to find overdose (drug poisoning) response training, and how registered Take Home Naloxone (THN) sites should distribute naloxone.

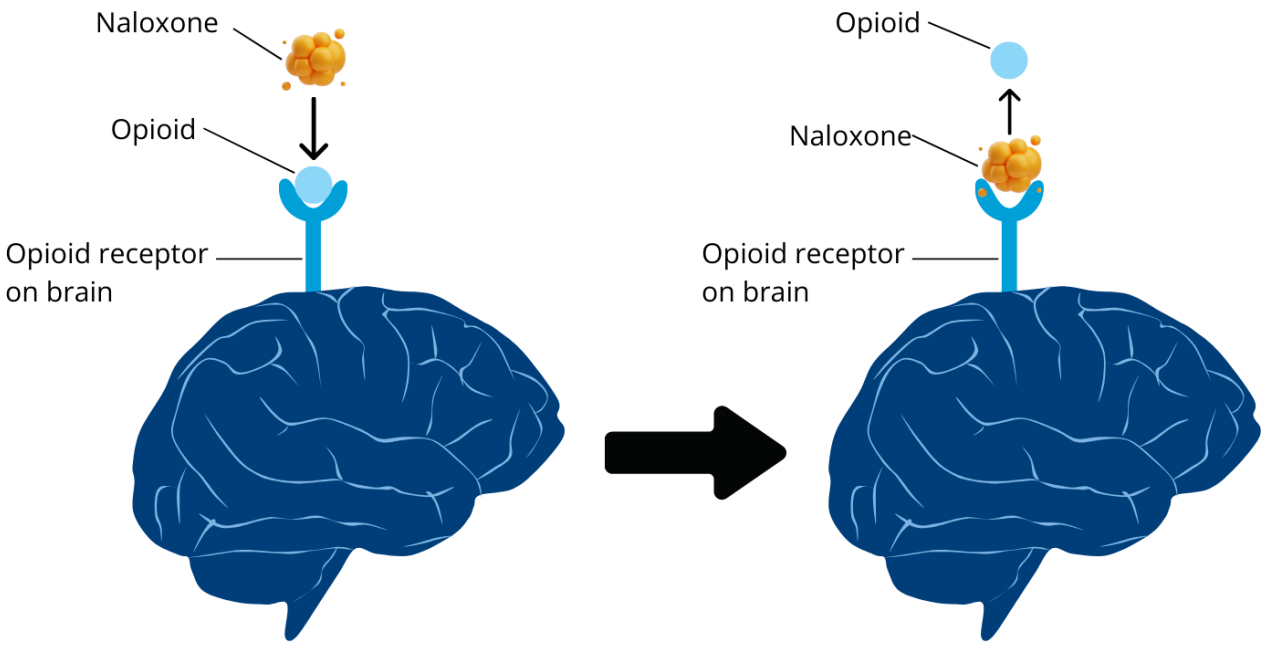
For more naloxone training materials, resources for trainers, and videos on drug poisoning prevention, recognition, and response, visit the Naloxone Training and Resources on Toward the Heart website.

See Section 10 - Opioid Poisoning Response for more details on recognizing and responding to an opioid poisoning.

What is Naloxone?

Naloxone is a fast-acting medication that temporarily reverses an opioid poisoning. In the body, opioids like morphine, heroin, methadone, and fentanyl attach to receptors in the central nervous system. When too many opioids attach to receptors, this causes breathing to slow or stop. Naloxone works by temporarily removing opioids from those receptors. This helps people to start breathing again and can prevent brain injury or death caused by a lack of oxygen to the brain and body.

Figure 1. How Naloxone Works. Naloxone enters the brain and temporarily removes the opioids from the opioids receptors.



Naloxone only works if there are opioids in the body. It has no effect if there are no opioids in the body. The effects of naloxone are short-acting, and it stops working after 30 minutes to 2 hours (depending on the type of naloxone given). When naloxone starts to wear off, opioids can attach back on the receptors and cause another opioid poisoning, which is called a rebound opioid poisoning.

In 2016, naloxone was made available without a prescription in Canada.[1,2] Following this, the *Health Professions Act* and the *Emergency Health Services Act* were changed so that any person can give

[1] For more information see the BC Drug Schedules Regulation.

naloxone to anyone they think is having an opioid poisoning in BC. This includes people who can give medications, like regulated healthcare provider and first responders, and people who cannot normally give medications, like non-regulated healthcare or service providers, administrative staff, and bystanders.[2,3]

Anyone, anywhere, can give naloxone to anyone they think is having an opioid poisoning.

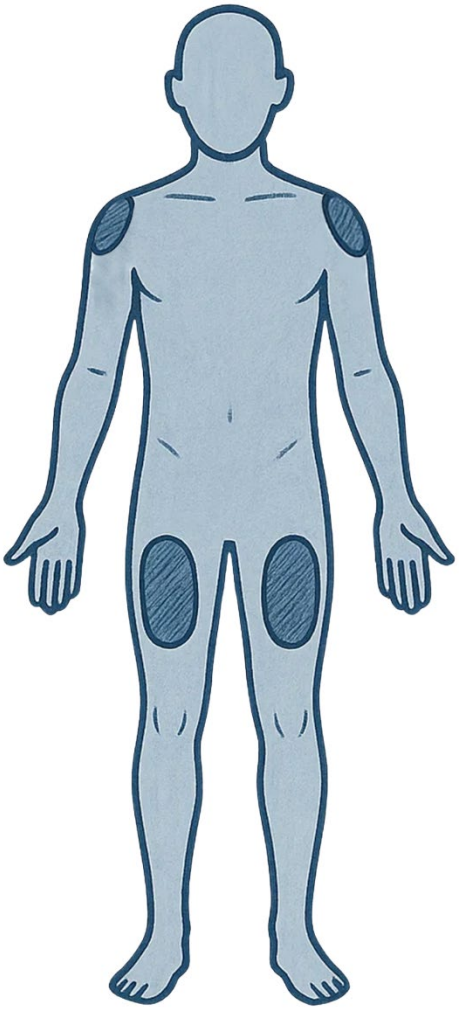
Types of Naloxone

Naloxone comes in 2 main forms: as a shot (injectable) and a nasal spray. Naloxone is the generic name of the medication and Narcan is a brand name of the nasal spray.

Injectable naloxone can be given a few ways: into a muscle (intramuscular), under the skin (subcutaneous), or directly into a vein (intravenous).[4] Intramuscular (IM) injectable and nasal naloxone should be used in community settings, and intravenous (IV) naloxone can be given by regulated health care providers in hospitals.[4]

IM injectable naloxone is injected into a large muscle group such as the thigh or upper arm (deltoid).

Figure 2. Injection Sites for IM Injectable Naloxone. Injectable naloxone is injected into the thigh or upper arm (deltoid), as shown in the areas highlighted in darker blue.



Nasal naloxone is sprayed into the nose (intranasally [NAS]).

Figure 3. Delivery of Nasal Naloxone through the Nose. Nasal naloxone is sprayed into the nose as shown below.

Comparing IM injectable and Nasal Naloxone

Choosing the Best Type of Naloxone

There is no single "best" type of naloxone for everyone. Both types of naloxone work effectively and each has its own benefits and limitations.

If both types of naloxone are available to distribute: service providers should share information on nasal and injectable naloxone so people can choose the naloxone option that works best for them.

Nasal and IM injectable naloxone have the same medication. Both types are effective at reversing an opioid poisoning. The table on the following page compares some aspects of nasal and IM injectable naloxone formulations.

Comparing Nasal and IM Injectable Naloxone		
	Nasal Naloxone	**IM Injectable Naloxone**
Dosing (how much to give at one time)	1 dose = 1 spray = 4mg/0.1ml	1 dose = 1 ampoule/syringe = 0.4mg/1ml
How to give	1 spray in 1 nostril per dose. Alternate between nostrils with each dose.	Inject 1 dose into a large muscle such as the thigh or deltoid/shoulder. Switch muscles with each dose.
Giving more doses if needed	Spray every 3 minutes if breathing does not get better.	Inject every 3 minutes if breathing does not get better.
Time to onset of action (how long it takes to start working)	Usually 3-4 minutes, but it can take up to 17 minutes.[5,6]	2-5 minutes.[2,5]
Time to peak of action (how long until the maximum effect of naloxone is reached)	15 to 30 minutes.[8]	15 minutes.[9]
Duration of action (how long the effects last)	60-120 minutes.	
Bioavailability (how much naloxone is available in the body after it is given)	46-52%.[10, 11]	About 100%.[10]
Half-life elimination (the amount of time it takes for your body to remove half the naloxone)	2 hours.[12]	30 to 80 minutes.[12]
Equivalence conversion (how nasal compares to injectable)	1 dose of nasal naloxone is equal to 5 doses of injectable naloxone[11,13]	
Storage	Keep it in its packaging and at a temperature between 15°C to 25°C. Nasal naloxone will freeze at temperatures below -15°C. If this happens, the device will not spray. You will need to thaw it out at room temperature for 15 mins.[10] Naloxone that has been exposed to extreme temperatures is still safe to use, but it might not work as well. Replace naloxone that has been exposed to extreme temperatures as soon as you can.	Naloxone injectable should be stored between 15°C to 30°C, protected from light.[10] Naloxone that has been exposed to extreme temperatures or sunlight is still safe to use, but it might not work as well. Replace naloxone that has been exposed to extreme temperatures as soon as you can.

Choosing Between Nasal and IM injectable Naloxone

Two things should be considered when choosing the type of naloxone to reverse opioid poisoning:

1. The responder's comfort and ability to administer nasal or injectable naloxone, and
2. Characteristics of the person experiencing opioid poisoning.

IM Injectable Naloxone

IM injectable naloxone is absorbed quickly and consistently. IM injectable naloxone allows responders to give small doses, which can help people with a physical opioid dependence avoid precipitated opioid withdrawal. [6, 7, 10, 13] Giving more naloxone than necessary to reverse opioid poisoning in people with opioid dependence can cause precipitated withdrawal, where they suddenly go into withdrawal. [2,11,14]

IM injectable naloxone is preferred, when:

- The responder is comfortable and able to give IM injectable naloxone.
- Giving the lowest dose of naloxone is critical, such as the person experiencing opioid poisoning is pregnant or has a physical opioid dependence.
- The person has problems with their nose that reduces the absorption of nasal naloxone, such as injury or bleeding.
- 1 or more doses of nasal naloxone have been given and the person is not breathing normally.

Injectable IM Naloxone

Benefits: Absorbed quickly and reliably by the body. Responders can give lower doses of naloxone to reverse opioid poisoning.

Limitations: Requires skill and comfort with opening a glass ampoule, drawing up the naloxone into a syringe, and injecting it into a muscle.

Nasal Naloxone

Nasal naloxone is absorbed in the nose tissues before moving into the bloodstream. Congestion and differences in the nose can change how quickly and effectively it is absorbed. Nasal naloxone can take slightly longer and be less predictable than IM injectable naloxone.

In some situations, nasal naloxone is preferred because it is less invasive and can be given more quickly than IM injectable naloxone. Sometimes, responders are not comfortable or able to open a glass ampoule, draw up the liquid naloxone into a syringe, and inject the naloxone into a muscle. This can be

due to lack of training, limited hand strength or mobility, stressful situations, dark environments, extreme cold, or fear of needles. [14,17]

Nasal naloxone is a good option, when:

- Responders are not comfortable or able to give IM injectable naloxone,
- The person experiencing opioid poisoning does not have physical opioid dependence.

Nasal Naloxone Dosing Considerations

One 4 milligram (mg) dose of nasal naloxone is equal to 2 mg of IM injectable naloxone (or 5 doses). [10] Several studies show that higher doses of naloxone have more side effects, including serious ones that affect breathing, blood pressure, and the heart.[14-24] Giving high doses of naloxone can also cause precipitated opioid withdrawal in people who have a physical opioid dependence.

Giving more than one dose of nasal naloxone increases the chance of a person experiencing these side effects, including precipitated opioid withdrawal.[7]

Reduce the Risk of Precipitated Opioid Withdrawal

Giving too much naloxone to someone with a physical opioid dependence can cause the person to go into precipitated opioid withdrawal. To lower the chance of this happening, responders should try to use injectable naloxone (if it is available and the responder is able to use it).

To lower the risk of precipitated opioid withdrawal, responders should also:

- Give 1 rescue breath every 5 seconds,
- Give naloxone time to work (3 minutes) before giving the next dose. Use a timer to keep track of time.
- Start with the lowest dose needed to help restart breathing,
- Give naloxone only if it's needed for slow, stopped, or abnormal breathing,
- Stop giving naloxone when the person starts breathing normally on their own (12 or more breaths per minute), even if the person is still not awake, and
- Remember the goal of reversing an opioid poisoning is to get the person breathing normally again (12 or more breaths per minute), not necessarily to wake them up.

Nasal Naloxone Absorption Considerations

If a person is not responding to nasal naloxone, it may be because their nose is not absorbing it properly. Some factors can make it difficult for naloxone to be absorbed through the nose, including:

- Issues with the condition of a person's nose, like having:
  - Blood in the nostrils (epistaxis),
  - Nasal mucus,
  - Injuries to the nose,
  - Changes to the inside of the nose like having a deviated or perforated septum (the wall that divides the two nostrils) and nasal polyps.[25]
- Using other substances that affect the nose, including:
  - Substances that make blood vessels in the nose shrink (vasoconstrictors), and
  - Regularly using substances up the nose, like snorting opioids or cocaine.

In any of these cases, injectable naloxone is better if it is available. However, if IM injectable naloxone is not available, you should still give nasal naloxone – it is better than not giving anything.[11] One study showed that nasal naloxone can still work if a person has chronic rhinitis, or an inflamed or irritated nose.[26]

Nasal Naloxone

Benefits: It is easy to give. It can be given by responders with different abilities and in challenging situations.

Limitations: It can take slightly longer to work and can be less predictable than injectable naloxone. The dose is higher than injectable, which can trigger precipitated opioid withdrawal in people with physical opioid dependence.

Naloxone Considerations

Pregnancy

The BCCDC strongly recommends giving naloxone to anyone who is pregnant or has recently given birth if opioid poisoning is suspected. The benefits of giving naloxone outweigh the potential harms because it protects the pregnant person and the fetus from brain injury and death. Giving naloxone can still cause precipitated opioid withdrawal in a pregnant person and fetus if they are physically dependent on opioids. It can lead to early labour or cause fetal distress, so it is important to call 9-1-1 and get medical help right away after giving naloxone.[27, 28] When possible, use injectable naloxone to give the lowest effective dose of naloxone needed to reverse the opioid poisoning and reduce the risk of harm from withdrawal.

For more details on giving naloxone to pregnant people, see Section 10 - Opioid Poisoning Response.

Human Milk

Naloxone can pass into human milk, but it does not get absorbed by the baby drinking it, so it is safe to give naloxone to a person who is breast- or chest-feeding.[29-31]

However, opioids pass into human milk, so the baby can experience an opioid poisoning from drinking human milk that has opioids.[29-31] A baby experiencing an opioid poisoning is a medical emergency. You should call 9-1-1 and follow the emergency call taker's instructions.

A person who has had naloxone for an opioid poisoning should not breast- or chest- feed until advised to do so by a medical professional. See Section 10 - Opioid Poisoning Response.

Call 9-1-1 and give naloxone to anyone who is pregnant, has recently given birth, or is breast- or chest-feeding if opioid poisoning is suspected.

Overweight and Obesity

People who are overweight or obese should be given IM injectable naloxone with a longer needle length (a 1.5-inch needle) or be given nasal naloxone.[16] THN kits come with a standard sized 1-inch needle, which may not be long enough to reach the muscle and could result in less of the medication being absorbed by the body.[10]

Naloxone Adverse Effects

Adverse effects are more serious and unexpected reactions. The most common adverse effect of naloxone is precipitated opioid withdrawal, where a person can suddenly enter withdrawal. In very rare cases, naloxone may cause serious adverse effects due to anaphylaxis from an allergic reaction or noncardiogenic pulmonary edema (excess fluid in the lungs).[32-34] Despite these risks, giving naloxone is still strongly recommended if someone is showing signs of an opioid poisoning.

Anaphylaxis (Severe Allergic Reaction)

The only time naloxone should not be given is if the person has a severe life threatening allergy (anaphylaxis) to naloxone. Severe allergic reaction to naloxone is extremely rare.[37] If it is unclear whether the person has a life-threatening allergy, naloxone should still be given.[9]

Signs of a severe allergic reaction (anaphylaxis), including one or more of the following:[38]

- Breathing and airway:
  - Shortness of breath,
  - Wheezing,
  - Swollen lips or tongue, or
  - Difficulty swallowing.
- Skin:
  - Hives,
  - Flushing, or
  - Itching.
- Cardiac (heart):
  - Low blood pressure,
  - Fainting or collapse, or
  - Weak pulse.
- Gastrointestinal (stomach):
  - Cramps, or
  - Vomiting.

If you see any signs of a severe allergic reaction minutes to hours after receiving naloxone, call 9-1-1.

Precipitated Opioid Withdrawal

If a person who has a physical dependence on opioids is given a lot of naloxone, this can cause them to go into precipitated opioid withdrawal. This can be very painful and uncomfortable and usually happens within a few minutes of giving naloxone. [11, 34, 35]

Watch for signs of precipitated opioid withdrawal:

- high heart rate (tachycardia)
- tremor (shaking or trembling)
- sweating (diaphoresis)
- chills
- nausea
- vomiting
- abdominal cramps
- muscle or joint pain
- anxiety
- irritability

- dilated (large) pupils

For more details on precipitated withdrawal see Section 10 - Opioid Poisoning Response.

Noncardiogenic Pulmonary Edema

Naloxone-induced noncardiogenic pulmonary edema (NCPE) is a rare complication that can happen 12 to 24 hours after giving naloxone. Naloxone-induced NCPE happens when excess fluids suddenly fill into the lungs, making it hard to breath and lowers the amount of oxygen in the body.[32] This typically presents as acute respiratory distress syndrome (ARDS). Watch for: [36]

- Sudden difficulty breathing or shortness of breath (acute onset respiratory distress),
- Fast breathing (tachypnea),
- Struggling to catch their breath, and
- Low levels of oxygen in the body (hypoxia).

If you see any of these signs, call 9-1-1.

Adverse Effects From Naloxone

The most common unwanted effect is sudden opioid withdrawal, which means a person may feel sick soon after naloxone is given.

Severe reactions are very rare. Call 9-1-1 right away if the person has trouble breathing or shows signs of a severe allergic reaction.

Naloxone Distribution Programs in BC

Giving out naloxone is an important part of substance use care and preventing harms and death from opioid poisoning in BC. There are several ways for people in BC to get injectable and nasal naloxone.

The BCCDC manages the provincial Take Home Naloxone (THN) and Facility Overdose Response Box (FORB) programs. THN kits are available at more than 2,300 registered sites across BC, including nearly 200 sites in First Nations communities. These sites provide free naloxone kits to people who are likely to witness and respond to an opioid poisoning. The FORB program supplies naloxone and overdose response supplies to over 800 non-profit, community-based organizations across the province.

FNHA helps fill gaps in access by providing free nasal naloxone to people with First Nations Health Benefits. Naloxone is available at pharmacies without a prescription through these benefits.

People with First Nations Health Benefits should first access a free THN kit from a registered site, whenever possible. If a THN kit is unavailable, injectable or nasal naloxone can be obtained through First Nations Health Benefits. This approach ensures continuity of access and helps address gaps in the healthcare system.

Eligible public sector organizations may access naloxone through the Product Distribution Centre (PDC). Most private and for-profit businesses are not eligible to access provincial naloxone distribution programs. They can purchase naloxone at pharmacies without a prescription and arrange hands-on training.

See the table below for more information on the naloxone distribution programs in BC.

List of Naloxone Distribution Programs in BC

Table 2: Naloxone Distribution Programs in BC

Program	Who is this program for?	Type of Naloxone	More Information
BCCDC Take Home Naloxone (THN) Program	People who are likely to witness and respond to opioid poisoning	IM injectable and nasal naloxone.	IM injectable THN kits have 3 doses of 0.4 mg IM injectable naloxone in glass ampoules.

	can access a THN kit at no cost from registered distribution sites. Find a site that gives out THN kits and training through the BCCDC Toward the Heart Site Finder.		Nasal naloxone THN kits have 2 doses of 4 mg nasal naloxone in nasal devices. The BCCDC ships to authorized distribution sites that have a business address. The BCCDC works in partnership with the Health Authority to register locations that provide training and give out THN kits. Some community pharmacies in BC may be eligible to order BCCDC THN kits through their banner or wholesaler. Pharmacies unable to obtain BCCDC THN kits through a banner or wholesaler may be approved to register directly with the BCCDC in exceptional circumstances. Organizations interested in becoming a THN distribution site should contact their regional harm reduction coordinator. For more information visit BCCDC's Naloxone program
BCCDC Facility Overdose Response Box (FORB) Program	The FORB program provides drug poisoning response boxes, kits and training supplies for staff at non-profit and community-based organizations where staff are likely to witness	IM injectable	Whether an organization or site is eligible is decided together with their regional health authority. Interested organizations/sites should contact their regional harm reduction coordinator FORB sites work with their health authority to develop and implement drug poisoning response policies for staff and to support ongoing staff training and debrief opportunities.

	and respond to opioid poisoning. Eligible housing sites are those that are non-profit. FORB is not meant for private housing sites. FORB supplies are free for eligible sites registered with the BCCDC FORB program.		The FORB program does not give supplies to health authorities, government agencies, and for-profit or private business locations. Organizations and services that are not eligible for FORB can buy naloxone through the product distribution center (PDC) or community pharmacies. For more information: visit the Facility Overdose Response Box (FORB) Program
BC First Nations Health Benefits	Naloxone is available for free to any person enrolled in the First Nations Health Benefits program if a BCCDC THN kit is not available.	IM injectable and nasal	Nasal naloxone kits have 2 doses of 4 mg nasal naloxone spray in nasal devices. Pharmacies should provide access to a BCCDC THN kit first. Do not bill First Nations Health Authority (FNHA) if a BCCDC THN kit is available. For more information visit FNHA's Naloxone program and FNHA Nasal Naloxone Program FAQ's including details on site eligibility. For more information on the First Nations Health Benefits Contact Health Benefits: • Phone toll-free: 1-855-550-5454 or • Email: health benefits@fnha.ca
Product Distribution Centre (PDC)	Eligible public sector organizations (e.g. provincial	IM injectable	Schools can find out more about naloxone and overdose response by reading the Response to Unexpected Health Emergencies in Schools:

	government ministries, public post-secondary institutions, etc.) can get naloxone through the provincial government. Government-funded BC schools may be eligible to purchase naloxone kits through the PDC.		Considerations for Responding to Overdose Events. For more information on the BC PDC, visit PDC Online Store - Log On webpage.
Other access points for naloxone	Organizations and sites that are not eligible for provincial naloxone distribution programs listed above can purchase naloxone in different ways.	IM injectable and nasal	Organizations and settings that are not eligible for provincial naloxone distribution programs can buy IM injectable or nasal naloxone at a pharmacy. Contact the pharmacy to ensure stock is available. Purchased naloxone will not be BCCDC-branded kits. Organizations should arrange hands-on training on recognizing and responding to a drug poisoning. Consider requesting training from the pharmacy where naloxone was purchased, take an online training course and follow up with hands-on training, or take group training sessions. Some organizations (e.g. St. John Ambulance) offer naloxone and group training. Availability of naloxone and training varies. Contact organizations directly. The BCCDC strongly recommends occupational health and safety guidance on naloxone administration and drug poisoning response.

			Consider the need for written plans for initial and ongoing staff training, drug poisoning response, storage of naloxone and replacement on expiry. Consider reviewing occupational policies to promote principles of the Good Samaritan Drug Overdose Act to support staff to seek help during emergencies. See Work Safe BC First Aid Advisory on Naloxone.

How to Participate in BCCDC Naloxone Programs

Click the links below for information on eligibility, how to apply, and requirements:

- THN Distribution sites:
  - Eligibility for THN sites.
  - Staff at registered THN distribution sites must provide hands-on drug poisoning response (overdose) training to people accessing a THN kit.

- FORB Program sites:
  - Eligibility for the FORB program.
  - Organizations and sites must develop and implement drug poisoning response policies for staff and staff training and debrief opportunities (in partnership with their health authority).

See Resources For Drug Poisoning (Overdose) Response Trainers for information on drug poisoning response training.

Drug Poisoning Response (Overdose) Training

If you give out naloxone, it is important to train people on drug poisoning response that includes information on how to prevent, recognize, and respond to an opioid poisoning. It is not enough to just train people on how to give naloxone. The unregulated drug supply is unpredictable, so how to recognize and respond to opioid poisoning can change often.

Everyone who responds to drug poisoning is strongly encouraged to complete drug poisoning response training and participate in annual refresher sessions to maintain their skills. Responders are also strongly encouraged to complete cardiopulmonary resuscitation (CPR) training and updates.

Responding to an opioid poisoning is stressful, and sometimes people responding to a drug poisoning might forget steps. The SAVE ME acronym (found on the next page) was developed to help people remember the steps. You can find instructional stickers on the inside of all naloxone kits. Responders also need to remember to call 9-1-1 and give rescue breaths. The SAVE ME steps can also be found at Toward the Heart- SAVE ME Steps to Respond to Opioid Poisoning .

Train people how to prevent, recognize, and respond to opioid poisoning (overdose) using naloxone.

How to Respond to an Opioid Poisoning

S — Stimulate

Check if they are responsive

1. Speak to them
2. Squeeze their fingertips or the muscle between the neck and shoulder

If they are not responsive call 9-1-1

A — Airway

1. Check if they are breathing normally
2. Check pulse (heartbeat) for less than 10 seconds
3. Remove anything in their mouth
4. Insert airway (if trained and permitted)

V — Ventilate

1. Lift chin and tilt head back
2. Give 1 breath every 5 seconds
3. Keep giving breaths until breathing normally

E — Evaluate

1. Check breathing again
2. Check responsiveness
3. Check pulse for less than 10 seconds

M — Medicate

Give 1 dose of naloxone if they are not breathing normally:

- Inject **1 ampoule** (0.4 mg) into arm or thigh muscle **OR**
- Give **1 intranasal spray** (4 mg) in one nostril

E — Evaluate & Support

1. Keep giving breaths
2. Check breathing again
3. Give another dose of naloxone every 3 minutes until breathing normally

Responsiveness means:

- Awake and alert **OR**
- Easy to wake up

Breathing normally means:

- Taking 12 or more breaths per minute **AND**
- No unusual breathing sounds (e.g. gurgling)

If at any time:

There is NO PULSE:
Start CPR with rescue breathing and compressions

They start breathing normally:

- Place them on their side
- Do not leave them alone
- Keep monitoring them
- Repeat SAVE ME if their breathing changes
- **STOP** giving naloxone when they are breathing normally – even if they are still unresponsive

towardtheheart.com
BCCDC HARM REDUCTION SERVICES

BC Centre for Disease Control
Provincial Health Services Authority

September 2024. Version 3.

Provincial Drug Poisoning (Overdose) Response Training Programs

There are several provincial drug poisoning response training programs available in BC:

Not Just Naloxone Program by the FNHA

The FNHA's Not Just Naloxone (NJN) program is a two day in-person or virtual 'train the trainer' program that teaches people how to have supportive conversations about substance use in First Nations communities. The aim of this training is to help harm reduction programs and services be more culturally informed, culturally relevant, and culturally safe. The topics covered in NJN aim to stop stigma towards people who use substances and bring about meaningful change for community wellness. The training includes how to recognize, respond to, and prevent a toxic drug poisoning, as well as information about Indigenous harm reduction, decolonizing substance use, and how racism and prohibition promote harm.

NJN is a low-barrier program open to Indigenous and non-Indigenous people in health, education, government, and community services. NJN welcomes participants who are Elders, Knowledge Keepers and youth.

For more information email njn@fnha.ca.

Online BCCDC Drug Poisoning Response Training

The BCCDC offers a self-guided training course through Toward the Heart called Naloxone 101. This course is recommended for anyone who wants to learn how to respond to an opioid poisoning using naloxone. This course is good for people who have never had training and for people who want an in-depth refresher of previous training. There is a link to a personalized certificate that can be manually filled in and signed by organizations after training is complete.

Naloxone 101 is also available on Learning Hub by health authority staff with access to the platform. A personalized certificate is available to download at the end of this training.

Toward the Heart also provides training for people who have received drug poisoning response training before at NaloxoneTraining.com. This short training tool is recommended for anyone who wants to refresh what they have learned in past drug poisoning response trainings they have taken. This training can be accessed by anyone. A personalized certificate is available to download at the end of this training.

In-Person Drug Poisoning Response Training

Many THN sites provide hands-on training with practice supplies. This training helps people feel more confident responding to an opioid poisoning. People who are likely to witness and respond to opioid poisoning are encouraged to complete online training, then visit a THN site for hands-on practice and to pick up a THN kit. Health authority and community THN sites may have more capacity and practice supplies to support hands-on practice.

Visit the Toward the Heart Site Finder for information on where to find a nearby THN site. Call ahead to find out if they offer hands-on training.

THN Distribution Guidance

THN sites that give out naloxone are encouraged to follow these guidelines.

Make it Easy to Access

The THN program is intended to be a low-barrier program. It is best to offer training when you give out a naloxone kit. You should still give people a kit if they do not want training. People do not need to give identification or personal information to get a THN kit.

THN kits are intended for people who use substances, as well as their friends, loved ones, and neighbours. Think about giving other resources or information in addition to a kit.

Check Expiry Dates

It is important to check the expiry dates of naloxone kits before giving them out.

The expiry dates can be located on:

- Naloxone ampoules (in all THN and FORB products)
- Naloxone nasal spray packaging (in THN kits)
- Naloxone sleeves (in FORB boxes)
- Amber medication bottle label (in THN and FORB 3-dose kits)
- The label on the outside of the kit (in THN kits)

Do not give out naloxone if it has an expiry date that is less than 3 months away. Contact the regional harm reduction coordinator if naloxone in THN kits or FORB is within 3 months of their expiry date. The BCCDC informs registered sites about upcoming expiry dates and provides guidance on managing expired stock. This information is also shared through updates at https://towardtheheart.com/thn-sites.

If an individual's THN kit expires, they may replace the expired contents at a registered THN site. Do not replace the entire kit. Instead, replace individual supplies and update the expiry date on the outside of the kit to match the naloxone expiry date to reduce waste.

Continued…

THN Distribution Guidance continued…

"First In, First Out"

Give out older supplies first, before giving out newer supplies so they do not expire before they are handed out. Remember: "First In, First Out" (FIFO).

There is one exception: Do not distribute naloxone if its expiration date is less than 3 months away.

"One-for-One" Distribution

Most of the time, give 1 nasal or injectable IM THN kit to each person. An injectable IM naloxone kit can be given with a nasal naloxone kit if the person requests both or when delays in emergency health services are likely (e.g. rural or remote areas).

There are times when people benefit from getting more than 1 kit:

- Consider where they live
    - Is the community rural and remote?
    - Is there access to other harm reduction services in the area?
    - What are emergency response times in the community?
- Is the person getting kits for friends or others in their household?

Consider the Setting

THN distribution varies by site, so a 'one size fits all' approach to training does not work. Before handing out kits, sites should assess how to meet their community's needs. Consider things like operating hours, how close they are to other THN sites, staffing, location, and how stigma could affect people using services.

Tips to provide low-barrier training:

- Post naloxone training materials (posters, QR codes) in busy areas (bathrooms, elevators, etc.),
- Provide easy-to-access information (brochures, pamphlets).

Continued…

THN Distribution Guidance continued…

Determine the Person's Training Needs

Determine the person's needs before providing drug poisoning (overdose) response training and a THN kit.

Questions to ask to make training more relevant:

- Start with their needs: "What questions do you have about recognizing and responding to overdose?"
- Ask about previous training: "When was the last time you had overdose response training?"
- Share updates: "There's been some changes since your last training. Would you like to review?"
- Provide hands on training with practice supplies: "Would you like to practice opening an ampoule and preparing naloxone for injection?"
- Check their knowledge: "How do you tell if someone is having an overdose?"
- Explore recent experience: "If you feel comfortable, can you share the last time you were at an overdose where naloxone was used? What happened?"

Then provide drug poisoning (overdose) response training and hands-on practice that builds on strengths and addresses learning needs.

Resources

- CRISM Naloxone Best Practice Guidance for information on best practices for community-based drug poisoning (overdose) education and naloxone distribution programs in Canada.
- FNHA Toxic Drug Emergency Community Support Guide for information and resources on the toxic drug emergency response for First Nations communities.

Resources for naloxone trainers:

- BCCDC Naloxone 101 Course for information on how to prevent, recognize, and respond to drug poisoning.
- BCCDC Naloxone Trainer Requirements for the minimum education and training requirements to provide drug poisoning response training.
- Toward the Heart Naloxone Training and Resources for information on drug poisoning response training and resources.
- BCCDC Naloxone Training Manual for a handbook on drug poisoning response training.
- BCCDC Naloxone Training Key Takeaways for guidance to support trainers to deliver key messages of drug poisoning response training.
- Naloxone Training Checklist for trainers to assess the knowledge of participants who receive drug poisoning response training.
- BCCDC Take Home Naloxone Kit Site Finder for information on naloxone distribution at THN sites and community pharmacies.
- Subscribe to the BCCDC Harm Reduction Education Team newsletter for updates on drug poisoning response and naloxone administration.

Glossary

Antidote refers to a medicine that reverses the effects of a substance or poison.

Fentanyl refers to a potent synthetic opioid.

Intramuscular means given into a muscle.

Intranasal or nasal means given into the nose through a nostril.

Intravenous means given into a vein.

Non-regulated service provider means an employed service provider who is not licensed or registered by a regulatory body, who has no legally defined scope of practice, required education, or practice standards. For example, mental health workers, housing support workers, outreach workers, and peer support workers.

Opioid refers to a class of substances that slow down the central nervous system and relieve pain. Opioids can be unregulated or regulated. For example, morphine, heroin, fentanyl, and methadone.

Opioid poisoning refers to physiological harms that can occur from consumption of opioids; reflects the unpredictability and volatility of the toxic unregulated drug supply. This term is preferred to "overdose", which implies that an individual took too much of a substance, whether intentionally or unintentionally.

Physical opioid dependence refers to changes in the body that occur from consuming opioids. Physical withdrawal symptoms occur when the person's body does not have enough opioids.

Precipitated opioid withdrawal: when a person experiences sudden acute opioid withdrawal due to use of too much of an opioid antagonist medication (e.g. naloxone).

Service provider means any person employed in a health or social service setting to provide care to another person. A service provider may be regulated or nonregulated.

Rebound opioid poisoning refers to a second opioid poisoning that happens after naloxone wears off. This is because opioids are still circulating in the body, and the effects of naloxone are temporary.

Regulated service provider refers to an employed service provider who is registered and licensed by an approved regulatory body (as defined under the Health Professions Act), with specific education

requirements, a legally defined scope of practice, and related practice standards. These include nurses, nurse practitioners, physicians, and social workers.

SAVE ME is the acronym used to describe the steps to respond to opioid poisoning. It stands for stimulate, airway, ventilate, evaluate, medication, and evaluate.

Toxicity refers to the measure of how harmful or poisonous a substance is.

Types of naloxone refers to the way a medication is made for administration. Sometimes called formulation. For example, intramuscular, nasal, and intravenous are formulations of naloxone.

Unregulated drug supply refers to substances that are illegally produced and not checked for quality or consistency.

Acknowledgements

BC Centre for Disease Control:

Harm Reduction & Substance Use Services
Sammy Iammarino
Emily Ogborne-Hill
Paul Bangah
Keira St. George
Megan Bobetsis
Brittany Graham
Christie Wall
Dr. Jessica Moe
Dr. Roy Purssell
Sierra Williams
Charlette Stephens

Knowledge Translation
Carly Welham
Julienne Jagdeo

PEEP

Drug and Poison Information Centre

First Nations Health Authority:

Cowichan Tribes First Nation
Elder Doreen Peter

Office of the Chief Medical Officer
Dr. Nolan Hop Wo
Kathy Riyazi
Corrina Chase
Dr. Jae Ford
Jessica Xavier

Mental Wellness Clinical Services
Nikhil Gandhi

Public Health Response
Keshia Cleaver
Natalia Dos Santos
Terri Gillis
Marina Bochar
Natasha Green

Northern Regional Team
Jolene Pagurut

Island Regional Team
Jenny Peters

Indigenous Harm Reduction Research
Ashley Simpson

With review from:
Dr. Alexis Crabtree (BCCDC Harm Reduction & Substance Use Services)
Dr. Nel Wieman (FNHA Office of the Chief Medical Office)
Harm Reduction Strategies and Services Committee
Office of the Provincial Health Officer

References

1. Government of British Columbia. More Than 2,500 Lives Lost to Toxic Drugs in 2023. Public Safety and Solicitor General. January 24, 2024. Accessed November 22, 2024. https://news.gov.bc.ca/releases/2024PSSG0001-000069#:~:text=Preliminary%20reporting%20released%20by%20the,ever%20reported%20to%20the%20agency.
2. Kim HK, Nelson LS. Reducing the harm of opioid overdose with the safe use of naloxone: a pharmacologic review. Expert Opinion on Drug Safety. 2015;14(7):1137-1146. https://doi.org/10.22114%2Fajem.v0i0.279
3. Yousefifard M, Vazirizadeh-Mahabadi MH, Neishaboori AM, et al. Intranasal versus intramuscular/intravenous naloxone for pre-hospital opioid overdose: a systematic review and meta-analysis. Adv J Emerg Med. 2020;4(2):e27. https://doi.org/10.22114/ajem.v0i0.279
4. College of Pharmacists of British Columbia. Naloxone. 2024. Accessed August 12, 2024. https://www.bcpharmacists.org/naloxone
5. Lewis SNH, M, Lewin NA, Smith SW, Goldfrank LR, Hoffman RS. Goldfrank's Toxicologic Emergencies 11th Ed. 2019.
6. Dietze P, Jauncey M, Salmon A, Mohebbi M, Latimer J, van Beek I, McGrath C, Kerr D. Effect of Intranasal vs Intramuscular Naloxone on Opioid Overdose: A Randomized Clinical Trial. JAMA Netw Open. 2019 Nov 1;2(11):e1914977. doi: 10.1001/jamanetworkopen.2019.14977. Erratum in: JAMA Netw Open. 2020 Apr 1;3(4):e206593. doi: 10.1001/jamanetworkopen.2020.6593. PMID: 31722024; PMCID: PMC6902775.
7. Saari TI, Strang J, Dale O. Clinical Pharmacokinetics and Pharmacodynamics of Naloxone. Clin Pharmacokinet. 2024 Apr;63(4):397-422. doi: 10.1007/s40262-024-01355-6. Epub 2024 Mar 14. PMID: 38485851; PMCID: PMC11052794.
8. U.S. Food and Drug Administration. Clinical Pharmacology Review: Naloxone. Application Number: 208411. 2015. Available from: https://www.fda.gov/files/drugs/published/208411-Naloxone-Clinpharm-PREA.pdf
9. NNS_EN.pdf (narcannasalspray.ca) and [Product Monograph Template - Standard] (hres.ca)
10. Ryan, S. A., & Dunne, R. B. (2018). Pharmacokinetic Properties of Intranasal and Injectable Formulations of Naloxone for Community use: a Systematic Review. Pain Management, 8(3), 231–245. https://doi.org/10.2217/pmt-2017-0060
11. Jordan MR, Patel P, Morrisonponce D. Naloxone. [Updated 2024 May 5]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK441910/
12. Skulberg AK, Tylleskär I, Valberg M, Braarud AC, Dale J, Heyerdahl F, Skålhegg T, Barstein J, Mellesmo S, Dale O. Comparison of intranasal and intramuscular naloxone in opioid overdoses managed by ambulance staff: a double-dummy, randomised, controlled trial. Addiction. 2022 Jun;117(6):1658-1667. doi: 10.1111/add.15806. Epub 2022 Feb 8. PMID: 35137493; PMCID: PMC9302677.

13. U.S. Food and Drug Administration. Clinical Pharmacology Review: Naloxone. Application Number: 208411. 2015. Available from: https://www.fda.gov/files/drugs/published/208411-Naloxone-Clinpharm-PREA.pdf
14. Ferguson, M., Rittenbach, K., Leece, P., Adams, A., Ali, F., Elton-Marshall, T., ... & Buxton, J. A. (2023). Guidance on take-home naloxone distribution and use by community overdose responders in Canada. CMAJ, 195(33), E1112-E1123.
15. McDonald R, Lorch U, Woodward J, Bosse B, Johnson H, Mundin G, Smith K, and Strang J. (2017) Pharmacokinetics of concentrated naloxone nasal spray for opioid overdose reversal: Phase-I healthy volunteer study. Addiction, doi: 10.1111/add.14033.
16. Doppen, M., Kearns, C., Hills, T., Weatherall, M., & Beasley, R. (2024). Intramuscular vaccination needle length: a call to arms. The Lancet, 403(10426), 528-529.
17. Lapidot, T., Bouhajib, M., Faulknor, J. et al. A Novel Faster-Acting, Dry Powder-Based, Naloxone Intranasal Formulation for Opioid Overdose. Pharm Res 39, 963–975 (2022). https://doi.org/10.1007/s11095-022-03247-5
18. Thompson J, Salter J, Bui P, et al. Safety, Efficacy, and Cost of 0.4-mg Versus 2-mg Intranasal Naloxone for Treatment of Prehospital Opioid Overdose. Annals of Pharmacotherapy. 2022;56(3):285-289. doi:10.1177/10600280211030918
19. Avetian GK, Fiuty P, Mazzella S, Koppa D, Heye V, Hebbar P. Use of naloxone nasal spray 4 mg in the community setting: a survey of use by community organizations. Curr Med Res Opin. 2018 Apr;34(4):573-576. doi: 10.1080/03007995.2017.1334637. Epub 2017 Jun 7. PMID: 28535115.
20. Gooley B, Weston B, Colella MR, Farkas A. Outcomes of law enforcement officer administered naloxone. Am J Emerg Med. 2022 Dec;62:25-29. doi: 10.1016/j.ajem.2022.09.041. Epub 2022 Oct 1. PMID: 36215781.
21. Farkas A, Lynch MJ, Westover R, Giles J, Siripong N, Nalatwad A, Pizon AF, Martin-Gill C. Pulmonary Complications of Opioid Overdose Treated With Naloxone. Ann Emerg Med. 2020 Jan;75(1):39-48. doi: 10.1016/j.annemergmed.2019.04.006. Epub 2019 Jun 8. PMID: 31182316.
22. Payne ER, Stancliff S, Rowe K, Christie JA, Dailey MW. Comparison of Administration of 8-Milligram and 4-Milligram Intranasal Naloxone by Law Enforcement During Response to Suspected Opioid Overdose - New York, March 2022-August 2023. MMWR Morb Mortal Wkly Rep. 2024 Feb 8;73(5):110-113. doi: 10.15585/mmwr.mm7305a4. PMID: 38329911; PMCID: PMC10861201.
23. Maarten van Lemmen, Jeffrey Florian, Zhihua Li, Monique van Velzen, Eveline van Dorp, Marieke Niesters, Elise Sarton, Erik Olofsen, Rutger van der Schrier, David G. Strauss, Albert Dahan; Opioid Overdose: Limitations in Naloxone Reversal of Respiratory Depression and Prevention of Cardiac Arrest. Anesthesiology 2023; 139:342–353 doi: https://doi.org/10.1097/ALN.0000000000004622
24. Kummer RL, Kempainen RR, Olives TD, Leatherman JW, Prekker ME. Naloxone-associated pulmonary edema following recreational opioid overdose. Am J Emerg Med. 2022 Mar;53:41-43. doi: 10.1016/j.ajem.2021.12.030. Epub 2021 Dec 17. PMID: 34973491.
25. Elzey MJ, Fudin J, Edwards ES. Take-home naloxone treatment for opioid emergencies: a comparison of routes of administration and associated delivery systems. Expert Opin Drug Deliv

[Internet]. 2016 Sep 16 [cited 2017 Jan 13];1–14. Available from: http://www .tandfonline .com/doi/pdf/10.1080/17425247 .2017.1230097?needAccess=true
26. Edwards E, Kelley G, Kessler C, et al. Pharmacokinetics of 2.0 mg intranasal and intramuscular naloxone HCl administration and the impact of vasoconstrictor use on the bioavailability of intranasal naloxone HCl. Palm Springs (CA): American Academy of Pain Medicine; 2016.
27. Blandthorn J, Bowman E, Leung L, Bonomo Y, Dietze P. Managing opioid overdose in pregnancy with take-home naloxone. Aust N Z J Obstet Gynaecol. 2018;58(4):460-462. https://doi.org/10.1111/ajo.12761
28. Bonomo Y, Pastor A, Leung L, Blandthorn J, Dietze P. Managing opioid overdose in pregnancy with nasal naloxone. Aust N Z J Obstet Gynaecol. 2020;60(5):E11-E12. https://doi.org/10.1111/ajo.13216
29. National Library of Medicine. Naloxone. Drugs and Lactation Database. Updated Feb 15, 2024. Accessed August 12, 2024. https://www.ncbi.nlm.nih.gov/books/NBK501681/
30. Briggs GG, Towers CV, Forinash AB. Drugs in Pregnancy and Lactation: A Reference Guide to Fetal and Neonatal Risk. 12th ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2021.
31. UptoDate. Naloxone: Drug Information. 2024. Accessed Feb 05, 2024. https://www.uptodate.com/contents/naloxone-drug-information?search=naloxone&source=panel_search_result&selectedTitle=1~148&usage_type=panel&kp_tab=drug_general&display_rank=1#F1994471
32. Clark SB, Soos MP. Noncardiogenic Pulmonary Edema. National Library of Medicine StatPearls. Updated October 31, 2022. Accessed August 12, 2024. https://www.ncbi.nlm.nih.gov/books/NBK542230/
33. Jiwa N, Sheth H, Silverman R. Naloxone-induced non-cardiogenic pulmonary edema: a case report. Drug Saf Case Rep. 2018;5(1):20. https://doi.org/10.1007%2Fs40800-018-0088-x
34. Moustaqim-Barrette AP, Williams S, Ferguson M, et al. Adverse events related to bystander naloxone administration in cases of suspected opioid overdose in British Columbia: An observational study. PLoS ONE. 2021;16(10). https://doi.org/10.1371/journal.pone.0259126
35. Pergolizzi JV, Raffa RB, Rosenblatt MH. Opioid withdrawal symptoms, a consequence of chronic opioid use and opioid use disorder: current understanding and approaches to management. J Clin Pharm Ther. 2020;45(5):892-903.
36. Diamond M, Peniston HL, Sanghavi DK, et al. Acute Respiratory Distress Syndrome. National Library of Medicine StatPearls. Updated January 31, 2024. Accessed August 12, 2024. https://www.ncbi.nlm.nih.gov/books/NBK436002/
37. American Academy of Allergy, Asthma & Immunology. Naloxone. AAAAI. Accessed November 12, 2025. https://www.aaaai.org/allergist-resources/ask-the-expert/answers/old-ask-the-experts/naloxone