Using Oximeters
During an Overdose

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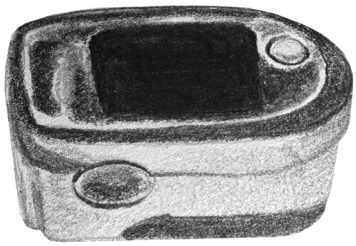
NEXT Distro
STAY ALIVE, STAY SAFE.

The text for this resource was heavily replicated with permission from a resource created by BCCDC Harm Reduction Services @TowardtheHeart.
More information and links at: **nextdistro.org/pulse**



What is a Pulse Oximeter?

Pulse oximeters are small devices that are used to measure the **pulse rate** (heart rate) and the **oxygen level** in a person's blood. Oximeters are useful when responding to an overdose because they can give you more information about the condition of the person you're responding to. **However, they do not replace your usual steps in evaluating the person.**

Why is using a pulse oximeter helpful to overdose response?

Due to tranquilizers becoming a common cut in the opioid drug supply, a person who is not responsive may be under the effect of a drug such as xylazine. Xylazine is an animal tranquilizer that causes heavy sedation. Some people have reported blacking out for up to six hours at a time. Because naloxone does not affect tranquilizers, using evaluation techniques and a pulse oximeter will support your overdose response. It's essential to administer naloxone if you believe they are experiencing an opioid overdose. However, if they are breathing but not very responsive, you can use a pulse oximeter to monitor their heart rate.

How Do I Use It?

Open the clip and attach the pulse oximeter to a finger, excluding the pinky or thumb, that is cleanest. It's important to avoid obstructions such as nail polish, acrylics, long nails, or dirt, as they can cause inaccurate readings. Be sure that the fingernail is on the same side as the red light and that their finger is inserted all the way into the oximeter as light beams must pass through the nail bed to give the reading.

Once clipped on the finger, the oximeter gives you two sets of readings:

a) Oxygen level in the blood (%SpO2) on the LEFT side

95–100%

Is a normal range. If this number is below 90% the person may not be getting enough oxygen to important organs like their heart and brain.

b) Heart Rate (PR_{BPM}) on the RIGHT side

60–100BPM

This is a normal range for someone who is awake. If they are asleep their heart rate could be as low as 40 BPM. A heart rate that is or stays above 160 BPM could mean the person is experiencing overamping and may need medical attention.

Wipe down with anti-microbial or alcohol wipes inside and out after each use.

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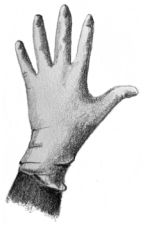
Note: Pulse oximetry readings are **not always accurate**. Readings may not be reliable if a person has one or more of the following:

- a low body temperature
- a lot of motion (e.g., they're shivering or seizing)
- medium or dark skin pigmentation (this will depend on the pulse oximeter you have)
- a low blood pressure
- a very low heart rate
- dirty hands
- dehydration

The effectiveness of pulse oximeters in detecting low oxygen saturation differs across races. According to a **recent study**, pulse oximeters were three times less likely to detect low oxygen saturation among Black patients than among White patients. Darker skin may pose challenges for some less sensitive pulse oximeters, as they have been primarily calibrated for white individuals, affecting their ability to accurately measure oxygen levels in the blood. Darker skin tones may look ashen or purple compared to pale or blue for someone with lighter skin who is experiencing a lack of oxygen. **Use the oximeter readings with caution and always use your own judgement during an overdose response!**

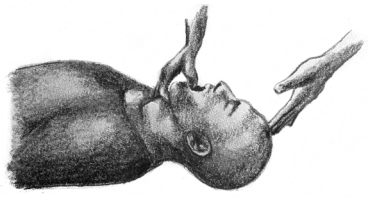
How Do I Use It When Responding to an Overdose?

1



Put on gloves and a mask (if available), stimulate the person, and call 911 if they are unresponsive.

2



Tilt their head back and check their airway for obstruction.

3

According to best practice guidelines for overdose response, the next step is to give rescue breaths (use CPR face shield).

However, if you don't feel comfortable providing breaths, skip this step and proceed to Step 4.

Use the following to help you decide whether breaths are needed:

- Is the person breathing slowly? (less than 10 breaths per minute)?
- Are their lips or tongue blue?
  - **If yes to any of the above, give rescue breaths (1 breath every 5 seconds).**
- Supplement this information using your oximeter:
  - **If the SpO2 reading is under 92%, continue giving rescue breaths.**

4

The next step is to administer naloxone:

- If you know the substance consumed is an opioid or you're not sure, administer naloxone (give 2 doses if necessary). When in doubt, always administer naloxone; naloxone is safe. Monitor the person's breathing rate, colour and blood oxygen levels using your oximeter until help arrives.
- If you are sure that the substance consumed is a non-opioid, naloxone is not necessary. Monitor oxygen levels and provide breaths (if comfortable) until help arrives. Note: A person who has used a benzo may remain unresponsive for longer. Monitoring oxygen levels will help determine whether giving breaths is necessary.

Repeat the steps indicated above, as necessary, until paramedics arrive!