

Naloxone and Temperature

The following information addresses frequently asked questions related to Naloxone and Temperature.

DOES NALOXONE WORK IF IT GETS REALLY HOT OR COLD?

Unlike vaccines where cold chain is vitally important to maintain effectiveness of the product; we do not routinely monitor naloxone temperatures. Naloxone is recommended to be stored at “controlled room temperature” between 15°C-30°C and to be kept in a dark place (away from light).

NALOXONE EXPOSURE TO HEAT

Naloxone can be kept at 25°C without concern. Temperatures at 30°C, especially during the shipping process, are also acceptable as long as the average temperature does not exceed 25°C. Temporary spikes up to 40°C are permitted as long as they do not exceed 24 hours.

Advice to individuals: during hot weather avoid leaving your naloxone in a car for an extended period of time. Naloxone ampoules should be kept out of direct sunlight.

NALOXONE EXPOSURE TO COLD

Naloxone can be kept in a cool place or refrigerated at 2°C to 8°C.¹ The concern is with THN kits in sub-zero temperatures which occur in some areas of BC during winter. Teligent, the current manufacturer of naloxone in the BCCDC THN kits, has performed stability studies and determined that the product remains stable after exposure to freezing temperatures as low as -20°C for up to 2 weeks.

Shipping naloxone kits to Northern communities: Transportation of THN kits to our Northern communities may take 8 or 9 hours in the back of an unheated truck with outside temperatures of minus 30°C. Therefore a temperature controlled courier service was introduced so the temperature of naloxone can be maintained during shipping - during the winter months only.

Advice to individuals: If you carry naloxone in the winter keep your naloxone kit near your body such as in a pocket or attached to your belt under your jacket or coat. Do not leave your kit in a backpack outside or in a car for a long time where temperature may be sub-zero for extended periods.

WHAT TO DO IF NALOXONE GETS TOO HOT OR TOO COLD?

Research has shown naloxone can be safely used after hot and cold stresses.² Drug temperatures beyond the manufacturers recommended storage ranges do not affect the chemical structure of naloxone. However, if the naloxone is repeatedly outside the recommended temperature range, we advise going to a THN site and replacing the ampoules. The replacement process for expired naloxone should be followed for more details see <http://towardtheheart.com>

If the **only naloxone available is known to have been outside recommended temperatures** (or is past its expiry date) **use it**. It may not be as effective but **Do Not Delay** and wait for additional help to arrive. If someone is having an opioid overdose they need naloxone as soon as possible.



1. General notices and requirements. Applying to standards, tests, assays, and other specifications of the United States Pharmacopeia. USP 33-NF 20 Reissue. General Notices.
2. Küpper, T., Schraut, B., Rieke, B., Hemmerling, A., Schöffl, V. and Steffgen, J. (2006). Drugs and Drug Administration in Extreme Environments. Journal of Travel Medicine, 13(1), pp.35-47.
3. Johansen RB, Schafer NC, Brown PI. Effect of extreme temperatures on drugs for prehospital ACLS. Am J Emerg Med 1993; 11: 450–452.