

# Emergency CPR

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Emergency CPR takes place at a designated CPR area equipped with an anesthetic machine and standard crash cart kit.

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## Station Alert

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- **In an emergency such as when a cat is not breathing, a loud and clear verbal, “Not breathing” should be called out to alert the Clinic Supervisor and Veterinary Assistant.** All four members of the CPR team should convene around the CPR station.
- **When transporting, do not hold the cat from the scruff of its neck alone.** Always support its back and bottom, too. Support the cat’s head without flexing its neck, so that the airway remains straight and open.
- **The cat and its medical record should be transported immediately to the designed CPR location at the first sign of breathing problems** and time should not be spent assessing the cat in another area.
- **The supervising veterinarian should always assure the crash cart is stocked** and the anesthesia machine is functional at the CPR station before the start of a clinic.

## Emergency CPR Instructions

### Four Person Protocol

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- **Person 1:** Recorder
- **Person 2:** Provides ventilation
- **Person 3:** Performs chest compressions
- **Person 4:** (CPR team leader): Administers medication

Ideally, the supervising veterinarian should be in charge of this station and serve as the CPR team leader. However, in the event that he or she is unavailable, any veterinarian available should step in and perform CPR. Persons 1-3 should be available Veterinary Assistants.

Apnea is a commonly observed event occurring immediately after TXK administration. It is typically very responsive to doxapram if administered promptly. Cats should be closely monitored after TXK administration. Respiratory arrest occurring later after induction or cardiac arrest is less likely to have a successful outcome.

1. Loudly **verbalize, “Not breathing!”** upon the first signs of apnea and rush cat to CPR
2. The veterinarian should **immediately assess the cat, checking for breathing, mucous membrane color.** The Veterinary Assistant should begin filling out the CPR Emergency Treatment Record.

3. **Assess if the cat is breathing. Auscultate or palpate for a heartbeat.** If a heartbeat is identified, check the mouth for any obstructions to the airway. **Clear mucous or vomitus.**
4. **Apnea:** Cats do not usually need to be intubated or have their anesthetic reversed with yohimbine for simple apnea, because they usually respond promptly to doxapram.
  - Once it has been determined that there is no movement of the chest wall but a heartbeat is present, **administer the respiratory stimulant doxapram IV** according to the dosing Doxapram is contraindicated when cardiac arrest is present.
  - **Administer supplemental oxygen via mask and bag once every 6 seconds.** Assure positive pressure ventilation is occurring with a tight mask and that the chest wall is moving during ventilation.
  - **Return the cat to the station from which it originated prior to the arrest** once the cat begins breathing on its own and is deemed stable by the veterinarian. The Emergency Treatment Record should travel with the cat.
  - **Intubation should be performed if the cat does not respond to doxapram** within 2 minutes or is cyanotic.
5. **Cardiac arrest:** If there is **no heartbeat**, the supervising veterinarian should initiate CPR.
  - Begin **basic life support** according to the Emergency Treatment Record.
    - **Circulation:** Apply external cardiac compressions twice every second (120/minute)
    - **Airway:** Quickly check the airway for foreign materials or It should be cleared of mucous or vomitus if necessary. Position the cat in ventral recumbency and intubate. Administer 0.2 cc topical 2% lidocaine on the larynx if needed to stop laryngospasm. If intubation is delayed, supplemental oxygen should be delivered via a mask.
    - **Breathe:** Ventilate the cat every 6 seconds with oxygen (10/minute)
    - **Administer yohimbine** slowly IV to reverse part of the anesthesia (xylazine) using the same volume as the TKX.
    - **Perform 2 minutes of uninterrupted compressions/ventilations**, then reassess for heartbeat
  - Begin **advanced life support** according to the Emergency Treatment Record if there is no heartbeat after 2 cycles (4 minutes) of basic life support.
    - **Administer epinephrine** intravenously or intratracheally.
    - **Establish intravenous access.**
    - **Reassess for heartbeat and effective ventilation** after every 2 minutes of uninterrupted compressions and ventilations.
    - **Administer epinephrine** every 4 minutes.
    - **Once a heartbeat is reestablished**, assess the cat and determine the next steps in its care. This is done by the Clinic Supervisor.
    - **Do not administer additional yohimbine** to these cats post-operatively.
  - **Compare the Paw Tag and the Medical Record** to be sure the ID# matches.
  - **Complete the Emergency Treatment Record** and make sure it travels with the cat.

## Station Closing and Cleanup

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When the clinic is concluded:

- Inventory the remaining supplies.
- Clean the area and dispose of all trash.
- Wash all tables.
- Wipe as much of the overhead surgery lamp as can be reached.
- Sweep or vacuum and mop the floor.