DoveLewis®
Veterinary Emergency & Specialty Hospital

June 7, 2023

Veterinary CPR Training

DoveLewis Technician Trainer

Jessica Waters-Miller, CVT

DoveLewis

Virtual Attendee FAQ's

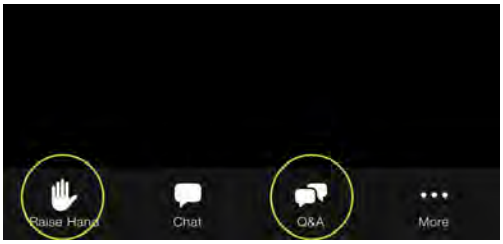
Do I need to create my own Zoom account to attend?
No. You can access the webinar through the link in your confirmation email. Click the link that says, "Click Here to Join" at the time of the lecture.

Is there someone to help if I have trouble accessing the lecture?
Yes. Please reach us at contact@dovelewis.org if you're experiencing difficulties joining the meeting. During the lecture, you can use the "Raise Hand" function and someone will be able to help you.

Is attendance tracked?
Yes. As you register for the Zoom meeting, you will be asked to enter your information. Attendance is tracked for RACE records.

Is this lecture RACE approved?
Yes. This lecture is RACE-Approved for one Interactive-Distance CE credit. You will receive an emailed certificate of attendance within one business day after the event.

Will I be able to ask questions?
Yes. If you have questions during the lecture, please use the Q&A function to submit your question. We will save questions for the end of the lecture.



Will I be able to talk?
No. All attendees will be in listen-only mode. If you have a question or need help, the Q&A or Raise Hand function.

Will the presenter or other attendees be able to see me?
No. All attendees will only have the capability to listen to the presenter.

How will I get my certificate?
You must register by using the Zoom link to prove attendance. You will receive an emailed certificate of attendance within one business day after the event.

Can I record the lecture?
No. The lecture will only be recorded by DoveLewis, and will likely be available on atdove.org at a later date.

For more support, please email *contact@dovelewis.org*

DoveLewis

DoveLewis V eterinary Emergency & Specialty Hospital
1945 NW Pettygrove St. Portland, OR | P 503-228-7281 F 503-228-0464 W dovelewis.org

DoveLewis® Lecture Notes

Veterinary CPR Training

Jessica Waters-Miller, CVT

Outline

- RECOVER Initiative
- Preparedness and Prevention
- Basic life support
- Advanced life support
- Monitoring
- Post cardiac arrest care

What does RECOVER mean anyway?

- **REassessment Campaign On VEterinary Resuscitation**
- Based on recent work by ILCOR (international liasion commmittee on resuscitation)
- 101 clinical questions were examined covering 5 domains
  - Preparedness and Prevention
  - Basic life support
  - Advanced life support
  - Monitoring
  - Post cardiac arrest care

Preparedness and Prevention

- Location, storage and content of resuscitation equipment should be standarized and regularly audited (I-A)
- Checklists, algorithm charts and dosing charts improve compliance (I-B)
- CPR training every 6 months is recommended to reduce decay of skills (I-A)
- Each hospital should evaluate their own treatment area to determine where the best place is to set up a crash station with monitoring equipment and supplies

Team Approach

- Crash situations draw a lot of attention. It is best to limit the number of people involved with CPR
- Team approach to CPR, not more than 3-4 people need to be involved
  - Team leader – DVM or CVT
  - Someone to intubate and ventilate
  - Someone to do manual compressions
- Communication
  - Scribe to write down events of CPR
  - Only team leader should give direction on interventions – drug doses, when to defibrillate etc.
  - Instructions should be repeated back to the team leader to ensure accuracy
- Debriefing is a time to recognize gaps in efficiency in order to perform better next time, not a time for blame or finger pointing

Basic Life Support

- Recognition of arrest
- Chest compressions
- Airway management

Recognition of Arrest

- Should take no more than 10-15 sec
- Brief evaluation of mental status and breathing effort
- Brief auscultation and pulse evaluation – if patient has spontaneous breaths
- Ok to start compression based on little or no airflow REGARDLESS of whether patient has spontaneous heart beat
  - Best to start compressions and determine it is *not* needed as opposed to starting compressions too late

Chest Compressions

- Size and chest conformation will determine hand positioning, cardiac pump technique versus thoracic pump technique
- Goal 100-120 compressions/min
- 50% duty cycle
- Compress 1/3 of the diameter of the chest

DoveLewis® Lecture Notes

Veterinary CPR Training

Jessica Waters-Miller, CVT

Basic Life Support – Ventilation

- 1 breath / 6 sec – about 10 breaths/min regardless of patient size
- 1 sec inspiratory time
- Up to 40 cm H20 is okay for inspiratory pressure
- Pros and cons for both Ambu Bag and anesthesia machine
    - Use whichever oxygen delivery system you are most familiar with

Advanced Life Support

- Includes anything beyond BLS until the point of ROSC – return of spontaneous circulation
- Vasopressors, positive inotropes, correction of acid/base disturbance, volume administration and defibrillation
- Witnessed arrest (in hospital, during anesthesia etc), if *prompt* BLS and ALS is performed, *initial* ROSC rate may be up to 50% in dog and cats
- Non witnessed arrest (out of hospital arrest or presents already deceased) ROSC much lower than 50%

Drug Therapy

- Epinephrine: Low dose 0.01 mg/kg IV every other BLS cycle (ie every 4-5 minutes)
- Atropine: 0.04 mg/kg IV once OR every other BLS cycle, independent of epinephrine dosing
- Other drugs used highly dependent on patient needs
    - Dextrose, calcium gluconate, steroids, anti-arrhythmic drug can be given in specific circumstances but should not be given to every arrested patient

FOLLOW the CPR Algorithm

- **BLS** – initiation of chest compressions, intubate and ventilate
- **ALS** – obtain vascular access, initiate monitoring (EKG, ETCO2), administer reversals, other drug therapy
- If NO EKG information obtained at time of arrest wait 1 BLS cycle (2 min) and evaluate EKG prior to making next ALS decision
- If EKG information is available at the time of arrest, continue with ALS algorithm

EKG Diagnosis and Action Plan

- Asystole or PEA
    - Low dose epinephrine every *other* BLS cycle
    - Atropine every *other* BLS cycle (not dependent on timing of epi)
- V-Fib or Pulseless V-Tach
    - Do *not* give Epi or Atropine
    - Immediate defibrillation if available
    - Precordial thump

ALS – Defibrillation

- Rhythms responsive to defibrillation
    - Ventricular Fibrillation (VF)
    - Pulseless Ventricular Tachycardia (PVT)
    - Atrial Fibrillation

Post Arrest Care – Now What?!

- Post arrest care is important is key in improving survival outcomes
- We have to battle with consequences of post arrest systemic issues
    - Multiorgan failure
    - Cardiogenic shock (myocardial stunning)
    - Pre-existing disease
    - Cerebral hypoxia

Improve Outcome in CPR

- Be prepared for any crash situation
- Routine training so there is no delay in starting CPR
- *Brief* assessment of ABCs to reduce delay in CPR
- *Do as much as possible to reduce interruption in chest compressions*
- Give CPR enough time
    - At least 4-5 BLS cycles – about 8 to 10 minutes

atDove Videos for Reference (text is linked)

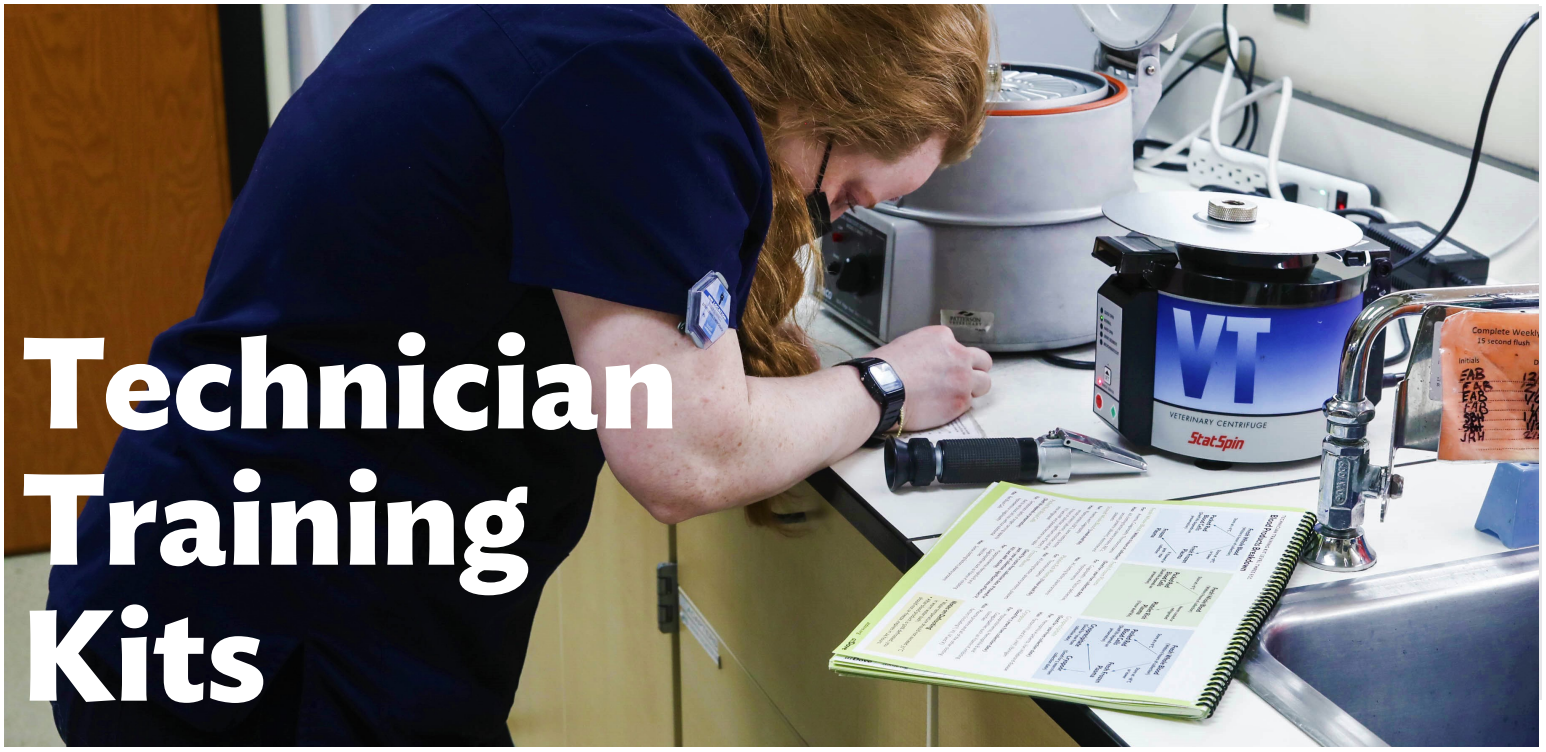
Open Chest CPR

Open Chest CPR: Advanced Methods

CPR Demonstration: Chest Compressions and Ventilation

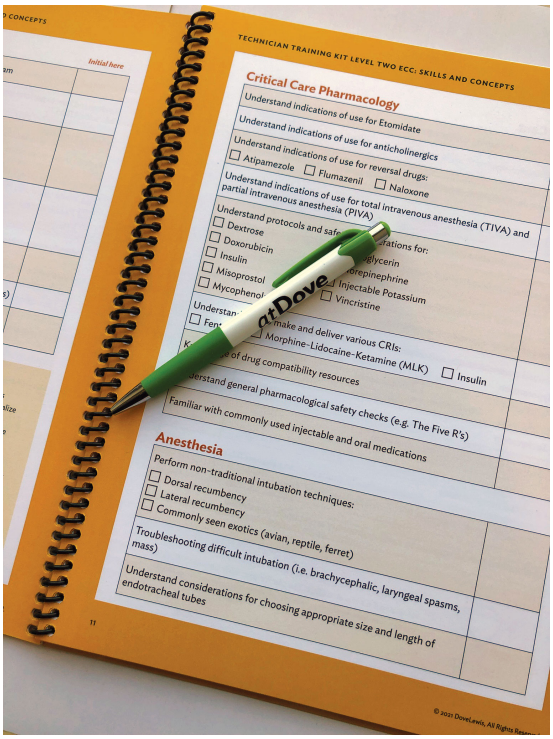
CPR Demonstration: Defibrillator Review

Hand Positioning in CPR



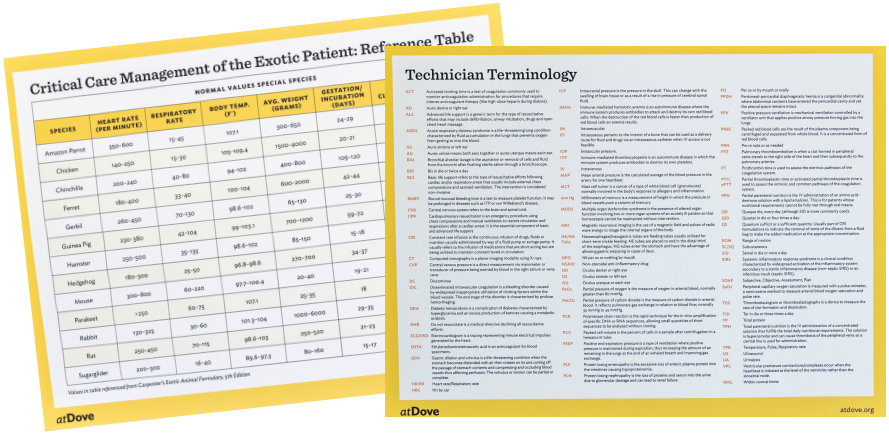
Technician Training Kits

Organize onboarding or supplement professional development with workbooks containing skills checklists, a comprehensive exam, and on-the-floor tools.



What's Inside?

- Available in General Practice or Emergency & Critical Care
- 10+ pages of skill checklists
- Technician tips for equipment and procedures
- Comprehension exams
- Manager support and feedback guides
- On-the-floor resources for quick reference and study
- Certificates of completion



U.S. orders come with free, 11x17 posters!

Use the QR code to shop training kits!

POWERED BY DoveLewis

@atdoveorg

DoveLewis®
Veterinary Emergency & Specialty Hospital

CELEBRATING 50 years OF COMMUNITY

We're Hiring!

Come join a different kind of veterinary hospital

Student loan repayment (qualify month 1!)

14+ board-certified specialists under one roof

$0 mental health copays

No parent company

A collaborative learning environment

Apply Today

DOVELEWIS.ORG/CAREERS
RECRUITMENT@DOVELEWIS.ORG