CPR Basics from the ER

Based on RECOVER Guidelines (VECCS)

Presented by VEG St. Peters & Brentwood

Original slides provided by: Katie Williams, LVMT (VEG Franklin Nursing Trainer)

Desiree' Gardner, LVMT (VEG Franklin Nursing Manager)

Our Team: VEG Saint Louis

Gabby Jones, RVT
Nursing Manager
VEG St. Peters

Katie Groom, DVM
Medical Director
VEG Brentwood &St. Peters

Hannah Fore, DVM
Lead Doctor
VEG St. Peters

Morgan Stoddard, DVM
Lead Doctor
VEG Brentwood

Why is CPR Training Important?

- **CPR has a fairly low success rate in animals compared to humans**
  - 2-10% of our veterinary patients achieve ROSC and even less survive to discharge
  - 20-25 % of humans survive to discharge
  - Anesthetic arrests have a higher success rate
- **Build confidence and muscle memory**
  - Every second counts - delays or hesitations reduce the chance of positive outcome
  - High quality technique directly impacts our chance of achieving ROSC
- **CPR training is important for ALL veterinary professionals**

How many of you are working with teams who are CPR trained?

What is Needed for CPR?

- Breathing circuit with oxygen (Anesthesia Machine or Ambu bag)
- ECG
- IV Catheter, T-Port, and Tape
- Lots of Flush
- Capnograph
- Step stool
- RECOVER Algorithm and Drug Dosing Chart
- Emergency Drugs
- Stethoscope
- Laryngoscope, ET Tubes, and Tie
- Needles of various sizes
- Monitoring Sheet / Pen
- At least 4 people
- **Psychological Safety**

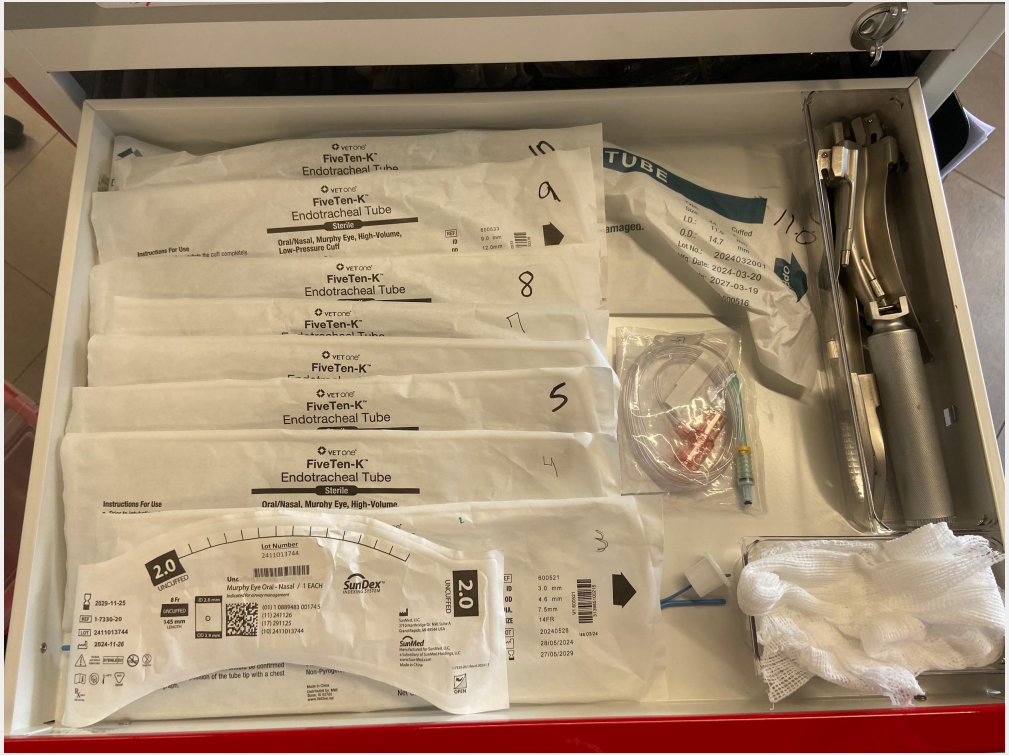
What lives in our crash cart at VEG?

Top of Cart

- Defibrillator / ECG / Capnograph
- Portable Suction Unit
- Syringe Pump
- Fluid Pump
- Open Bag of Fluids with Set
- Slam Bag
- SPO2 Sensor
- Oxygen Muzzles

What lives in our crash cart at VEG?

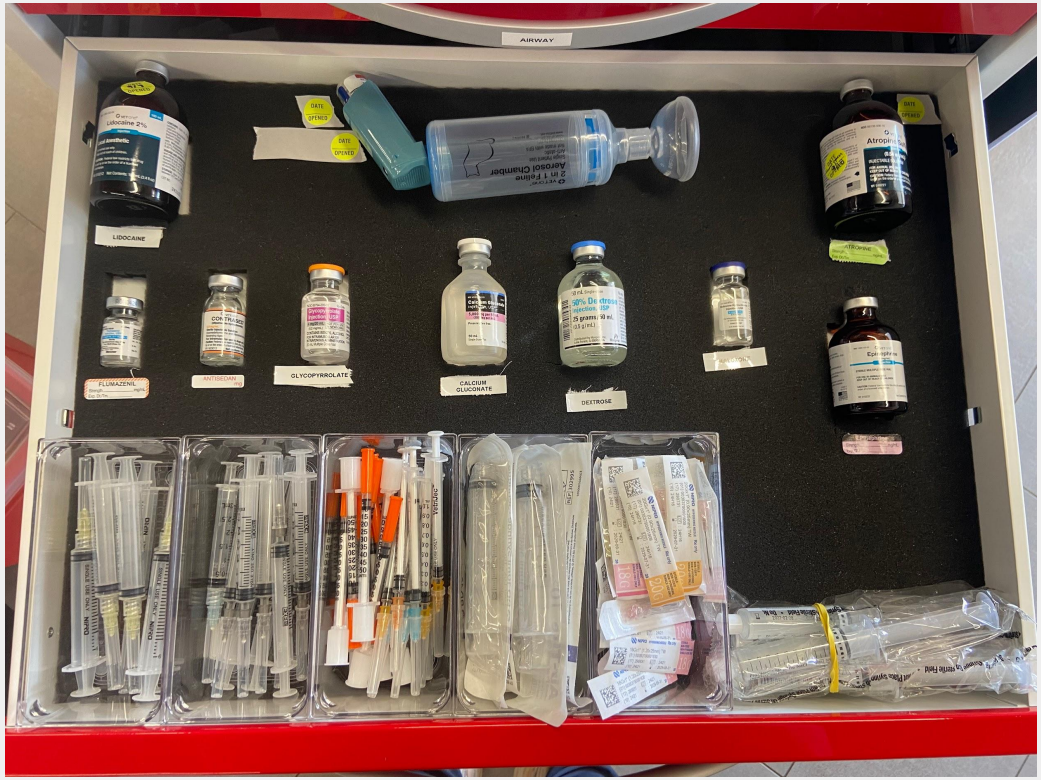
Airway Drawer (First Drawer)



- ET Tubes (single size)
- ET Tie
- Capnograph
- Laryngoscope
- Stylet
- Syringe for Cuff Inflation

What lives in our crash cart at VEG?

Medication Drawer (Second Drawer)



- Epinephrine
- Atropine
- Naloxone
- Flumazenil
- Antisedan
- Lidocaine
- Furosemide
- Calcium Gluconate
- Dextrose
- Glycopyrrolate
- Albuterol Inhaler
- 10 ml flush
- Syringe/Needle
    - Insulin , 1ml , 3ml ,10ml

What lives in our crash cart at VEG?

IV Access and O2 Mask (Third Drawer)

- IVC supplies
- Tourniquet
- Lactate Reader
- BG Reader
- O2 masks of various sizes
    - Some with diaphragm

What lives in our crash cart at VEG?

Premade Kits (Fourth Drawer)

- EZ IO
- Centesis Kits
- Cut Down Kit
- Surgical Airway Kit
- Fenestrated Caths
- Sterile Gloves

What lives in our crash cart at VEG?

Ambu Bags and Misc (Fifth Drawer)

- Sterile Saline
- Hypertonic Saline
- Suction Supplies
- Ambu Bags
- Defibrillator External Paddle

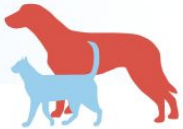
Think About Your Hospital and Your Team…

- Do you have a crash cart / crash box?
- Where is it?
  - Does your team know where it is?
  - Is it stocked and ready to go? Who is responsible for checking it? Is there an inventory list?
  - Do you have one in surgery?
- Does your team know what to do when a code is called?
  - Have you had practice codes? How often?
- Are you empowering your team to take the lead in a code?

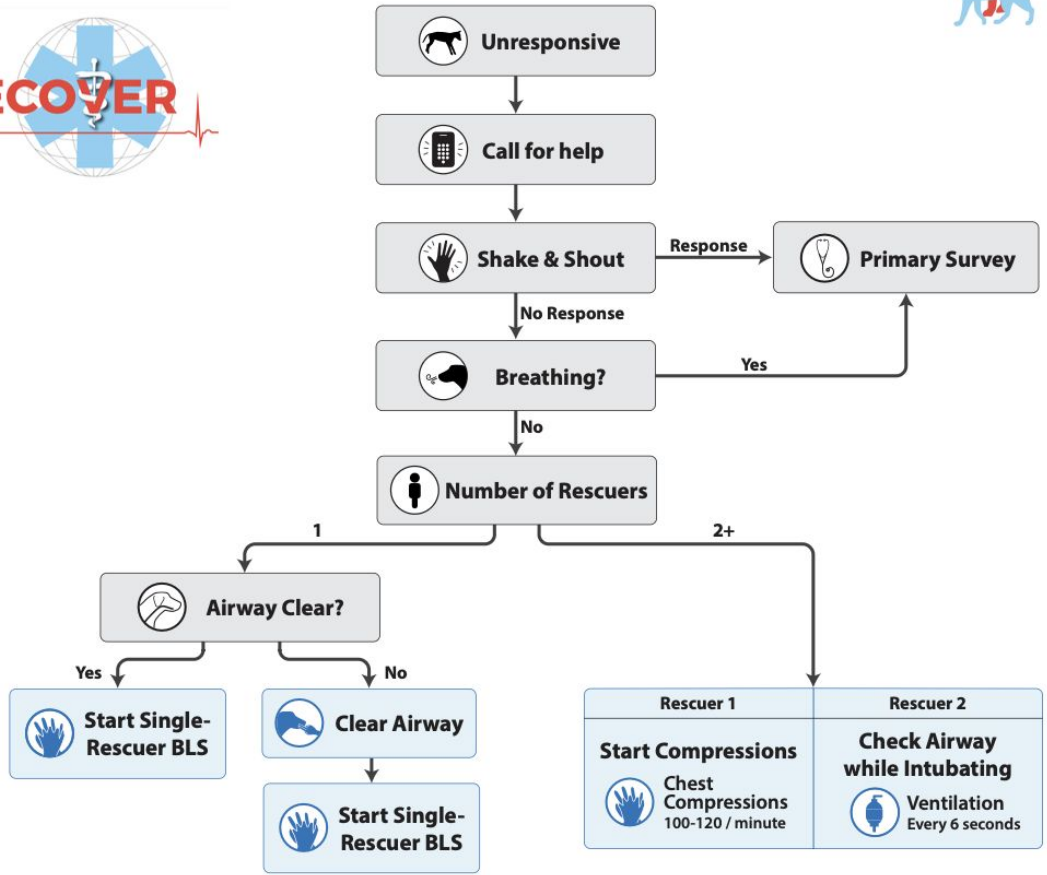
How Do I Know If My Patient Needs CPR?

Any Princess Bride Fans…

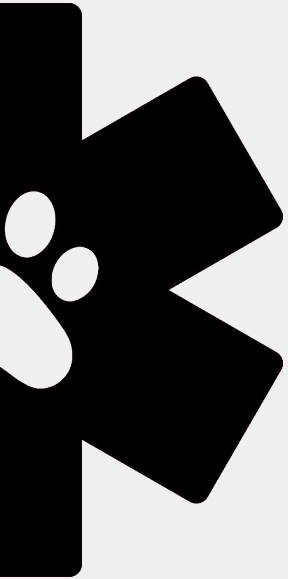
CPR Initial Assessment Algorithm



RECOVER

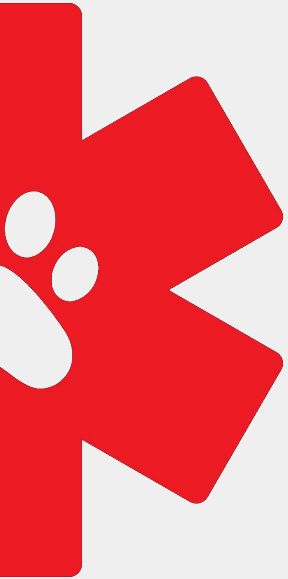


Different Types of “Arrest” Warranting CPR



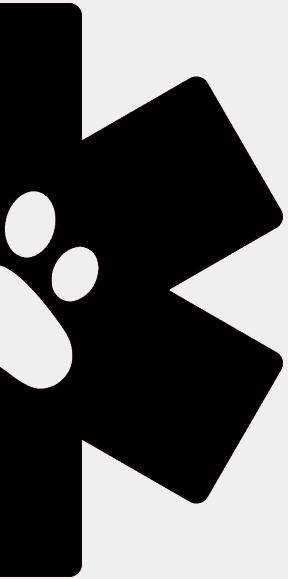
- Respiratory Arrest: Breathing stops
  - Can occur due to drugs, smoke/water inhalation, other
- Cardiac Arrest: Only the heart stops
  - Can occur due to drugs, anaphylaxis, disease, other
- Cardiopulmonary Arrest (Full Arrest): Breathing and Heart stop
  - Usually starts with respiratory arrest and progresses to full arrest

Assessment



- Shake & Shout
- Airway - Rule out obstruction of the airway
- Breathing - Determine if the patient is breathing or not
- Circulation - Does my patient have a heartbeat/can I feel a pulse?
- ***Should take less than 10-15 seconds total***

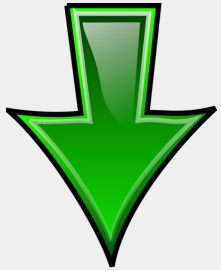
Still Unsure CPR is Warranted?



- Start compressions!
    - Studies have shown starting chest compressions immediately (even before confirming loss of pulses) dramatically improves success
- There is a low chance that you will cause permanent damage by starting compressions (as long as they are appropriate compressions) even if the patient does not need them
    - Temporary damage can include pulmonary contusions, pneumothorax, and broken ribs

Going through the Algorithm

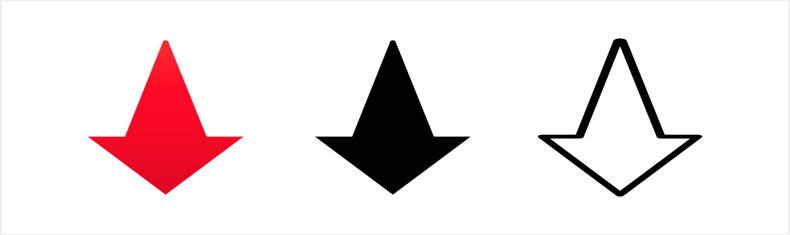
Start Basic Life Support - BLS → Two minutes of chest compressions with ventilation every 6 seconds



Start Advanced Life Support - ALS → Attach ECG, EtCO2, IV access, drug reversals

Going through the Algorithm

Pulse and Check → palpate pulses and evaluate ECG for rhythm diagnosis



- If asystole/PEA→ resume compressions and breathing.
- – Atropine ONCE at the beginning
- – Low dose epinephrine every OTHER cycle

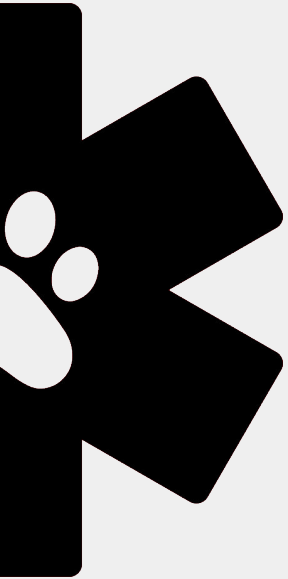
- If Vfib/pulseless vtach (shockable rhythm)→ resume compressions and breathing.
- Charge defibrillator then pause to shock
- RESTART compressions and breathing for 2 minutes

When Do Most Codes Occur in General Practices?

- Most likely during anesthetic procedures
  - What are the common pre-medications that you guys give pre-op?
    - Know your reversals!
  - Does anyone know when during anesthetic procedures a patient is *most* likely to code?
- Other less common occurrences in general practice:
  - Walk in emergency appointment
  - Older patients with heart disease
  - Seizure/neurologic patients

- Has anyone seen / helped during a code here? What were the circumstances?

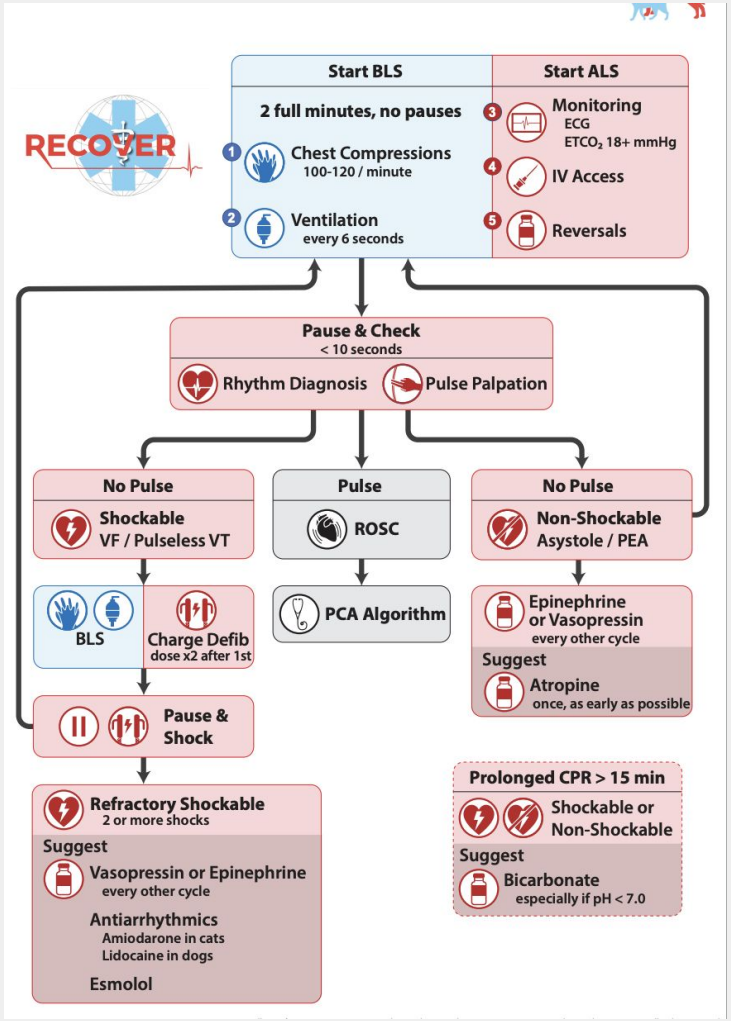
Common Reversal Drugs



- Atipamezole (Antisedan)
  - Dexmedetomidine (Dexdomitor)
  - 100mcg/kg IV
- Naloxone (Narcan)
  - Opioids (Fentanyl, Hydromorphone, Methadone, Butorphanol, Morphine)
  - 0.04mg/kg SC, IM, IC, IO
    - **SC or IM doses can be delayed up to 5 minutes
- Flumazenil
  - Diazepam or Midazolam
  - 0.01mg/kg IV start at low end

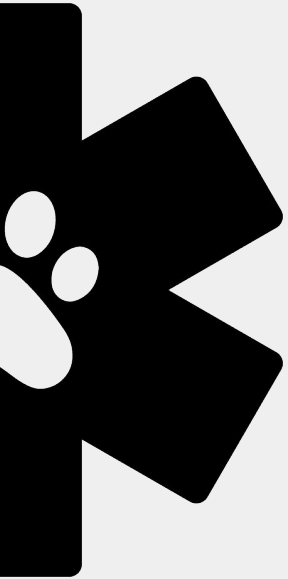
Once a Code is Called….

Circulation , Airway and Breathing


RECOVER
Start BLS
2 full minutes, no pauses
1 Chest Compressions
100-120 / minute
2 Ventilation
every 6 seconds
Start ALS
3 Monitoring
ECG
ETCO2 18+ mmHg
4 IV Access
5 Reversals
Pause & Check
< 10 seconds
Rhythm Diagnosis
Pulse Palpation
No Pulse
Shockable
VF / Pulseless VT
BLS
Charge Defib
dose x2 after 1st
Pause & Shock
Refractory Shockable
2 or more shocks
Suggest
Vasopressin or Epinephrine
every other cycle
Antiarrhythmics
Amiodarone in cats
Lidocaine in dogs
Esmolol
Pulse
ROSC
PCA Algorithm
No Pulse
Non-Shockable
Asystole / PEA
Epinephrine
or Vasopressin
every other cycle
Suggest
Atropine
once, as early as possible
Prolonged CPR > 15 min
Shockable or
Non-Shockable
Suggest
Bicarbonate
especially if pH < 7.0

C = CIRCULATION / COMPRESSIONS

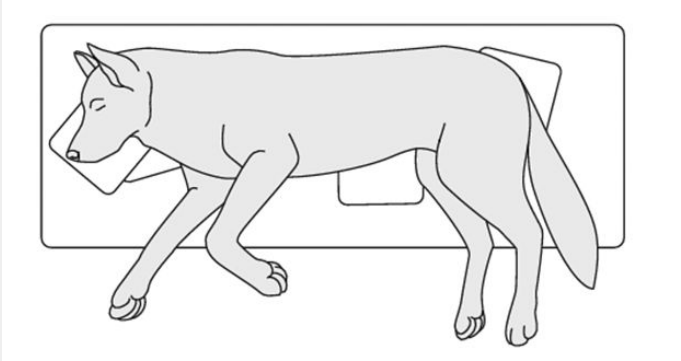
Chest Compressions



- Ideal rate 100-120 bpm
  - < 100 bpm = low BP, low perfusion
  - > 120 bpm = heart unable to fill properly, low stroke volume
- 2 Minute Cycles of Compressions
  - It can take up to 1 full minute of compressions for blood flow to reach constant, steady state
- ***Should chest compressions ever be stopped during a cycle of BLS just to evaluate the ECG?***

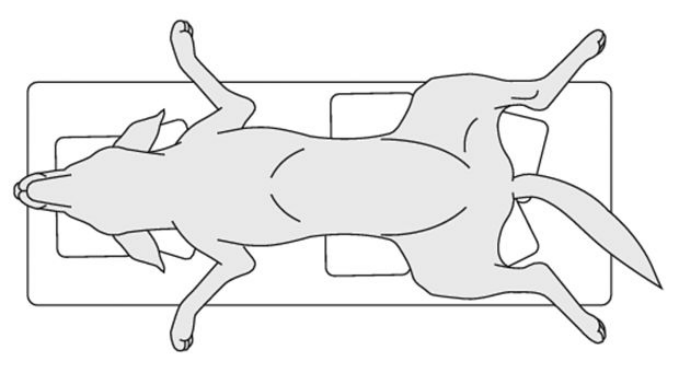
Patient Positioning + Considerations

Lateral Recumbency



Should compress about ½ - ⅓ the width of the chest in lateral recumbency

Dorsal Recumbency of wide chested dogs



Should compress about ¼ the width of the chest in dorsal recumbency

Chest Compression Techniques

- **<u>Cardiac Pump Technique</u>**
  - Compressions directly over the heart
  - Small dogs or cats, keel chested dogs
  - Bend elbow back and compress where elbow lies over chest
    - Two handed approach should not be used in small dogs or cats
  - Theory: The blood flow from the heart is from directly compressing the ventricles

Chest Compression Techniques

- **Thoracic Pump Technique**
  - Compressions over the widest part of the chest
  - Wide chested or barrel chested dogs
  - Theory: The compressions raise the overall pressure in the thoracic cavity and pushes blood from the aorta into circulation

Chest Compression Techniques

- Keel chested

- Round chested

Compression Form Options

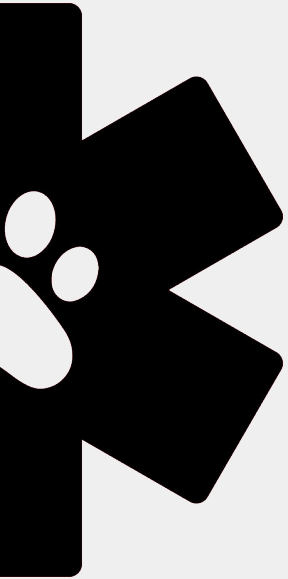
Single Handed*

Two Handed

Two Handed,
Dorsal Recumbency

*used for small dogs and cats only, alternative options include the v-shaped one handed technique, circumferential or the one handed (through the heel of your hand) technique

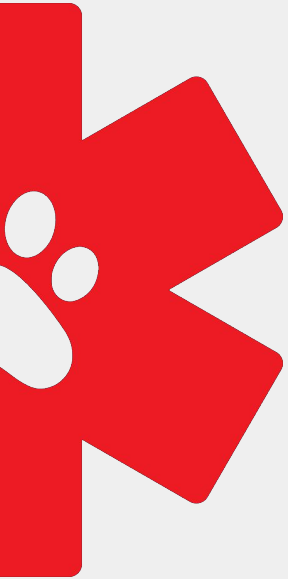
Good Form - Good Compressions



- Elevate yourself above the patient with their back closest to you

- Hand over hand
- Shoulders positioned directly above your hands
- Elbows locked, compressing with the core muscles, bending at the waist
- Driving your compressions through the heel of your hand
- The exception to the locked elbows is when performing single handed compressions
- Don’t lean on the patient

Compression Songs (100 - 120 bpm)



- Pink Pony Club by Chappell Roan (107 bpm)
- Stayin’ Alive by the Bee Gees (104 bpm)
- Another One Bites The Dust by Queen (110 bpm)
- Eye of the Tiger by Survivor (108 bpm)
- Stronger by Britney Spears (108 bpm)
- Everybody (Backstreet’s Back) by The Backstreet Boys (108 bpm)
- Set Fire to the Rain by Adele (108 bpm)

Let’s Practice!

Laterally recumbent Cardiac Pump (one hand technique pending size)

Laterally recumbent Cardiac Pump

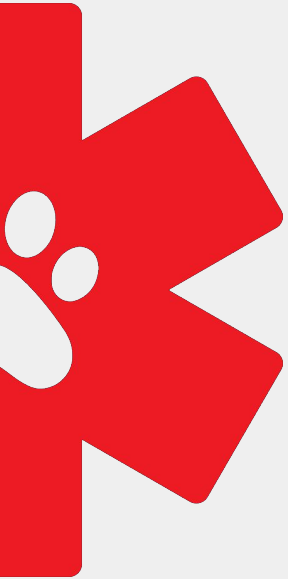
Laterally recumbent
Thoracic Pump

Dorsally recumbent
Thoracic Pump

Laterally recumbent
Cardiac OR Thoracic Pump - Assess $EtCO_2$ and adjust as needed

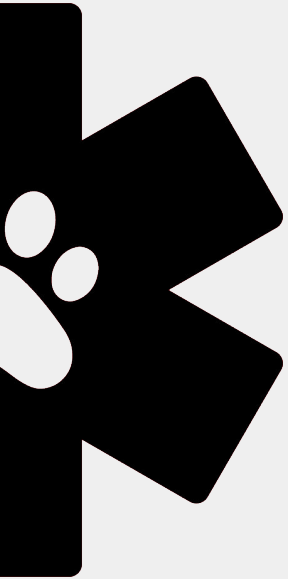
A = AIRWAY

3 Ways to Support an Airway



- **Intubation**
- **Face Mask**
- **Mouth to Snout**
- Less commonly - cricothyrotomy for upper airway obstructions

Intubation is the Most Effective



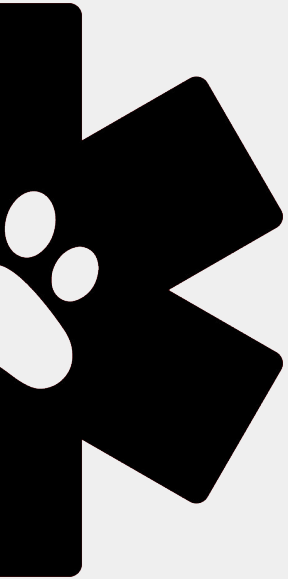
- **Advantages :**
  - Prevents aspiration
  - Allows for more effective ventilation and monitoring of ETCO2
- **Considerations :**
  - Should be performed quickly and by someone trained/confident
  - Do not delay chest compressions to attempt placement

Face Mask

A tight fitting mask attached to an ambu bag or anesthetic machine

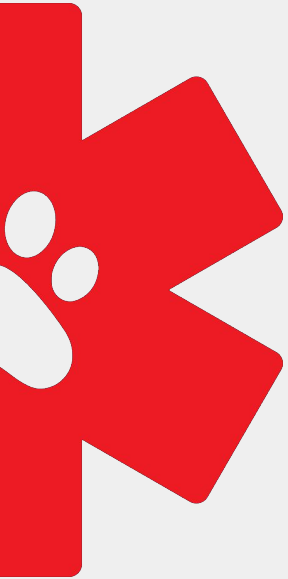
- **Advantages :**
  - Less complicated than intubation
  - Good option if intubation is delayed or not possible
    - Airway inflammation , Tracheal FB , Rigor
  - Essential for some small mammal CPR
    - Chinchilla , rabbit , hamster (obligate nasal breathers)
- **Considerations :**
  - High flow rates as essential (4-8L/min)
  - Requires good seal to be effective

Mouth to Snout … Better Than Nothing!



- **Technique:**
  - Close animals mouth
  - Extend neck to open airway
  - Place your mouth over the nostrils and blow until chest rises
  - Provide 2 breaths every 30 compressions (if alone) or every 6 seconds (if there are multiple rescuers)
- **Considerations :**
  - May not be effective for brachycephalic breeds with stenotic nares
  - Less effective in general
  - Higher risk of gastric inflation
  - Best as a temporary measure outside of the clinic

Additional Airway Notes



- Ambu bag is preferred over an anesthesia machine due to less dead space in the tubing and less ventilation resistance ; however, if you only have an anesthesia machine:
    - Be sure to detach patient and flush circuit of anesthetic gas replacing with fresh O2

DO NOT USE FLUSH VALVE WHEN ATTACHED TO PATIENT

B = BREATHING

Breathing Basics

- Ideal rate of breathing: 10 bpm (every 6 seconds) with a pressure of about 30-40 cm H_2O
  - Hypoventilation = poor oxygen perfusion to vital organs
  - Hyperventilation = poor oxygen perfusion to heart muscles and brain, low $EtCO_2$
  - CO2 is potent vasodilator!
    - CPP = MAP - ICP
- Breaths should be a quick squeeze of the ambu bag / reservoir bag
- Patient's neck should be extended for adequate breathing
- $EtCO_2$ should be 18 mmHg minimum during CPR
  - Proper ET tube placement can be confirmed with $EtCO_2$ > 12 mmHg
  - If suddenly increases >10 mmHg, possibility of ROSC
  - **Remember that $EtCO_2$ actually has NOTHING to do with breathing for your patient and EVERYTHING to do with current circulation**

End Tidal CO2 Basics

- When cells use oxygen and glucose for metabolism, one of the byproducts is CO_2
- Indicator of ventilation, metabolism, and perfusion
- End Tidal Carbon Dioxide ($EtCO_2$) = CO_2 level at the end of an exhaled breath
- **$EtCO_2$ considered to be one of the best indicators of effectiveness of CPR efforts (chest compression efficiency and CO)**
  - As cardiac output increases due to good chest compressions and adequate ventilation, or R.O.S.C., more CO_2 is returned to the lungs and exhaled, so $EtCO_2$ increases
  - As cardiac output decreases due to poor compressions and/or inadequate ventilation, less CO_2 is returned to the lungs and exhaled, so $EtCO_2$ decreases
  - What about trends?

Interpreting End Tidal CO2 During CPR

- The $EtCO_2$ reflects the amount of blood returning from the tissues to the lungs
  - Higher cardiac output = Normal to high end normal $EtCO_2$
  - Lower cardiac output = Lower $EtCO_2$
- $EtCO_2$ can be interpreted at any time during CPR, including during chest compressions, as it is not susceptible to artifact due to motion (like the ECG)
- Increased minute ventilation (RR > 10 rpm and/or too large of large tidal volumes) will decrease $EtCO_2$, even if chest compressions are being done correctly.
  - In order to use $EtCO_2$ as a measure of chest compression efficacy, ventilation must be delivered consistently at a rate of 10 bpm as described in the BLS algorithm.
- **Sudden increase in $EtCO_2$ by > 10 mmHg = check for ROSC**
- Troubleshooting $EtCO_2$?

CPR Roles, Cycles, and Drug Administration

Common Roles During CPR

Ideally a minimum of 4 people to run a code

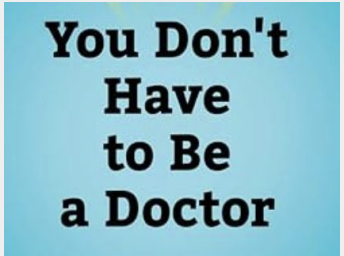
- Person 1 - Person running the code/Lead
- Person 2 - Chest compressions
- Person 3 - Airway/ventilator
- Person 4 - Recorder

Ideally your Lead and Recorder stay in their roles. Those in charge of chest compressions and airway rotate back and forth.

- Other tasks split between team - IVC placement, emergency drugs, client communication, runner

Who Orders and Gives the Drugs?

- Sometimes, the DVM on the case will be present and will give orders
  - But what if they are not?
- Nurses, you're up! Use the RECOVER drug dosing chart
  - If your DVM is busy, you are that patient's first line of defense
  - These are your written medical orders until your DVM comes back
  - Empower your nursing staff! This is why CPR training and practice is SO IMPORTANT!



Common Emergency Drugs

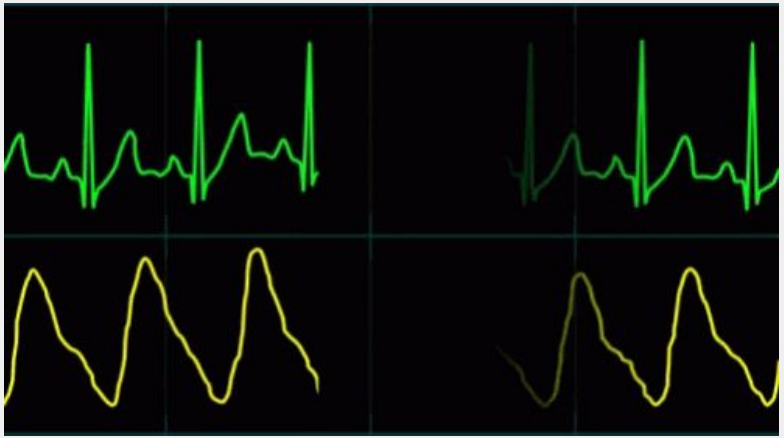
- Epinephrine
  - Potent vasoconstrictor to shunt blood to core organs
    - Dose: 0.01mg/kg IV
- Atropine
  - Increases heart rate, decreases vagal tone
    - Dose: 0.04-0.05mg/kg IV
- Lidocaine
  - Antiarrhythmic used during shockable rhythms
  - Dogs: 2mg/kg IV
- Reversals
  - Atipamezole (Antisedan)
    - Dexmedetomidine (Dexdomitor)
    - Dose:
      - Usually same # of mls as dexmed, or 0.1mg/kg IV
      - Remember IM has less perfusion and is likely to not be as effective
  - Naloxone (Narcan)
    - Opioids (Fentanyl, Hydromorphone, Methadone, Butorphanol, Morphine)
    - Dose: 0.04mg/kg IV
  - Flumazenil
      - Diazepam or Midazolam
      - Dose: 0.01mg/kg IV
- Flushing - 10-20mls for each medication (dogs), 5mls for cat

When Do We Give These Drugs?

- Remember, CPR Cycles are 2 Minutes each
- Always reverse your drugs if possible!
- Epinephrine
  - Low dose (0.01mg/kg) administer every 3-5 minutes (every other cycle, once administered)
  - High dose is no longer recommended
- Atropine
  - Administer once (0.04 mg/kg) if vagally mediated code is possible, no longer recommended to redose
  - If given, should be administered as early as possible for patients with non-shockable arrest rhythms
  - Decreases vagal tone

After Each 2 Minute CPR Cycle:

- Check your ECG
- Check your Capnograph
- Auscultate and Evaluate Breathing
- None of the Above?

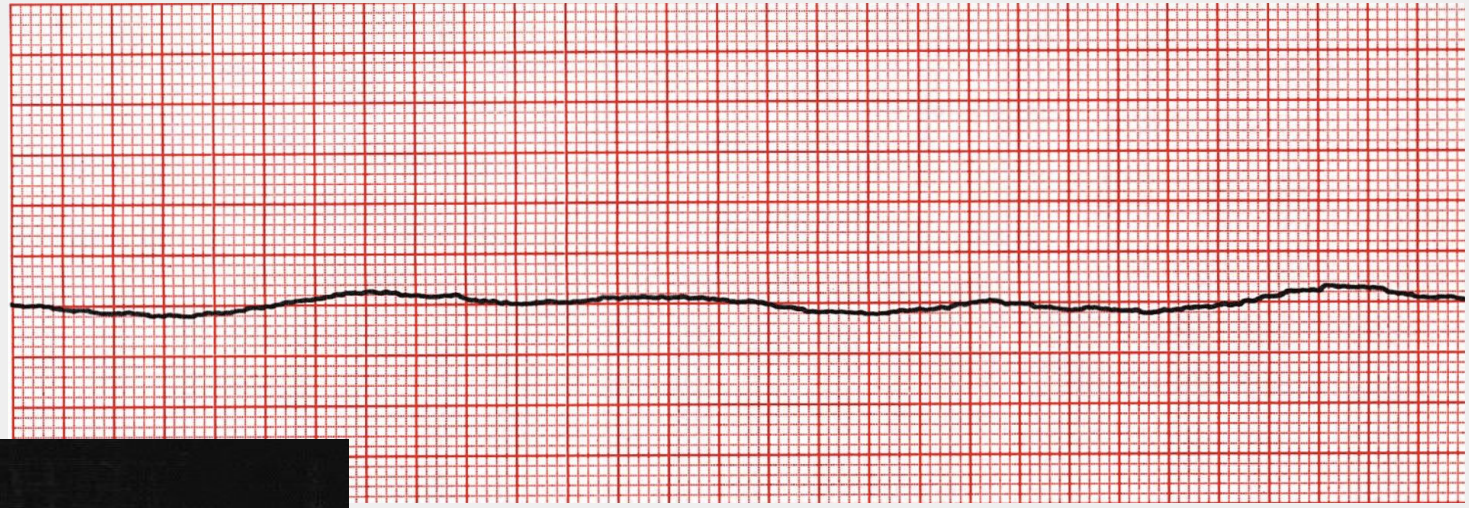


Normal Sinus Rhythm

Typical, normal rhythm; both electrical and mechanical heart activity are present

Asystole

The absence of both electrical and mechanical heart activity

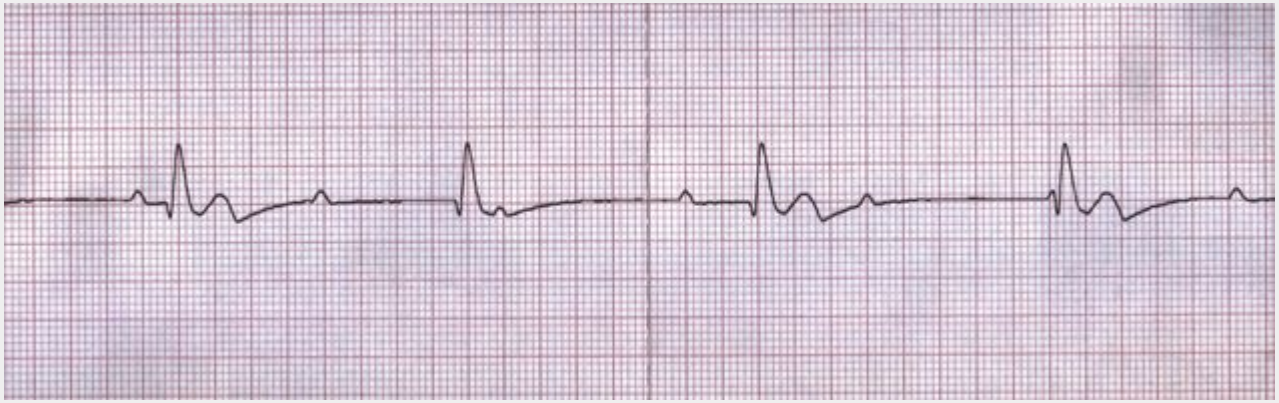


Pulseless Electrical Activity (PEA)

The presence of electrical activity, but absence of mechanical heart activity

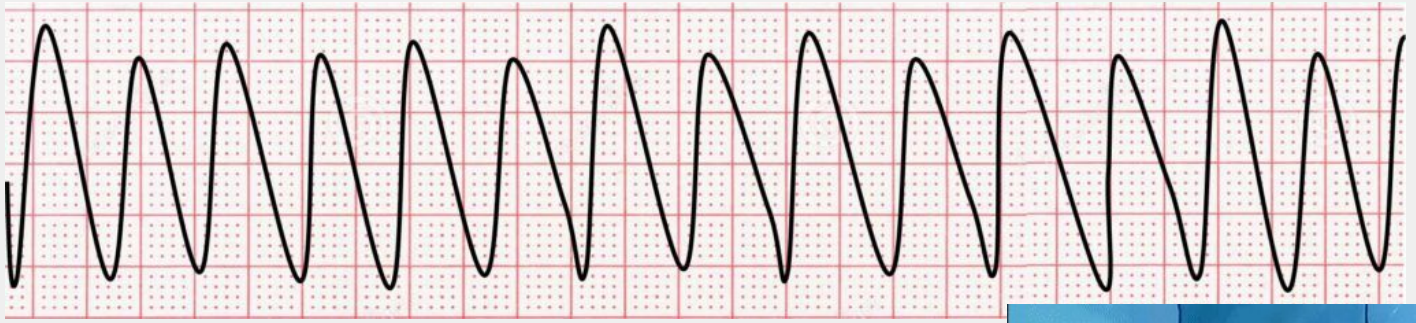
Presentation can vary

Rate is < 200



Ventricular Fibrillation

The presence of electrical and mechanical activity, but uncoordinated



Shockable rhythm

Pulseless Ventricular Tachycardia

Unstable arrhythmia originating from ventricles, rate >200 bpm

Pulseless V-tach is a shockable rhythm

Additional Considerations

Closed Loop Communication Is Key!

- A request is made by leader or DVM and the person receiving the request repeats it back to them
- Provides more accurate/efficient care
- Prevents communication errors
- Prevents multiple people from doing the same task (similar to “calling the ball” in a sport)

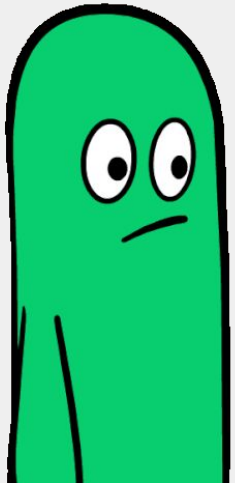
Alternative Drug Admin Routes

- Intratracheal administration emergency drugs
  - (Naloxone , Atropine , Vasopressin , Epinephrine , Lidocaine)
  - May be considered when IV access has not been established
  - Not effective ; requires increased dosing and dilution
- Remember, absorption of these drugs require perfusion
  - Dead patient = no perfusion = IM administration of medications is not effective!

- **Intraosseous Catheters**
  - Quick and easy
  - EZ IO Gun
  - Can deliver emergency drugs , fluids , blood products
    - Can also check BG , Lactate , blood type on aspirate

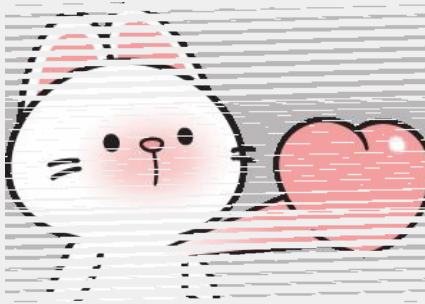
How long do we run the code?

- No right or wrong answer
- Communication is key
  - Owner wishes
  - Prognosis
- Consider length of resuscitation
  - >15 min is considered prolonged CPR
  - Permanent brain damage and other serious ischemic injury

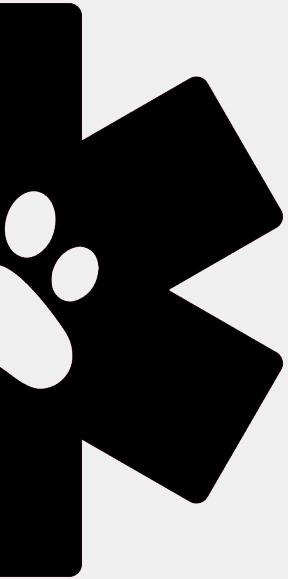


After the Code: If ROSC is Achieved

- Alert the owner as soon as possible
- Have someone monitor the patient until instructed otherwise by a DVM
- Be prepared for another arrest
    - Hands on your patient! Don’t rely on ecg!
- Be prepared for the owner to elect euthanasia
    - Prognosis survival to discharge
- Debrief



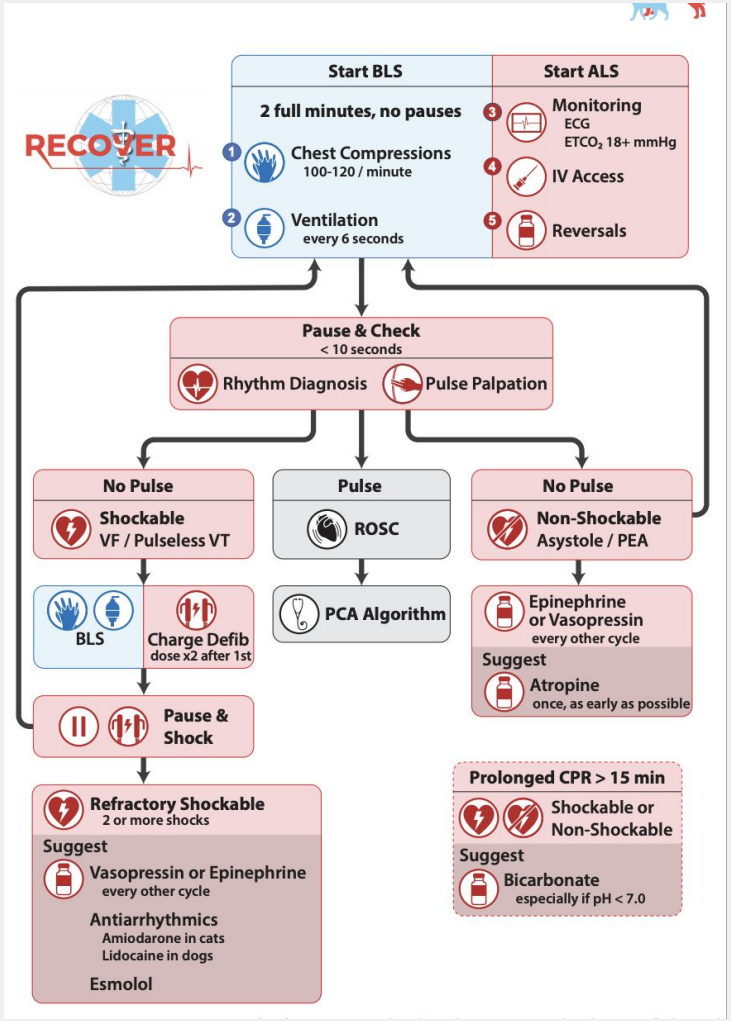
If CPR is Not Successful …



- Take a moment to grieve
- Try to remember the low success rate of CPR in veterinary medicine
- Debrief as soon as possible
    - Not the time for harsh critiques or finger-pointing

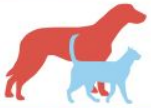
Debriefing after a code

- Not the time for harsh critiques or finger-pointing
- Reflect with the team on how things went
  - Communication
  - Team work
- Be open and honest to improve for next time


RECOVER
Start BLS
Start ALS
2 full minutes, no pauses
1 Chest Compressions
100-120 / minute
2 Ventilation
every 6 seconds
3 Monitoring
ECG
ETCO2 18+ mmHg
4 IV Access
5 Reversals
Pause & Check
< 10 seconds
Rhythm Diagnosis
Pulse Palpation
No Pulse
Shockable
VF / Pulseless VT
Pulse
ROSC
No Pulse
Non-Shockable
Asystole / PEA
BLS
Charge Defib
dose x2 after 1st
PCA Algorithm
Epinephrine
or Vasopressin
every other cycle
Suggest
Atropine
once, as early as possible
Pause &
Shock
Refractory Shockable
2 or more shocks
Suggest
Vasopressin or Epinephrine
every other cycle
Antiarrhythmics
Amiodarone in cats
Lidocaine in dogs
Esmolol
Prolonged CPR > 15 min
Shockable or
Non-Shockable
Suggest
Bicarbonate
especially if pH < 7.0

CPR Dosing Chart for Dogs and Cats

RECOVER



	DRUG	DOSE	Weight (kg)	2.5	5	10	15	20	25	30	35	40	45	50
				mL	mL	mL	mL	mL	mL	mL	mL	mL	mL	mL
Arrest	Epinephrine (1:1000; 1mg/mL)	0.01 mg/kg		0.03	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5
Arrest	Vasopressin (20 U/mL)	0.8 U/kg		0.1	0.2	0.4	0.6	0.8	1	1.2	1.4	1.6	1.8	2
Arrest	Atropine (0.4 - 0.54 mg/mL)	~ 0.05 mg/kg		0.25	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Anti-Arrhythmic	Amiodarone (50 mg/mL)	5 mg/kg		0.25	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Anti-Arrhythmic	Lidocaine (20 mg/mL)	2 mg/kg		0.25	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Anti-Arrhythmic	Esmolol* (10 mg/mL)	0.5 mg/kg		0.13	0.25	0.5	0.75	1	1.3	1.5	1.8	2	2.3	2.5
Reversal	Naloxone (0.4 mg/mL)	0.04 mg/kg		0.25	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Reversal	Flumazenil (0.1 mg/mL)	0.01 mg/kg		0.25	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Reversal	Atipamezole (5 mg/mL)	100 µg/kg		0.06	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
Monophasic Defibrillation	External Defib (J)	4 - 6 J/kg		10 J	20 J	40 J	60 J	80 J	100 J	120 J	140 J	160 J	180 J	200 J
Monophasic Defibrillation	Internal Defib (J)	0.5 - 1 J/kg		2 J	3 J	5 J	8 J	10 J	15 J	15 J	20 J	20	20 J	25 J
			Weight (kg)	2.5	5	10	15	20	25	30	35	40	45	50

*Administer esmolol 0.5 mg/kg IV or IO over 3-5 minutes followed by a CRI at 50 mcg/kg/min

Additional Resources

- RECOVER Initiative Website
- RECOVER App

Any Questions?

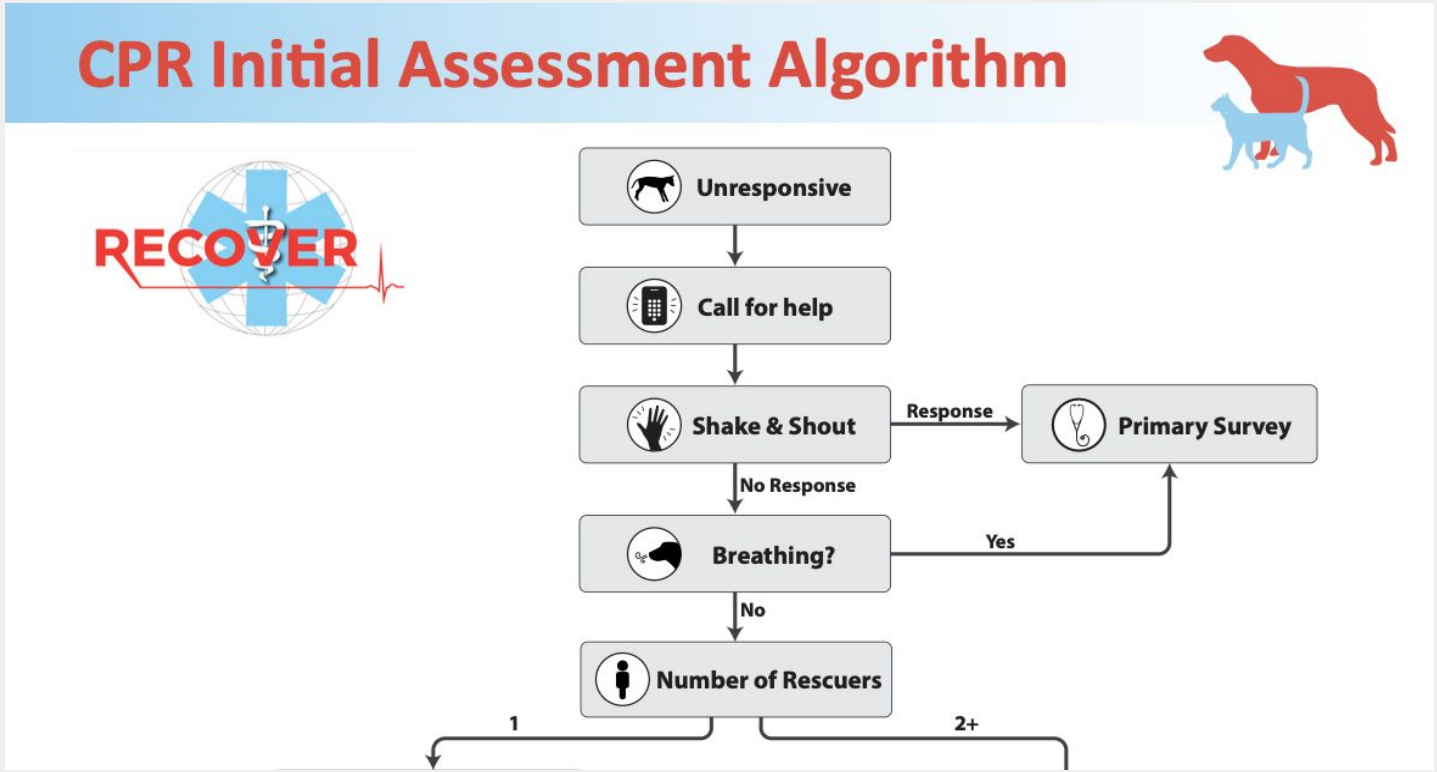
Quick Break…

Then Let’s Practice!

Suzie

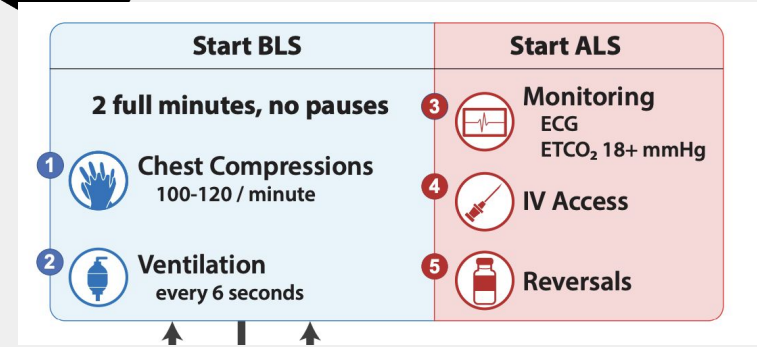
- Suzie is a 5 year old beagle that weighs 25lbs
- She came in for routine vaccinations and exam
- While your nurse is drawing blood she goes into cardiac and respiratory arrest.
- **What do you do first?**

Suzie

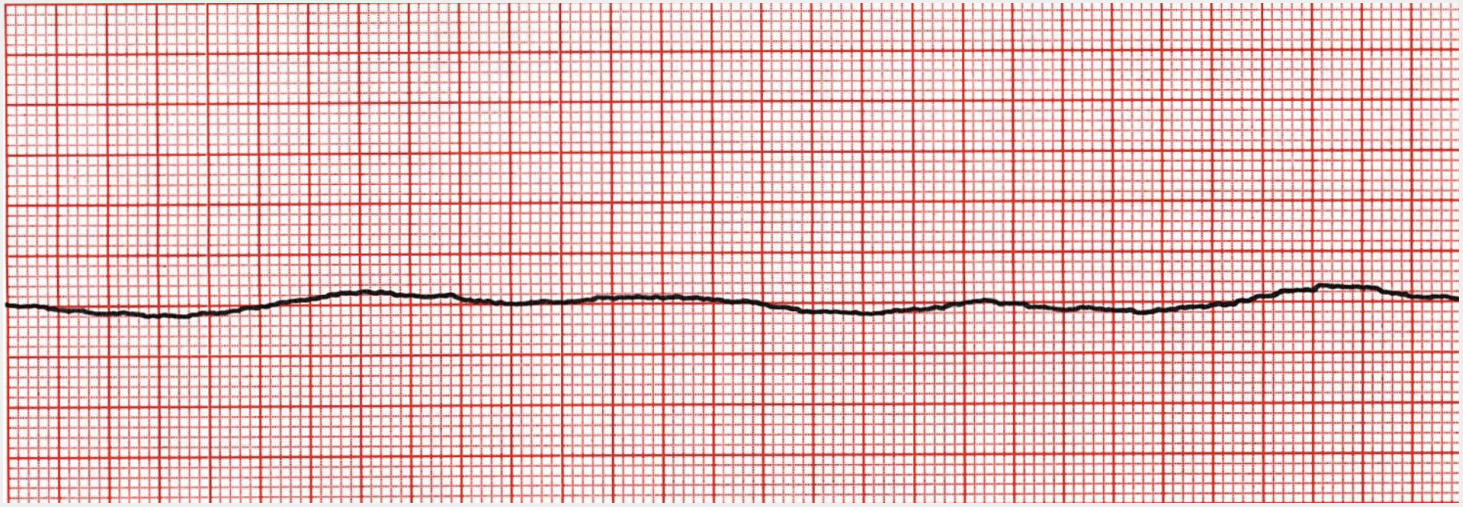

CPR Initial Assessment Algorithm
RECOVER
Unresponsive
Call for help
Shake & Shout
Response
Primary Survey
No Response
Breathing?
Yes
No
Number of Rescuers
1
2+

Primary Survey of Suzie

- There are no signs of breathing
- You cannot feel or hear a heartbeat
- What now?

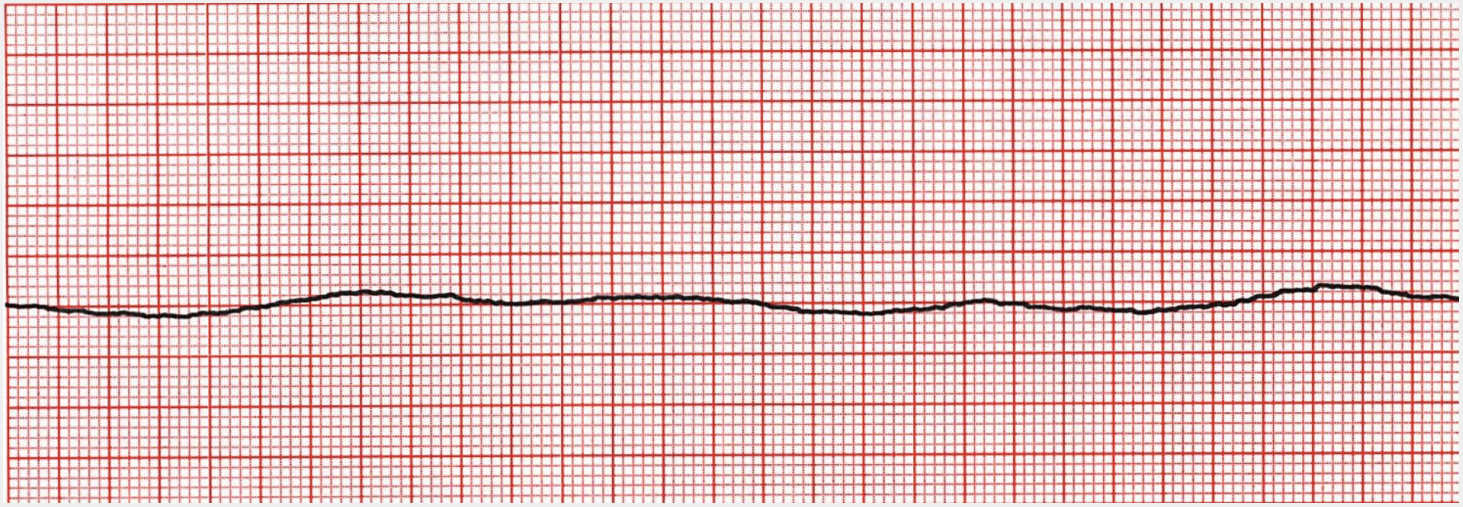


Rhythm Check #1



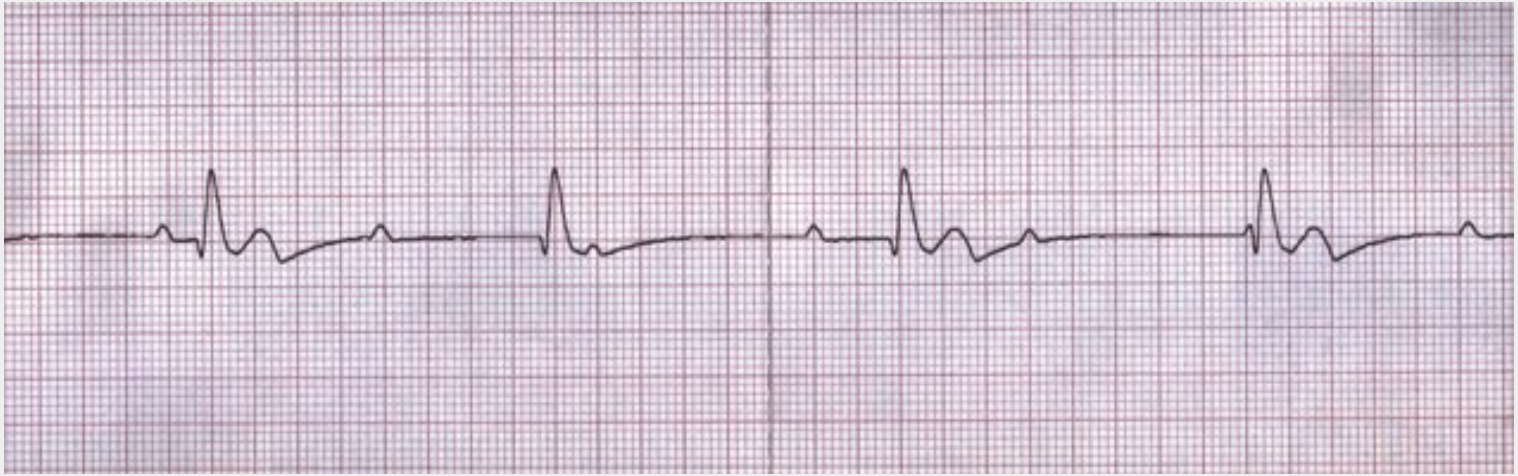
EtCO2: 8 mmHg, ECG: 0 bpm
RR: 0 rpm, Pulses not palpable

Rhythm Check #2



EtCO2: 20 mmHg, ECG: 0 bpm
RR: 0 rpm, Pulses not palpable

Rhythm Check #3



EtCO2: 18 mmHg, ECG: 0 bpm
RR: 0 rpm, Pulses not palpable

Rhythm Check #3

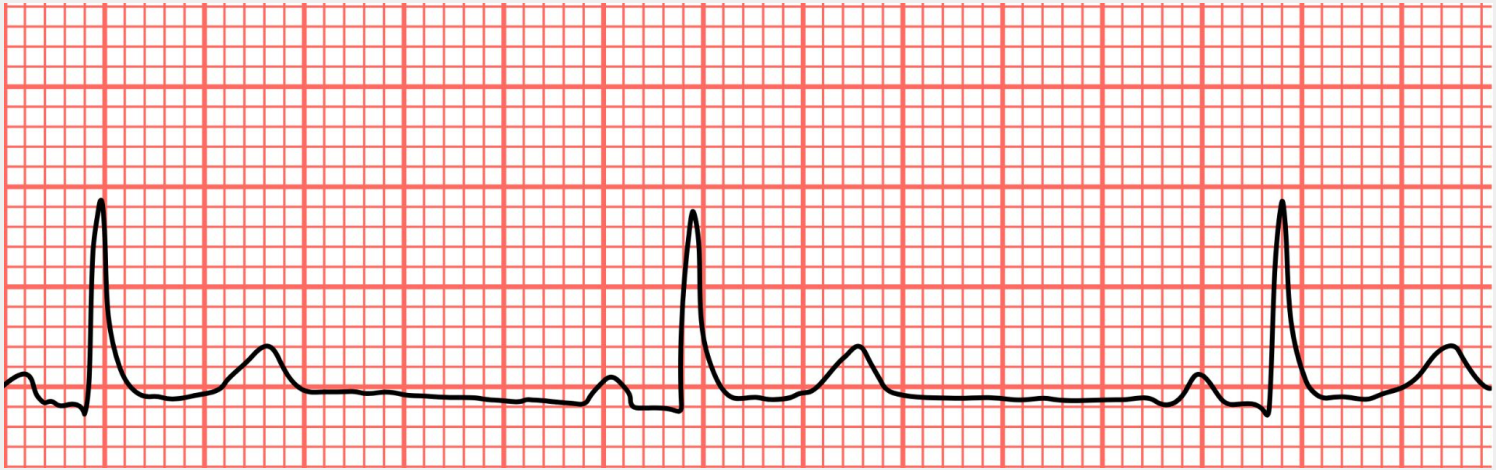
EtCO2: 35 mmHg, ECG: 70 bpm
RR: 30 rpm, Pulses palpable

You did it!!

Scout

- Scout is a 7 year old MN GSP and he weighs 63 lb
- His surgery was rocky and you battled his hypotension and hypothermia
- He was given hydromorphone as a premedication prior to induction
- You’ve extubated him and he is breathing well so you decide to go grab heat support

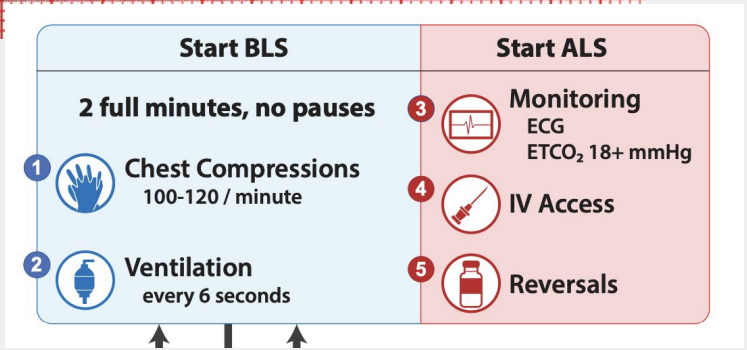
You move quickly, but when you return, you notice he is not breathing and this is is ECG



EtCO2: 20 mmHg, ECG: 30 bpm
RR: 0 rpm, Pulses thready

You go to pull up naloxone and his ECG changed to this - now what?

EtCO2: 15 mmHg, ECG: 0 bpm
RR: 0 rpm, Pulses not palpable



ECG

EtCO2: 30 mmHg, ECG: 80 bpm
RR: 30 rpm, Pulses palpable

Questions?