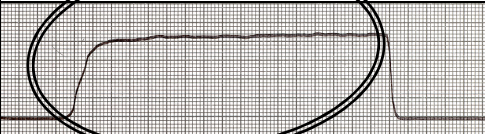
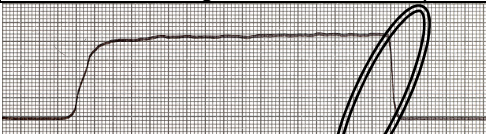
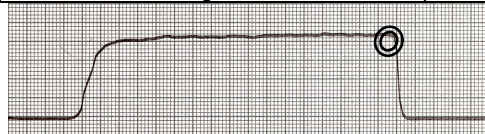


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1. What information does a capnography sensor obtain? A CO level B O ₂ /CO ₂ ratio C Oxygen level D Respiratory rate	2. What information does a capnography sensor obtain? A CO level B CO ₂ level C O ₂ /CO ₂ ratio D Oxygen levels	3. What information does a capnography sensor obtain? A CO level B O ₂ /CO ₂ ratio C Oxygen level D CO ₂ waveform
4. What is a cause of a low ETCO ₂ level? A Fever B Hyperoxia C Hyperventilation D Return of spontaneous circulation	5. What is a cause of a low ETCO ₂ level? A Hyperoxia B Hypotension C Hypoventilation D Hyperthyroidism	6. What is a cause of a high ETCO ₂ level? A Hyperoxia B Hypothermia C Hypoventilation D Using excessive TV when ventilating pt
7. What will happen to ETCO ₂ levels if you ventilate a pt too slowly? A Will fall B Will rise C Nothing - will not change D Nothing - if tidal volume is constant	8. What will happen to ETCO ₂ levels if you ventilate a pt too fast? A Will fall B Will rise C Nothing - will not change D Nothing - if tidal volume is constant	9. What pts will normally have an elevated ETCO ₂ value? A COPD B Geriatric C Pediatric D Heart failure
10. Where does exhaled CO ₂ come from? A Excessive inhaled O ₂ B Excessive inhaled CO ₂ C Inhaled carbon monoxide D Aerobic cellular metabolism	11. What does capnography <u>NOT</u> measure? A Metabolism B Oxygenation C Perfusion D Ventilation	12. Can a pt have a normal O ₂ sat, and an abnormal EtCO ₂ level? A No B Yes C Only if CO exposure is present D Only if receiving supplemental O ₂
13. How does capnography differ from pulse oximetry? A Capnography measures ventilation B Capnography tells you about oxygenation in low perfusion states C Capnography measures saturation of Hg with CO ₂ D Capnography measures saturation of Hg with oxygen	14. Does a pts capnography tell you about the adequacy of a pts oxygenation? A No B Yes C Only if the pt is intubated D Only if pt is spontaneously breathing	15. What is an elevated ETCO ₂ a sign of? A Alkalosis B Hypoxia C Respiratory failure D Carbon monoxide poisoning
16. Should capnography be used when BVM ventilating pt - prior to placement of advanced airway? A No B Yes C Only if ventilating pt for >5 minutes D Only if pre-oxygenating for advanced airway placement	17. Why should capnography be used when ventilating a pt - prior to placement of an advanced airway? A To prevent hyperventilation B To determine if an adequate amt of oxygen is being delivered C Capnography only needs to be used if the pt is in cardiac arrest D Capnography should only be used after placement of an advanced airway	18. What is a consequence of hyperventilation? A Hypercarbia B Decreased cardiac output C Increased cerebral perfusion D Increased coronary perfusion
19. In what 2 clinical situations would capnography be most useful? A Chest & abdominal pain B Abdominal pain & resp distress C Altered mental status & chest pain D Altered mental status & resp distress	20. When can capnography most help you make a clinical diagnosis? A Asthma/COPD vs ETT secretions B Asthma/COPD vs Heart Failure C Asthma/COPD vs Allergic reaction D Anxiety induced hyperventilation vs. pulmonary embolus	21. PM's have given midazolam to a pt; if the pt experiences respiratory depression, due to midazolam, which reading will change first? A Capnography B Blood pressure C Pulse oximetry (SpO ₂) D 12L ECG ST segments
22. When should capnography ALWAYS be used? A On every pt B Every pt receiving oxygen C Only pts who are intubated D All pts receiving assisted ventilation	23. Will capnography identify right mainstem intubation? A No B Yes C Only if pt is not in cardiac arrest D Only if ET tube is size 7 or greater	24. With capnography, which data point will first demonstrate apnea has occurred? A Waveform B ETCO ₂ value C Respiratory rate D Oxygen saturation

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25. How can capnography most accurately be used w/ pt receiving nebulizer tx? A They canNOT be used together B Place oral-nasal cannula on pt under neb-mask set-up C Capnography can only be assessed before and after a nebulizer tx D Pt must be intubated to use capnography while getting nebulizer tx	26. How can capnography most accurately be used on a pt receiving CPAP? A They canNOT be used together B Place oral-nasal cannula on pt under CPAP device C Capnography can only be assessed before and after CPAP D Capnography should not be used with CPAP as the values will be inaccurate	27. How can capnography be used in the pt who requires more than 6L of oxygen via nasal cannula? A It cannot be used in that situation B Capnography can only be used if the pt is intubated C Increase oxygen flow to capnography cannula to 15 L D Place capnography oral-nasal cannula on pt under NRB mask
28. Called for pt who OD'd on heroin; GCS 3, BP 130/80, P 90, R 4 shallow, O₂ sat 80%. What ETCO₂ would you expect? A Decreased B Normal C Elevated	29. Pt having asthma attack has an elevated ETCO₂; what's a likely cause? A Hypotension B Mild asthma attack C Severe asthma attack D Preexisting hypercarbia	30. What ETCO₂ reading would you expect in a pt hyperventilating from a severe panic attack? A Decreased B Normal C Elevated
31. What 2 things should be assessed and documented every 2 minutes when performing CPR? A O₂ sat & VS B O₂ sat & ECG C ECG & ETCO₂ D O₂ sat & ETCO₂	32. What capnography reading would you expect in shock, or cardiac arrest? A Decreased B Normal C Elevated	33. Why should capnography be used when treating the pt in cardiac arrest? A ETCO₂ is measure of cardiac output B The first ETCO₂ reading will determine if pt can be resuscitated C High initial ETCO₂ readings are indicative of a cardiac etiology D Capnography should not be assessed in pts receiving CPR as it is unreliable
34. During CPR, how will poor quality chest compressions affect ETCO₂? A Will fall B Will rise C Will not change D Will change only if ventilation rate changes	35. In cardiac arrest, what will happen to the ETCO₂ when return of spontaneous circulation (ROSC) occurs? A Will fall B Will rise C Will not change D Will change only if ventilation rate changes	36. During CPR, how will good quality chest compressions affect ETCO₂? A Will fall B Will rise C Will not change D Will change only if ventilation rate changes
37. PM's successfully resuscitated cardiac arrest pt. ETCO₂ = 58; pt is being ventilated @ 10/min w/ tidal volume just to chest rise. What should PM's do? A Administer NaBicarbonate B Increase rate/depth of ventilation C Decrease rate or depth of ventilation D Make no ventilation rate/depth change	38. PM's successfully resuscitated cardiac arrest pt. ETCO₂ = 30; pt is being ventilated @ 10/min w/ tidal volume just to chest rise. What should PM's do? A Assess for hypotension B Administer NaBicarbonate C Increase ventilation rate or depth D Decrease rate or depth of ventilation	39. How can adequacy of oxygenation best be assessed in cardiac arrest pts, when performing CPR? A Capnography B Pulse oximetry C Central color (lips, tongue) D There is no way to assess oxygenation in cardiac arrest pts
40. Why should capnography be used when treating the pt in cardiac arrest? A ETCO₂ measures quality of chest compressions B The first ETCO₂ reading will determine if pt can be resuscitated C High initial ETCO₂ readings are indicative of a cardiac etiology D Capnography should not be assessed in pts receiving CPR as it is unreliable	41. What factor guided EMS personnel to continue prehospital CPR for 96 minutes resulting in a neurologically intact survivor of cardiac arrest? A ECG rhythm B Capnography C Pulse oximetry D Insurance status of pt	42. What ETCO₂ reading is associated with a pt unlikely to be resuscitated? A Less than 5 for 10 minutes B Less than 10 for 20 minutes C Less than 15 for 20 minutes D Less than 20 for 10 minutes

43. Where should capno sensors for spontaneously breathing pts be stored? A With ET tubes B In drug box/bag C In pouch on monitor D With NC & O2 masks	44. Where should capno sensors for assisted ventilation be stored? A With ET tubes B In drug box/bag C With/on BVM device D In pouch on monitor	45. What is the order for placement when using both capnography & RQP/ITD? A Placement order does not matter B Pt – RQP/ITD – capnography – bag C Pt – capnography – RQP/ITD – bag D Placement order depends on if an advanced airway has been placed
46. What is an <u>UN</u> likely cause of a sharkfin shaped capnography waveform? A Heart failure B Kinked ET tube C Secretions in airway D Tongue obstructing airway	47. What capnography waveform would you expect to see in acute heart failure pt? A Sharkfin B Curare cleft C Rectangular D Notched plateau	48. What capnography waveform would you expect to see in a pt experiencing an asthma attack? A Sharkfin B Curare cleft C Rectangular D Notched plateau
49. Which has a major influence on ETCO2 values? A pt age B gender C pt weight D perfusion	50. Which has a major influence on ETCO2 values? A pt age B ventilation C type of device used D main or microstream capnography	51. Which has a major influence on ETCO2 values? A pt age B pt weight C metabolism D main or microstream capnography
52. PM's transporting intubated pt w/ head injury to level-1 TC. BP 186/74, P 62, R 10-assisted, O2 sat 98%, ETCO2 = 25. What should PM's do? A Increase rate/depth of ventilation B Assess for excessive ventilation depth C Make no change in ventilation rate/depth	53. PM's transporting intubated pt w/ chest injury to level-1 TC. BP 70/40, P 126, R 10-assisted, O2 sat 98%, ETCO2 = 25. What should PM's do? A Increase rate/depth of ventilation B Decrease rate/depth of ventilation C Assess for too shallow ventilation depth D Make no change in ventilation rate/depth	54. PM's transporting intubated pt w/ head injury to level-1 TC. BP 76/52, P 112, R 10-assisted, O2 sat 98%, ETCO2 = 25. What should PM's do? A Increase rate/depth of ventilation B Decrease rate/depth of ventilation C Assess for too shallow ventilation depth D Make no change in ventilation rate/depth
		
55. What does the circled area represent? A baseline B inspiration C exhalation D ETCO2 value	56. What does the circled area represent? A baseline B inspiration C exhalation D value	57. What does the circled area represent? A baseline B inspiration C exhalation D ETCO2 value
Answers to the following questions may be found on pages 13-23 of the class handout		
58. According to research, which is the MOST reliable method to confirm correct ETT placement? A Auscultation B Capnography C Pulse oximetry D Fogging of ET tube	59. Research demonstrates capnography may be used to help predict children in DKA; what was the researchers finding? A No pt w/ DKA had an ETCO2 above 36 B No pt w/ DKA had an ETCO2 less than 45 C Pts w/ DKA had normal ETCO2 levels D Pts w/ DKA usually had ETCO2 levels greater than 45	60. By what method do some anesthesiologists check capnography equipment? A Use own expired breath B Use sodium bicarbonate C Use carbon monoxide cannisters D Attach capno sensor to oxygen supply