



BTR Anesthesia - 24-09-2025

Dr. Zainab Vora

1. Which of the following is the correct sequence for CPR in Basic life support?

- A. Assess the patient's response, Activate ERS, check carotid pulse, Start CPR**
- B. Check carotid pulse, Start CPR, call for help and activate ERS, Defibrillate**
- C. Defibrillate, assess response, check carotid pulse, Maintain airway**
- D. Start CPR, Activate ERS, Defibrillate, Check pulse**

2. Regarding the procedure done with the needle shown below, which of the following is false?

- A. Done in lateral recumbent position**
- B. Breath holding not necessary**
- C. The bevel should face upwards while inserting the needle.**
- D. Coagulopathy is not a contraindication.**

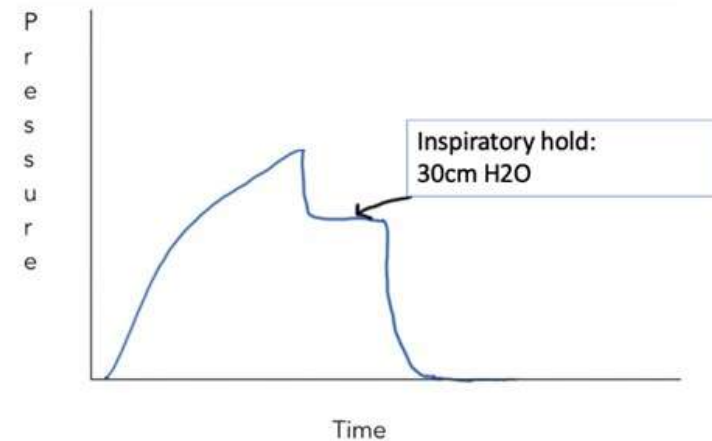


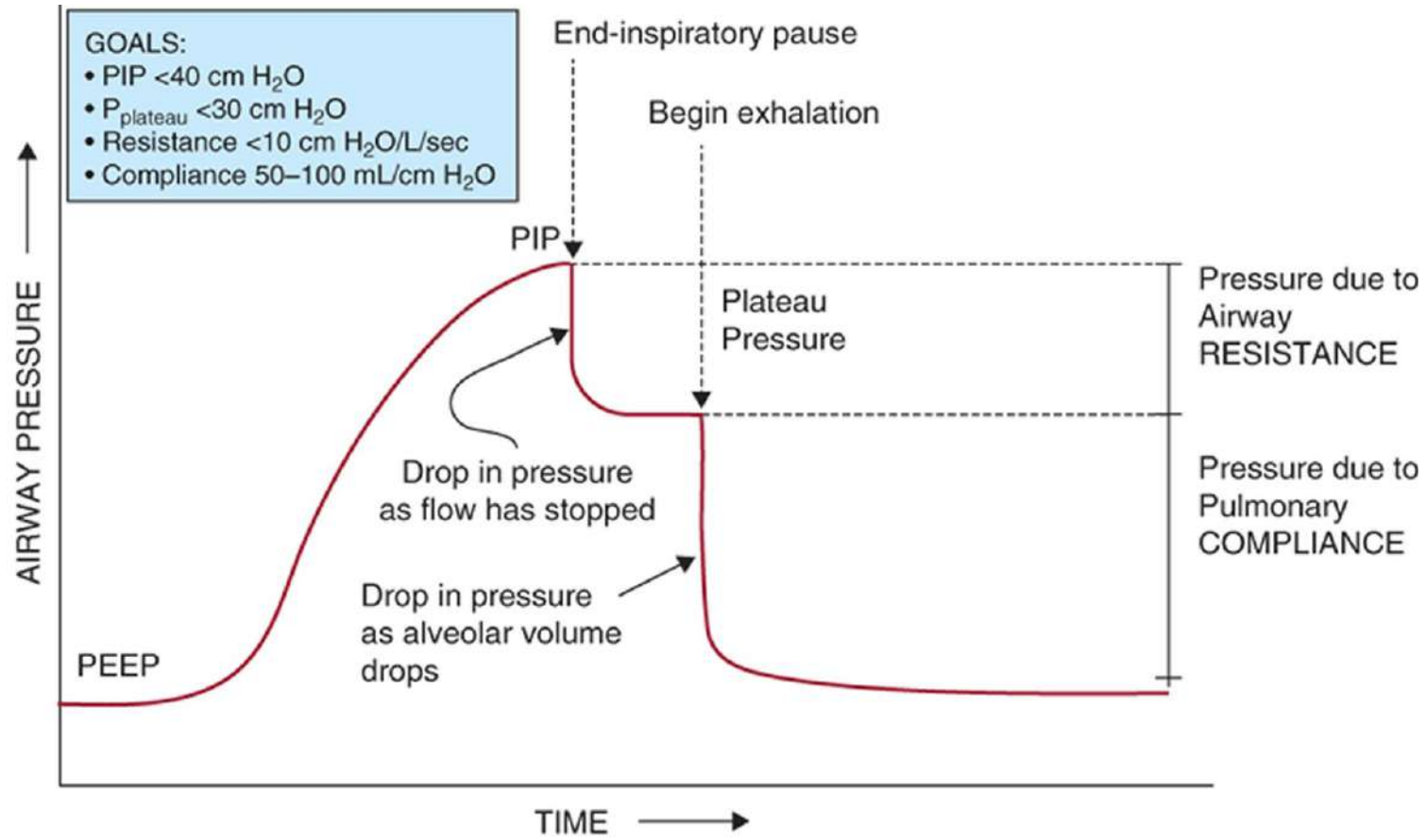
3. A 46-year-old patient is being mechanically ventilated for acute respiratory distress syndrome. The ventilator settings are: tidal volume 480ml, frequency 25 breaths per minute, PEEP of 5cm of H₂O, and FiO₂ of 90%. His weight is 60 kg. Arterial blood gases are normal. Which of the following can be done?

- A. Reduce FiO₂**
- B. Decrease tidal volume**
- C. Reduce respiratory rate**
- D. Reduce PEEP**

4. 32-year-old man is intubated and mechanically ventilated after an opioid drug overdose. He is sedated and passive. The ventilator triggers 14 breaths per minute, each delivering 500 mL of tidal volume at a peak flow rate of 60 L/min. An inspiratory hold is performed for 2 seconds following delivery of the tidal volume, and the airway pressure is measured to be 30 cm H₂O. The measured pressure most likely reflects which of the following?

- A. Upper airway resistance
- B. Total airway resistance
- C. Work of breathing
- D. Expiratory muscle strength





PEEP = Positive end-expiratory pressure (as set on ventilator)

PIP = Peak inspiratory pressure

5. Which of the following opioids is an antagonist at 'μ' and a complete agonist at 'κ' receptors?

- A. Pentazocine
- B. Buprenorphine
- C. Tramadol
- D. Fentanyl

Full agonist: Morphine, Pethidine, Heroin, Meperidine, Methadone, Codeine, Fentanyl, Remifentanyl

Partial agonist: Buprenorphine

Mixed agonist/antagonist: Nalbuphine, Pentazocine, Butorphanol

Antagonist:

6. A 48-year-old woman with CKD is scheduled for surgery. Her serum creatinine is 2.4 mg/dL and eGFR is 13. Which of the following opioids can be safely used in her?

A. Pethidine

B. Remifentanyl

C. Alfentanil

D. Morphine

7. An elderly man with ca pancreas is receiving intravenous opioids for pain management. Which of the following drugs can be safely administered to him because of ceiling effect on respiratory depression?

- A. Morphine**
- B. Buprenorphine**
- C. Fentanyl**
- D. Methadone**

8. Post-dural puncture headache depends on all except:

- A. Age**
- B. Timing of ambulation**
- C. Pregnancy**
- D. Type of needle**

9. What is the composition of Amsorb?

- A. Ca(OH)_2 , CaCl_2 , CaSO_4
- B. Ca(OH)_2 , NaOH , KOH
- C. Ca(OH)_2 , NaOH , CaCl_2
- D. Ba(OH)_2 , CaSO_4

10. Which is the preferred anaesthetic technique used in a surgery for a patient with severe aortic stenosis?

- A. General anesthesia**
- B. Spinal anesthesia**
- C. Epidural anesthesia**
- D. Intercostal nerve block**

11. Identify the defective enzyme in a patient whose dibucaine number was 20.

- A. Acetylcholinesterase**
- B. Monoamine oxidase**
- C. Catechol-O-methyltransferase**
- D. Butyrylcholinesterase**

12. Which among the following medications must be withheld on the day of surgery due to potential complications?

- A. Digoxin**
- B. Furosemide**
- C. Propylthiouracil**
- D. Prednisolone**

Stop Clopidogrel:

Warfarin:

LMWH:

UFH:

Lithium:

ACE/ARB/Diuretic/OHG/Insulin:

13. A 60-year-old male with a history of myocardial infarction two months back has been planned for elective cholecystectomy. The following image shows an assessment of his airway. He would be classified as:

- A. ASA PS 3, Grade 3 Mallampati**
- B. ASA PS 4, Grade 3 Mallampati**
- C. ASA PS 2, Grade 2 Mallampati**
- D. ASA PS 5, Grade 3 Mallampati**





I



II



III



IV

14. How to measure the size of the following device?

- A. Incisor teeth and tragus of the ear
- B. Corner of mouth and angle of mandible
- C. Tip of nose and angle of mandible
- D. Ala of nose and angle of mandible



Size	Age	Colour
000	Neonate (0-6 months)	Pink
00	Infant (6-12 months)	Blue
0	Small child (1-4 years)	Black
1	Older child (4-8 years)	White
2	Small adult / adolescent	Green
3	Medium adult{<50kg}	Yellow
4	Large adult{50-70kg}	Red
5	Extra-large adult{>70kg}	Orange

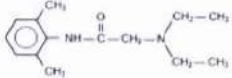

15. Which of the following LA would not need dose readjustment in a case of liver failure?

A. Lidocaine

B. Procaine

C. Bupivacaine

D. Ropivacaine

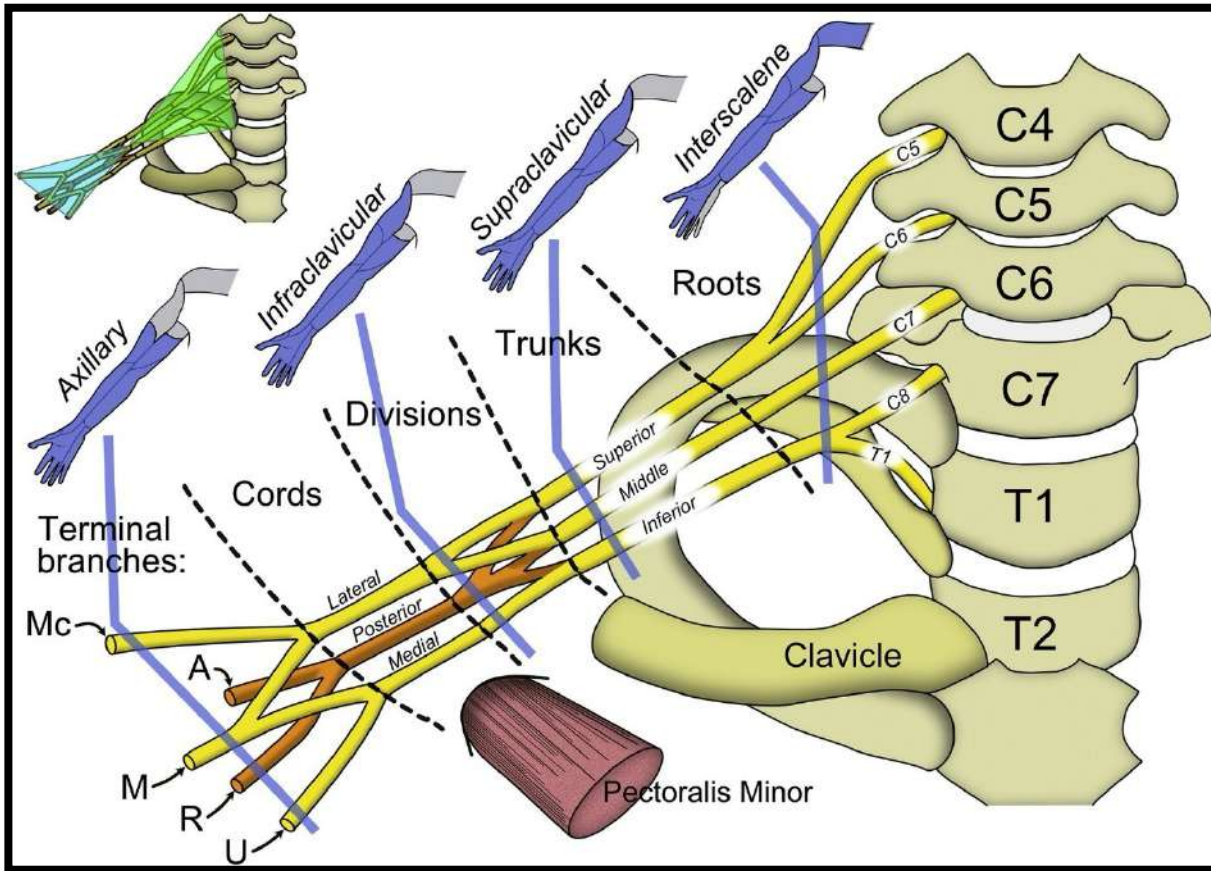
	Amides 'I' in stem	Esters
Structure	<p>Amino-amides</p> 	<p>Amino-esters</p> 
Examples	Bupivacaine Lidocaine Ropivacaine Prilocaine Mepivacaine	Cocaine Benzocaine Tetracaine
Volume of Distribution	>	< due to metabolism of pseudocholinesterases
Metabolism	Liver-cytochrome p450	Plasma Pseudocholinesterases
Duration of Action	Longer	Shorter
Allergic Reactions	RARE *methylparaben preservative	PABA metabolite what pts are allergic too Most likely allergic to Esters

16. Identify the correct size and material of MRI compatible gas cylinder

- A. Stainless steel, Size E**
- B. Molybdenum steel, Size A**
- C. Aluminium, Size E**
- D. Hard plastic, Size A**

17. Which of the following peripheral blocks is best for shoulder surgery?

- A. Interscalene block**
- B. Infraclavicular block**
- C. Axillary block**
- D. Supraclavicular block**



18. Which is the inhalational agent safe a patient of CKD on dialysis, if he is to undergo surgery?

- A. Methoxyflurane**
- B. Desflurane**
- C. Enflurane**
- D. Sevoflurane**



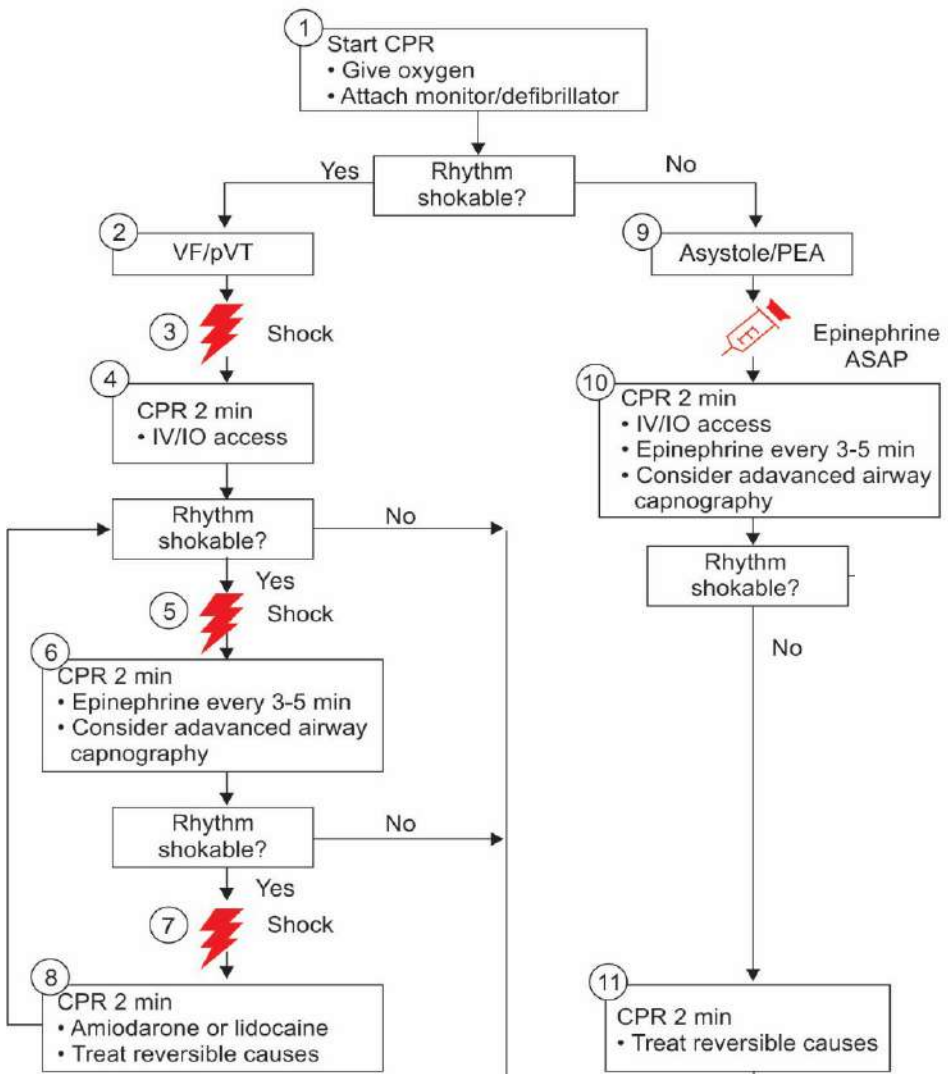
Compound A
Fruity odour
Asthma
Liver transplant

Coronary steal?

Min MAC
AI hepatitis

Tec-6 vaporizer
Maintenance agent
of choice
Best for Renal Sx,
Obese
CO with dessicated
soda lime

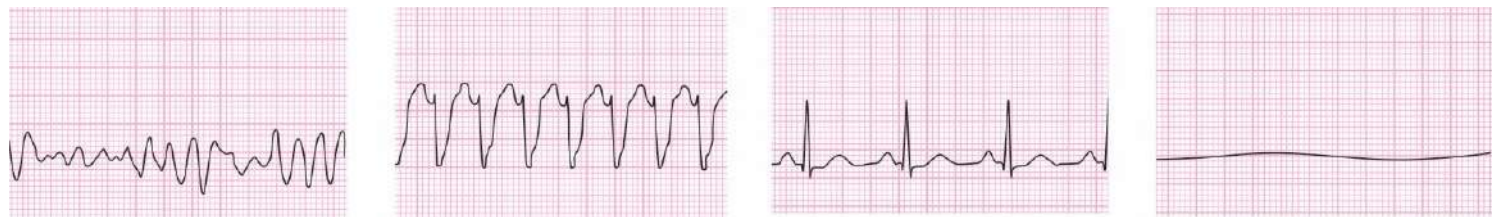
Adult cardiac arrest algorithm (VF/pVT/Asystole/PEA)



Drug therapy

- Epinephrine IV/IO dose: 1 mg every 3-5 minutes
- Amiodarone IV/IO dose: First dose: 300 mg bolus, second dose: 150 mg or
- Lidocaine IV/IO dose: First dose: 1-1.5 mg/kg second dose: 0.5-0.75 mg/kg.

Defibrillator:
Biphasic: 120-200 J
Monophasic: 360J



Perform maternal interventions

- Perform airway management
- Administer 100% O₂, avoid excess ventilation
- Place IV above diaphragm
- If receiving IV magnesium, stop and give calcium chloride or gluconate

Perform obstetric interventions

- Provide continuous lateral uterine displacement
- Detach fetal monitors
- Prepare for perimortem cesarean delivery

Continue BLS/ACLS

- High-quality CPR
- Defibrillation when indicated
- Other ACLS interventions (eg, epinephrine)

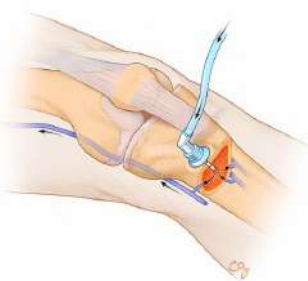
Perform perimortem cesarean delivery

- If no ROSC in 5 minutes, consider immediate perimortem cesarean delivery

OT?
Pffanelstein?
LSCS?

Reversible Causes of Cardiac Arrest (5-H/5-T), According to the AHA-Algorithm

Hypovolemia *	Tension pneumothorax *
Hypoxia	Tamponade (cardiac) *
Hypothermia	Thrombosis (myocardial infarction) *
H+ ions (acidosis)	Thrombosis (pulmonary) *
Hypo-/hyperkalemia	Toxins



- **ADRENALINE DOSES**
- **Anaphylactic shock / status asthmaticus:**
- **Cardiac arrest:**
- **Vasoconstriction:**
- **With LA for VC:**
- **Labour epidural:**

19. Identify the correct statements:

- 1. Glycopyrrolate is used as an anxiolytic before anesthesia.**
- 2. Postoperative nausea and vomiting (PONV) is the most common cause for hospital admission after day care surgery.**
- 3. The best type of anesthesia for pre-eclampsia is Epidural anesthesia**
- 4. Propofol is known to cause maximum pain on injection.**

A. 1, 2, 3, 4

B. 1, 4

C. 2, 3

D. 2, 3, 4

20. A 65-year-old male patient with cirrhosis is being posted for a liver transplantation. Which of the following induction agents will you use?

- A. Methoxyflurane**
- B. Thiopentone**
- C. Sevoflurane**
- D. Ketamine**

21. Preoperative fasting recommendation is

- A. 4 hours for solids in adults**
- B. 2 hours for liquids in adults**
- C. 2 hours for breast milk in infants**
- D. 4 hours for solids in infants**

Type of intake	Fasting time
Clear fluids	2 hours
Breast milk	4 hours
Light meal/semi solid foods	6 hours
Heavy/fatty meal	8 hours

22. A 27-year-old woman was brought to the casualty in an unconscious state after having suddenly collapsed. As there was no pulse, cardiopulmonary resuscitation was started and the defibrillator showed the following. What is the next step?

- A. Defibrillation**
- B. Synchronized cardioversion**
- C. 1 mg epinephrine IV**
- D. 0.5 mg atropine IV**



23. Children's Hospital of Eastern Ontario Pain Scale (CHEOPS) for rating postoperative pain includes all of the following, except.

A. Cry

B. Legs

C. Torso position

D. Oxygen saturation

Score	0	1	2
Cry	No cry	Crying, moaning	Scream
Facial	Smiling	Composed	Grimace
Verbal	Positive	None or other complaints	Pain complaint
Torso	Neutral	Shifting, tense, upright	Restrained
Legs	Neutral	Kicks, squirm, drawn up	Restrained

24. A 45-year-old male with Ischemic heart disease is posted for Coronary artery bypass graft surgery. You want beat to beat blood pressure measurement intraoperatively to guide you through the hemodynamic changes. Which among the following is the ideal artery for invasive blood pressure measurement?

- A. Ulnar**
- B. Radial**
- C. Brachial**
- D. Femoral**

25. Which of the following inhalational agents has the highest blood-gas partition coefficient?

- A. Halothane**
- B. N₂O**
- C. Desflurane**
- D. Methoxyflurane**

	MAC	BLOOD GAS SOLUBILITY
Methoxyflurane	0.2	12
Halothane	0.75	2.5
Isoflurane	1	1
Sevoflurane	2	0.65
Desflurane	6	0.45 (Xenon min)
N20	104	0.47

26. A 26-year-old pregnant woman receives epidural anesthesia. Immediately following the injection of lidocaine with epinephrine through the epidural catheter, the patient complains of perioral numbness and becomes very apprehensive. Her heart rate is 110/min and her BP is 90/60 mmHg. What is this most likely due to?

- A. Accidental subdural injection**
- B. Accidental subarachnoid injection**
- C. Accidental intravascular injection**
- D. Allergic manifestation to lignocaine**

27. Which of the following statements about sugammadex is false?

- A. Sugammadex is a reversal agent for rocuronium and vecuronium.**
- B. Sugammadex does not reverse the effect of succinylcholine.**
- C. It is safe for use in patients with renal impairment**
- D. Side effects include tachycardia, blurring of vision**

28. Which is not an obvious advantage of the following?

- A. Decreases need of intubation
- B. Reduces nasopharyngeal dead space
- C. Heating and humidification
- D. PEEP



29. Which of these is the definition of effective CPR?

1. Respiratory rate: 20 - 24 breaths per minute.

2. Chest compressions: 100-120/min.

3. Allow complete chest recoil.

4. 2-2.4 inches depression.

A. 1, 2, 3 and 4

B. 1, 2 and 4

C. 2, 3 and 4

D. 1 and 2 only

30. How long should elective surgery be deferred for a patient who was admitted in the ICU for severe respiratory infection?

- A. 6 weeks**
- B. 8-10 weeks**
- C. 12 weeks**
- D. 14 weeks**

31. Which of the following non-invasive investigations provides the most accurate prognostic information with respect to predicting risks of perioperative cardiac complications?

- A. Exercise ECG testing**
- B. Dobutamine stress echocardiography**
- C. Myocardial perfusion scintigraphy**
- D. Coronary angiography**

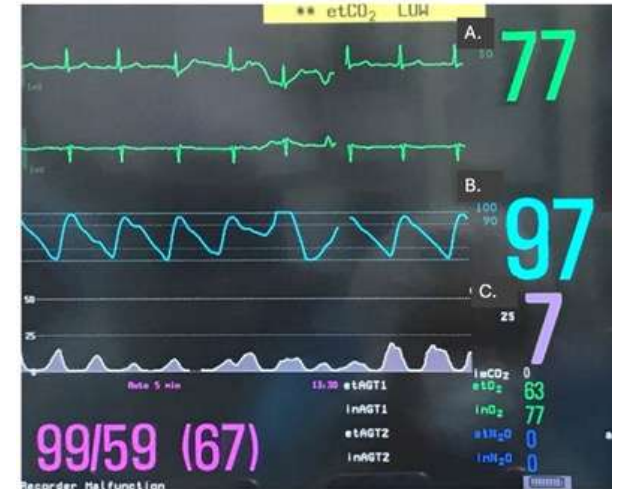
32. Identify A, B and C

A. A-MAP, B-Pulse, C-ETCO₂

B. A-HR, B-MAP, C-ETCO₂

C. A-O₂ saturation, B-Pulse, C-Pulse pressure

D. A-HR, B- O₂ saturation, C-ETCO₂



33. You are a very smart intern and the anaesthetist on duty trusts you with monitoring a patient after induction while he goes to the next case and asks you to give any medications if needed. You keep observing the monitor continuously and is shown in the image below. What is the next step in this patient?

- A. Inject IV dantrolene sodium**
- B. Administer top up NM blocking agent**
- C. Reassure yourself that “all is well”**
- D. Ask surgeon to limit blood loss**



34. A 70-year-old male patient was undergoing laparoscopic cholecystectomy. Halfway through the surgery, a sudden drop in EtCO₂ to 8 mm Hg was noted. His SpO₂ became 90% and blood pressure dropped to 70/50 mmHg and peak airway pressure was 18 cm of H₂O. What is the diagnosis?

- 1. CO₂ embolism**
- 2. Severe bronchospasm**
- 3. Pneumothorax**
- 4. Single bronchus intubation**

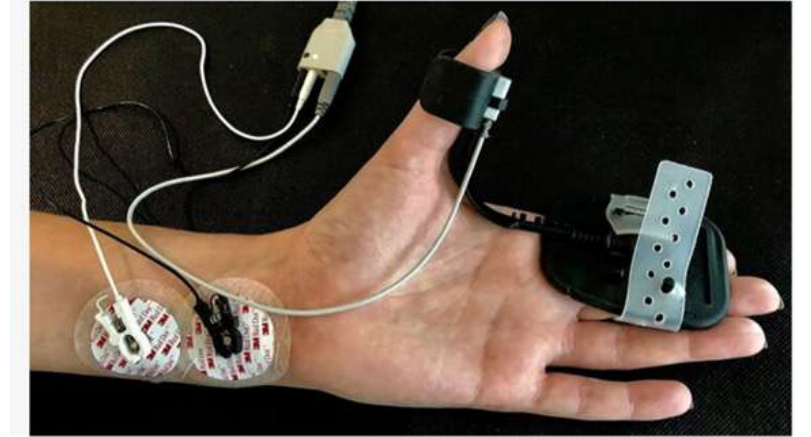
- A. Both 1 and 2**
- B. Both 3 and 4**
- C. 1 only**
- D. 2 only**

35. A 56-year-old male patient was given celiac plexus block with 0.25% bupivacaine for a refractory abdominal pain secondary to carcinoma pancreas. Shortly after the injection, the patient suddenly became unresponsive and the pulse was not recordable. Which of the following would be the best course of management for this patient?

- A. CPR with 20% intralipid**
- B. CPR with sodium bicarbonate**
- C. CPR with dobutamine**
- D. CPR with calcium**

36. The image given below shows neuromuscular monitoring of the patient after anesthesia. What is the most commonly used cranial nerve for monitoring the same?

- A. Facial nerve
- B. Ulnar nerve
- C. Auriculotemporal nerve
- D. Great auricular nerve



37. A 24-year-old young truck driver has developed a fissure in ano. What would be the ideal anesthesia for this case?

- A. Caudal anesthesia**
- B. Epidural anesthesia**
- C. Saddle anesthesia**
- D. Spinal anesthesia**

38. Which of the following drugs should be avoided for a daycare procedure?

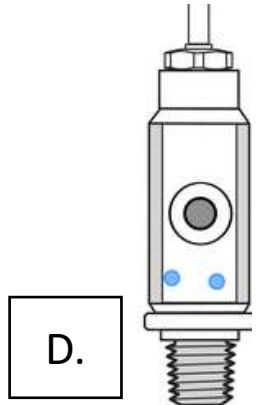
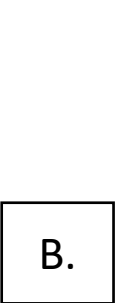
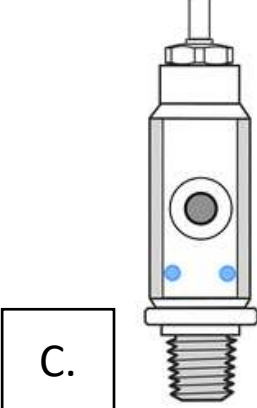
A. Propofol

B. Morphine

C. Sevoflurane

D. Sugammadex

39. A patient is scheduled for surgery, and the anesthesia team needs to ensure the proper connection of the oxygen supply. Which of the following PIN (Pin-Index) configurations corresponds to the oxygen supply in medical gas cylinders?



40. In a patient on mechanical ventilation and placed in prone position which of the following is true?

- A. Prevents atelectasis of lung and alveolar collapse**
- B. Reduces CO₂ in alveoli**
- C. Decreases inspiratory pressure**
- D. Increases venous return and thus maintains cardiac output**

41. You are the team leader during a cardiac arrest resuscitation scenario in a hospital setting. A 65-year-old patient has suddenly collapsed and is unresponsive. The monitor displays a rhythm as shown in the image. What is the next immediate step?

- A. Administer epinephrine**
- B. Begin high-quality CPR**
- C. Defibrillate using monophasic defibrillator at 360 joules**
- D. Defibrillate using biphasic defibrillator at 360 joules**



42. The patient, weighing 70 kg, arrived at the emergency department with acute pancreatitis and was subsequently transferred to the Intensive Care Unit (ICU) and put on a ventilator with the following settings: Fraction of Inspired Oxygen (FiO₂) at 90%, Positive End-Expiratory Pressure (PEEP) set to 12 mmHg, respiratory rate at 16 breaths per minute, and a tidal volume of 420 ml. The results of the arterial blood gas (ABG) analysis are provided below. What would be the appropriate next course of action for managing this patient?

pH – 7.33

PaO₂ – 110 mmHg

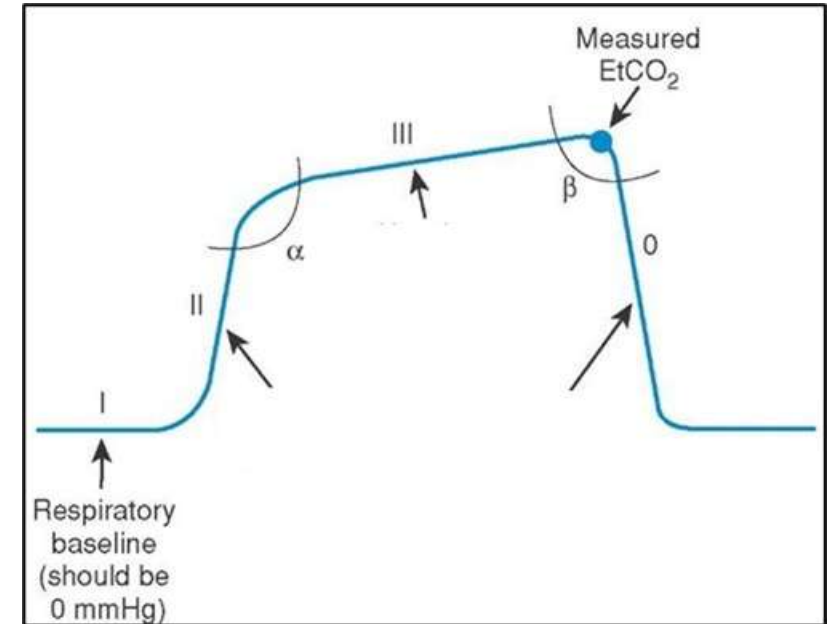
PaCO₂ – 60mmHg

spO₂ – 98%

- A. Increase PEEP to 16**
- B. Increase tidal volume**
- C. Increase respiratory rate**
- D. Reduce FiO₂**

43. What does phase II represent in the below image?

- A. Inspiration
- B. Expiration of dead space air
- C. Expiration of mixed air
- D. Expiration of alveolar air

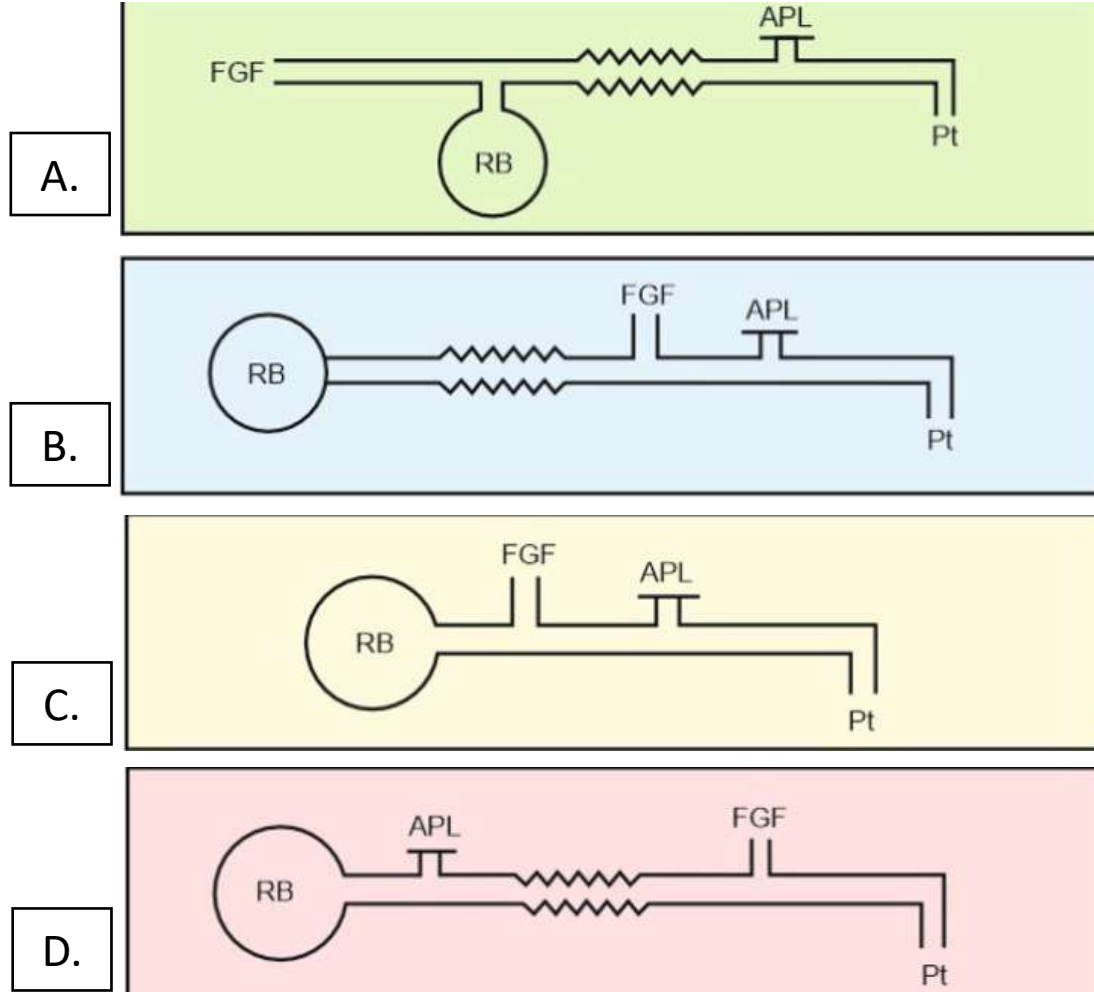


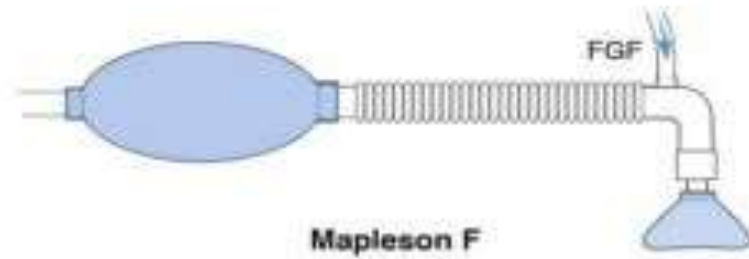
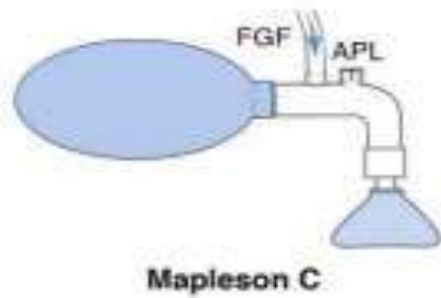
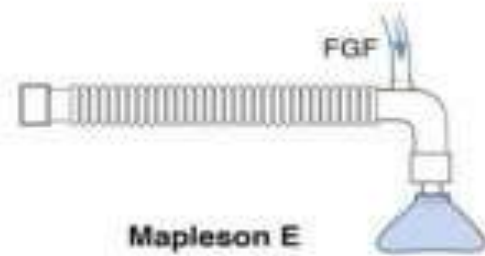
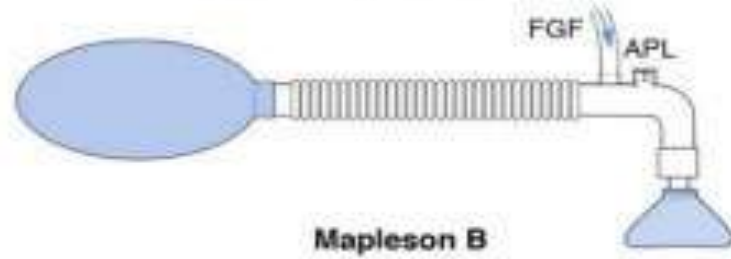
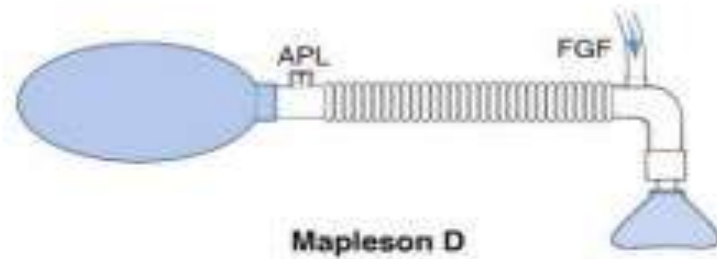
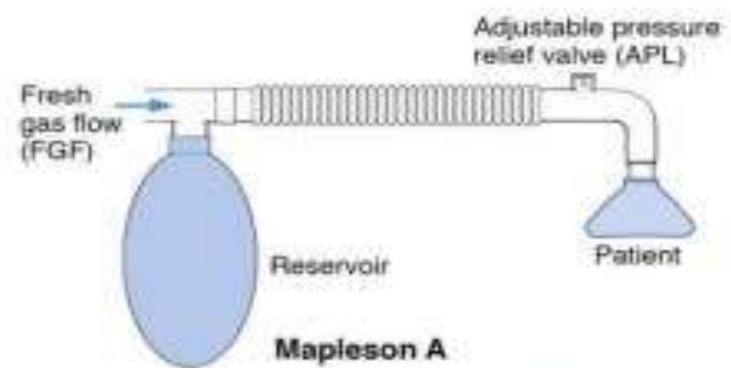
44. While resuscitating a newborn in the labor room, after bag and mask ventilation for 1 min at room air, the infant is still pale and hypoxic. What is the next step?

- A. Increase FIO₂ to 30%**
- B. Readjust the mask**
- C. Intubate**
- D. Start chest compression**

- M: Mask adjustment — Reapply the mask with proper technique and fit.
- R: Reposition airway — Place head in neutral or slight extension.
- S: Suction mouth and nose — Clear secretions that may obstruct airway.
- O: Open mouth — Open the mouth and lift jaw forward.
- P: Pressure increase — Increase inspiratory pressure incrementally until chest rise is seen.
- A: Alternative airway — If all else fails, insert endotracheal tube or laryngeal mask airway.

45. What is the most effective circuit for anesthesia under spontaneous breathing in adults?





46. What is the recommended dose of adrenaline for a child during cardiac arrest?

A. 0.01 mg/kg (1ml/kg of 1:10,000 solution)

B. 0.1 mg/kg (1ml/kg of 1:1000 solution)

C. 0.001 mg/kg (1ml/kg of 1:1,00,000 solution)

D. 0.5 mg/kg (1ml/kg of 1:2000 solution)

47. The following patient with X-ray as shown below is posted for immediate laparotomy. Which of the following anesthetic agent is contraindicated in this patient?

- A. Nitrous oxide**
- B. Desflurane**
- C. Halothane**
- D. Isoflurane**



48. Which of the following is measured by the device shown in the given image?

- A. Percentage of saturated Hb**
- B. Oxygen content of the blood**
- C. Partial pressure of oxygen**
- D. Amount of inspired oxygen**



49. A 70 kg elderly athlete undergoes surgery and is administered succinylcholine due to the unavailability of vecuronium. A total of 640 mg of succinylcholine is given intermittently. During recovery, the patient is unable to breathe spontaneously or move limbs. What is the explanation?

- A. Pseudocholinesterase deficiency increasing action of succinylcholine**
- B. Phase 2 blockade produced by succinylcholine**
- C. Undiagnosed muscular dystrophy and muscular weakness**
- D. Muscular weakness due to fasciculation produced by succinylcholine**

50. According to the latest AHA guidelines, what is the sixth link added to the "Chain of Survival"?

- A. EMS response
- B. Post-cardiac arrest care
- C. Early discharge
- D. Recovery



Chain of Survival



51. What is AMBU aura 40?

- A. First generation supraglottic airway device**
- B. Second generation supraglottic airway device**
- C. Third generation supraglottic airway device**
- D. Fourth generation supraglottic airway device**

52. A 45-year-old male is scheduled for elective hernia repair surgery. His preoperative assessment shows normal liver function, but he has a history of moderate asthma, for which he uses an inhaler intermittently. Which inhalational agent is most appropriate for this patient?

- A. Sevoflurane**
- B. Desflurane**
- C. Halothane**
- D. Nitrous oxide**

53. A 56-year-old man with acute respiratory distress syndrome (ARDS) is being managed in the ICU. The intensivist decides to implement Positive End-Expiratory Pressure (PEEP) in his ventilatory support. Which of the following statements about PEEP is incorrect?

- A. Useful in situations where PO₂ is low**
- B. Decreases carbon dioxide**
- C. Causes impairment in renal function**
- D. Decreases intracranial tension (ICT)**

PEEP:

-Prevents collapse, Increase recruitment

-Reduce work of breathing

-Barotrauma, Low CO, Raised ICP

N: 3-5cm

ARDS:8-12cm

54. Identify the incorrect pair

- 1. Etomidate-Does not cause myocardial suppression**
- 2. Fospropofol-Maximum pain on injection**
- 3. Ketamine- Neuroprotective**
- 4. Thipentone-Best for porphyria**

A. 2, 3, 4

B. 1, 2, 3, 4

C. 3, 4

D. 2, 3

55. Which of the following is included in high-quality CPR?

- 1. Compression depth of at least 5 cm**
- 2. Rotate chest compressor every 3 mins**
- 3. Avoid excessive ventilation**
- 4. Compression - ventilation ratio of 30:2**
- 5. Allow complete recoil**
- 6. ET co2 <10mm**
- 7. Intra-arterial DBP >20mm Hg**
- 8. Breaths 20-30/min**

A. 1,2,3,4,5,6,7,8

B. 1,2,4,5,7,8

C. 1,3,4,5,7,8

D. 1,3,4,5,7

56. Identify the correct pair of doses:

1. Max dose of lignocaine without adrenaline-300mg

2. Dantrolene sodium-2.5mg/kg

3. Intralipid 20% IV-1.5 mL/kg

4. Epinephrine in cardiac arrest-1mg 1:10000 iv

A. 1,2,3,4

B. 1,2,3

C. 2,3,4

D. 2,3

57. What is the appropriate size for ET tube for child aged 8?

A. 6mm

B. 7mm

C. 8mm

D. 9mm

Size of ET tube
Low-pressure, high-volume cuff
<1000g baby-2.5mm
1-2kg baby-3mm
>2kg-3.5mm
Child-3-4
Female:7mm
Male: 8mm

Tube Sizes in Pediatric



Types of tubes	Formula	4 Y	Unit
Endotracheal tube (uncuffed)	ETT = 4 + (age/4)	5	mm
NG or OG tube	NG = 2 x ETT	10	French
Foley tube	Foley = 2 x ETT	10	French
ETT depth (from incisor)	Depth = 3 x ETT	15	cm
Chest tube (max size)	Chest tube = 4 x ETT	20	French

Note 1: Minus the ETT size by 0.5 mm if cuffed tubes are used.

Note 2: Do not use cuffed ETT in neonates.



58. Identify the correct statements about muscle relaxants:

- 1. Gallamine and pancuronium have vagolytic activity**
- 2. Shortest acting approved NDMR is Gantacurium**
- 3. MR that may cause hypotension and flushing after injection: Tubocurarine**
- 4. Rocuronium and vecuronium can be reversed by use of Suggamadex**

A. 1,2,3,4

B. 2,3,4

C. 1,3,4

D. 2,4

1. Aminosteroid compounds:

1. Examples: Rocuronium, Vecuronium, Pancuronium, Rapacuronium
2. Features: Steroid nucleus structure, longer duration, primarily metabolized in liver and kidneys.
3. Generally do not cause histamine release.

2. Benzylisoquinolinium compounds:

1. Examples: Atracurium, Cisatracurium, Mivacurium, Doxacurium
2. Features: Non-steroidal, shorter or intermediate duration of action.
3. Undergo organ-independent elimination (Hofmann elimination and ester hydrolysis).
4. May cause more histamine release compared to aminosteroids.

59. Identify the correct statements

1. Lowest MAC=Highest potency

2. Min MAC-N₂O, Max MAC-Methoxyflurane

3. Blood gas partition coefficient (BGC)=Lipid solubility-Speed of induction

4. Lowest BGC-Xenon, Highest BGC-Methoxyflurane

A. 1,2,3,4

B. 1,3

C. 2,4

D. 1,4

60. Which of the following statements is true regarding sodalime?

- 1. 100 g of sodalime can absorb 23 liters of CO₂**
- 2. Amsorb is preferred for Sevoflurane and Desflurane over sodalime**
- 3. The major constituent of sodalime is Ca (OH)₂**
- 4. Water content of sodalime is 5%**
- 5. Can form a neurotoxic compound with Trilene**

- A. 2,3,4**
- B. 1,2,3,4,5**
- C. 1,2,3,4**
- D. 1,2,3,5**

61. You are planning to administer spinal anesthesia to a young female. Which of the following needles would be the most suitable for reducing the risk of a post-dural puncture headache?

- A. 22G Quincke**
- B. 22G Whitacre**
- C. 25G Quincke**
- D. 25G Whitacre**

62. Following tube adds additional airway resistance. This is due to:

- A. Circumference of the tube**
- B. Length of the tube**
- C. Diameter of the tube**
- D. Curvature of the tube**



$$R = \frac{8l\eta}{\pi r^4}$$

63. A 60-year-old patient with a history of severe (chronic obstructive pulmonary disease presents for an elective hernia repair. The patient has a forced expiratory volume in 1 second (FEV1) of 60% predicted and requires supplemental oxygen on activity. Under what ASA-PS classification would you place him?

A. ASA 1

B. ASA 2

C. ASA 3

D. ASA 4

64. A 2 years old child was playing with marbles and suddenly went limp and became unresponsive. Mother of the child was beside and saw him collapse. What is the first step to be done by mother in the situation?

- A. Call emergency medical services**
- B. Feel for pulse and assess the breathing**
- C. Back thrust**
- D. Heimlich manouever**

65. Arrange following parts of Anesthesia machine according to increasing pressure (from low to high):

- 1. Vaporizer mounting devices**
- 2. Hanger yoke assembly**
- 3. Flow meter assembly**
- 4. Pipelines**

A. 1-2-3-4

B. 1-3-4-2

C. 2-3-4-1

D. 2-4-3-1

1.High-pressure system:

1. Gas cylinders (E-cylinders) and their yokes.
2. Cylinder pressure regulators reducing cylinder pressure (~2000 psi oxygen) to an intermediate pressure (~45-55 psi).
3. Pressure gauges showing cylinder pressure.

2.Intermediate-pressure system:

1. Pipeline gas inlets.
2. Pipeline pressure gauges.
3. Oxygen failure protection device (fail-safe valve).
4. Flowmeter valves (where gas flow is controlled).
5. Oxygen flush valve (feeds gas directly from the intermediate pressure to the breathing circuit).

3.Low-pressure system:

1. Flowmeters (rotameters).
2. Vaporizers (where anesthetic vapor is added).
3. Common gas outlet leading into the breathing circuit.

66. All of the following are contraindications of neuraxial blockade except:

- A. Spinal deformity**
- B. Patient refusal**
- C. Local infection**
- D. Papilledema**

67. Identify the correct statements:

- 1. Best site for measuring the core temperature intra-operatively is lower 1/3 of esophagus**
- 2. Duration of action of proparacaine is 15-20 minutes**
- 3. T10 level anesthesia is adequate for LSCS**
- 4. Sch can cause hyperkalemia, tachycardia, raised ICP and raised intra-gastric pressure**

A. 1, 2, 3, 4

B. 1, 2

C. 3, 4

D. 2, 3

68. Which of the following is not weaning mode of ventilation:

A. CMV

B. SIMV

C. PSV

D. CPAP

69. Identify the maneuver being performed in the given image?

A. Head tilt, chin lift

B. Jaw thrust

C. Head extension

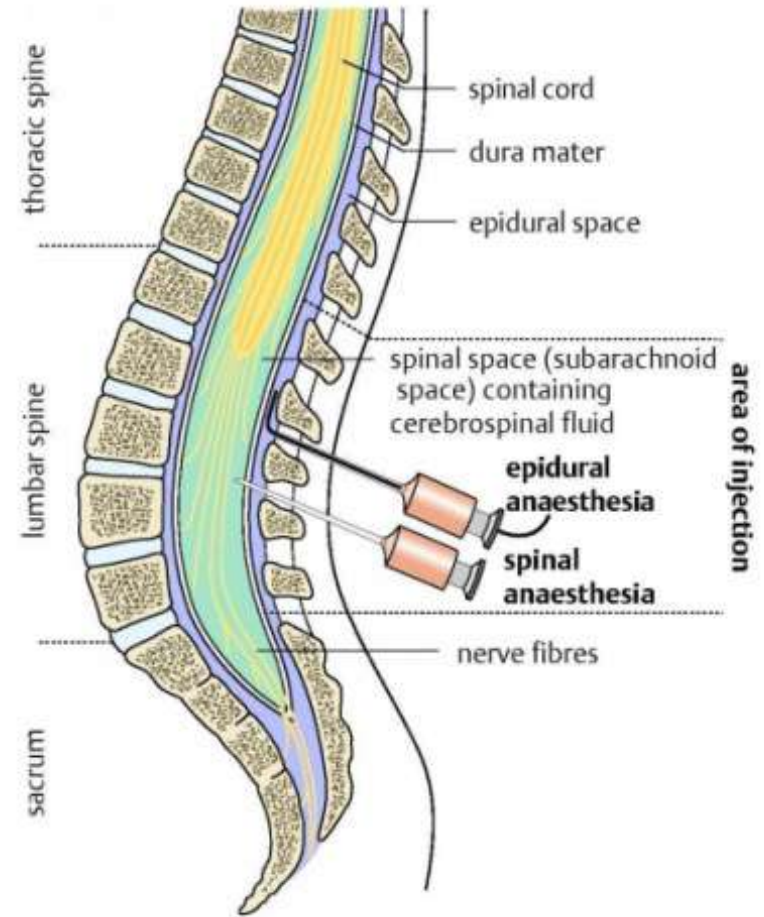
D. In line manual stabilization



70. Which of the following is an advantage of epidural over spinal anesthesia?

- A. Less dose of drug required**
- B. Duration can be prolonged using an inlaying catheter**
- C. Easier technique**
- D. Less traumatic needle**

Features	Epidural anesthesia (EA)	Spinal anesthesia (SA)
Drug dose	Larger dose than SA	Smaller dose than EA
Onset of anesthesia	Approximately 25–30 minutes	Approximately 5 minutes
Spine level that can be performed	Anywhere along the vertebral column	Lumbar only (mostly below the L2 vertebral body)
Quality of anesthesia	Not as good as SA	High
Intraoperative redosing	Possible, can be continued postoperatively via a catheter	Generally, a single-shot injection
Duration of block	Adjustable, prolonged	Brief, usually 2–4 hours



71. Which of the following is not correct about management of Post-CPR Return of spontaneous circulation?

- A. Targeted temperature management at 32 -36° C if patient is awake**
- B. MAP > 65 mm Hg**
- C. SpO₂ 92-98%**
- D. Emergent cardiac intervention if STEMI present**

72. A 34-year-old male is brought to the emergency department by his friends after being found unconscious. His friends report that he had been using heroin earlier in the day. On examination, the patient is unresponsive, his respiratory rate is 6 breaths per minute, pupils are pinpoint, and his oxygen saturation is 85% on room air. What is the most appropriate immediate management for this patient?

- A. Endotracheal intubation and mechanical ventilation**
- B. Administer intravenous naloxone**
- C. Start intravenous fluids and observe**
- D. Provide oxygen via nasal cannula and monitor**

73. Which color of Venturi device will you use to administer a 40% concentration of oxygen to the patient?

A. Yellow

B. White

C. Green

D. Red



Be equipped with 6 different oxygen concentration diluters which allows to select different oxygen concentration

Blue



24%
4L/min

White



28%
4L/min

Orange



31%
6L/min

Yellow



35%
8L/min

Red



40%
8L/min

Green



60%
12L/min

74. A 42-year-old woman who is on SSRI for major depression for 6 months underwent hernia surgery. Post-operatively the nurse administered an analgesic for the pain. After some time, the patient developed fever, rigidity, restlessness, and delirium. Clonus is demonstrated on examination. Which of the following is unlikely to have caused her symptoms?

- A. Meperidine**
- B. Buprenorphine**
- C. Tramadol**
- D. Fentanyl**

75. A 3-minute-old newborn is being resuscitated due to signs of respiratory distress. Where should the clinical team place the pulse oximeter to measure oxygen saturation in this infant?

- A. Left upper limb**
- B. Left lower limb**
- C. Right upper limb**
- D. Right lower limb**

Thank You



BTR Anesthesia - 24-09-2025

Dr. Zainab Vora

1. Which of the following is the correct sequence for CPR in Basic life support?

PYQ

- A. Assess the patient's response, Activate ERS, check carotid pulse, Start CPR CAB
- B. Check carotid pulse, Start CPR, call for help and activate ERS, Defibrillate
- C. Defibrillate, assess response, check carotid pulse, Maintain airway
- D. Start CPR, Activate ERS, Defibrillate, Check pulse

2. Regarding the procedure done with the needle shown below, which of the following is false?

- A. Done in lateral recumbent position ✓✓
- B. Breath holding not necessary ✓✓
- C. The bevel should face upwards while inserting the needle. ✓✓
- ~~D. Coagulopathy is not a contraindication.~~

plt < 50k CI



LP

3. A 46-year-old patient is being mechanically ventilated for acute respiratory distress syndrome. The ventilator settings are: tidal volume 480ml, frequency 25 breaths per minute, PEEP of 5cm of H₂O, and FiO₂ of 90%. His weight is 60 kg. Arterial blood gases are normal. Which of the following can be done?

A. Reduce FiO₂

B. Decrease tidal volume

C. Reduce respiratory rate

D. Reduce PEEP

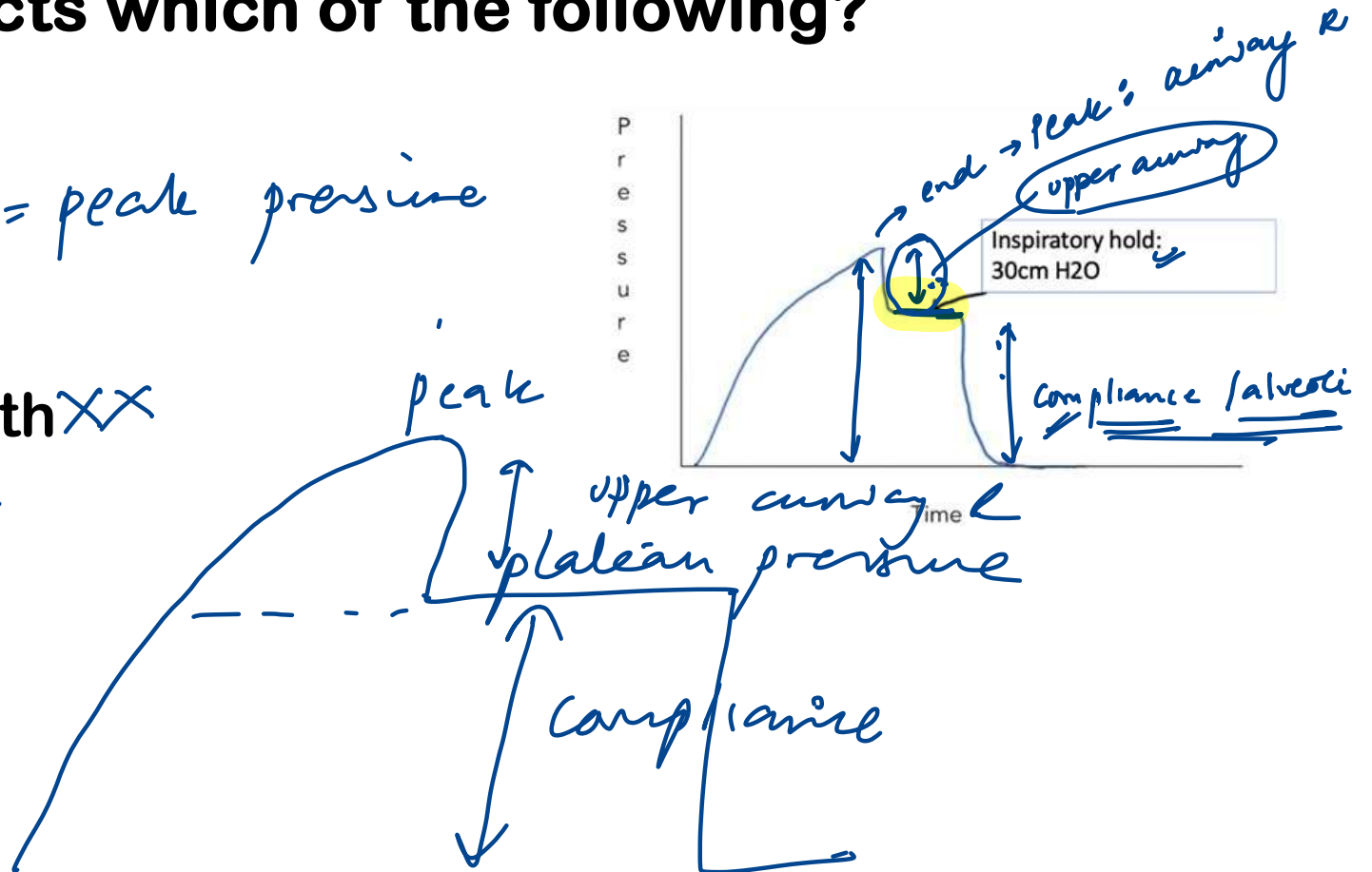
→ Low \bar{V}_T : 5-6 ml/kg

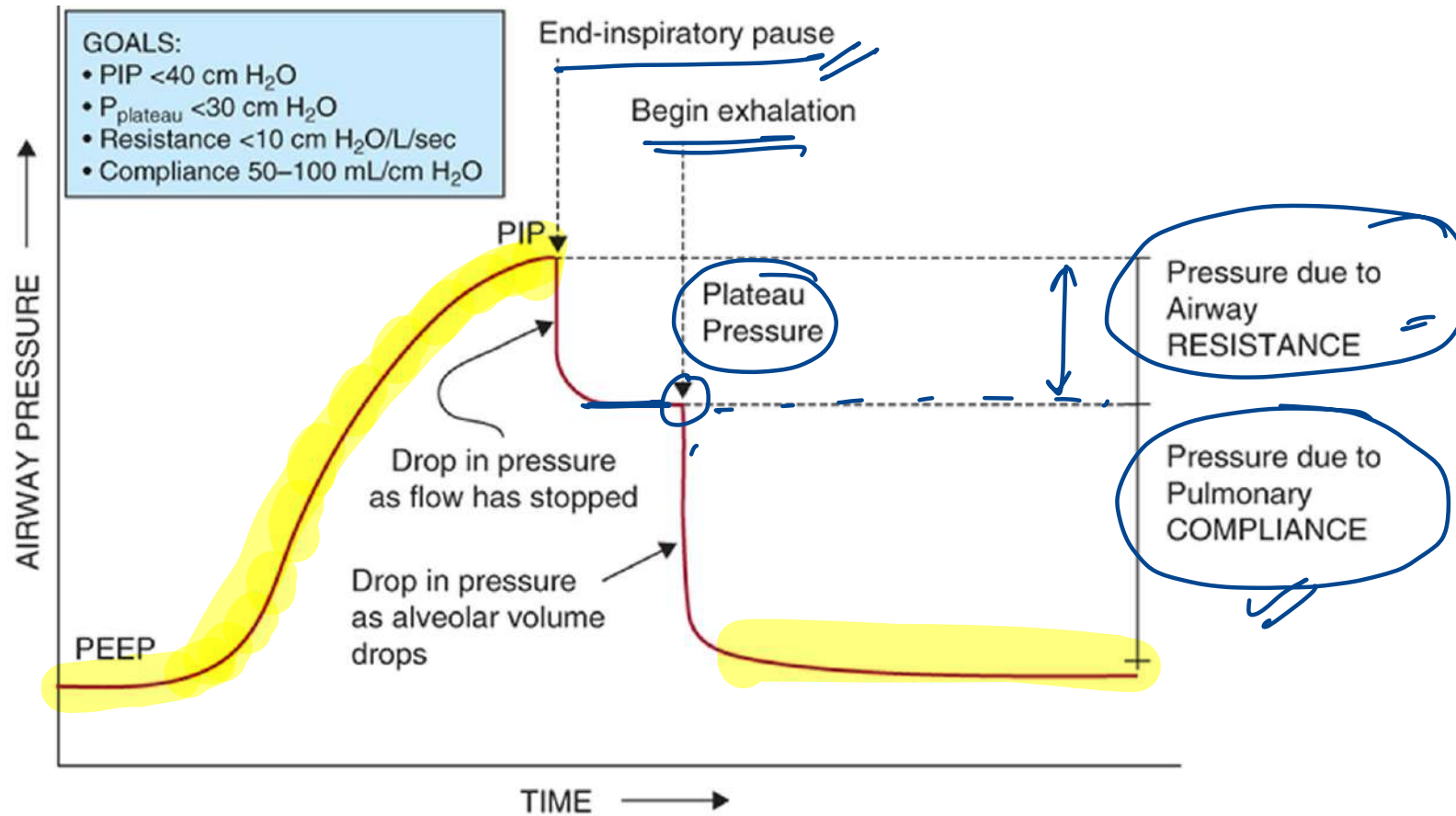
→ ↑ PEEP > 5 cm

RR / FiO₂ — pO₂ / pCO₂

4. 32-year-old man is intubated and mechanically ventilated after an opioid drug overdose. He is sedated and passive. The ventilator triggers 14 breaths per minute, each delivering 500 mL of tidal volume at a peak flow rate of 60 L/min. An inspiratory hold is performed for 2 seconds following delivery of the tidal volume, and the airway pressure is measured to be 30 cm H₂O. The measured pressure most likely reflects which of the following?

- A. Upper airway resistance
- B. Total airway resistance = peak pressure
- C. Work of breathing XX
- D. Expiratory muscle strength XX
- E. compliance alveoli





PEEP = Positive end-expiratory pressure (as set on ventilator)

PIP = Peak inspiratory pressure

5. Which of the following opioids is an antagonist at 'μ' and a complete agonist at 'κ' receptors?

- A. Pentazocine
- B. Buprenorphine
- C. Tramadol
- D. Fentanyl

Full agonist: Morphine, Pethidine, Heroin, Meperidine, Methadone, Codeine, Fentanyl, Remifentanyl

Partial agonist: Buprenorphine

Mixed agonist/antagonist: Nalbuphine, Pentazocine, Butorphanol

Antagonist:

6. A 48-year-old woman with CKD is scheduled for surgery. Her serum creatinine is 2.4 mg/dL and eGFR is 13. Which of the following opioids can be safely used in her?

A. Pethidine

B. Remifentanyl

esterases

C. Alfentanil

D. Morphine

→ avoid in DCS

day care Sx
ultrashort acting

7. An elderly man with ca pancreas is receiving intravenous opioids for pain management. Which of the following drugs can be safely administered to him because of ceiling effect on respiratory depression?

A. Morphine ✓

B. Buprenorphine

C. Fentanyl ✓

D. Methadone ✓

partial agonist

8. Post-dural puncture headache depends on all except:

A. Age *young > old*

B. Timing of ambulation

C. Pregnancy *↑*

D. Type of needle

*≠ cutting
Quincke*

*> splitting
Whitacre
Spottle*

E. BMI *↓ - ↑ risk*

F. multiple attempts

9. What is the composition of Amsorb?

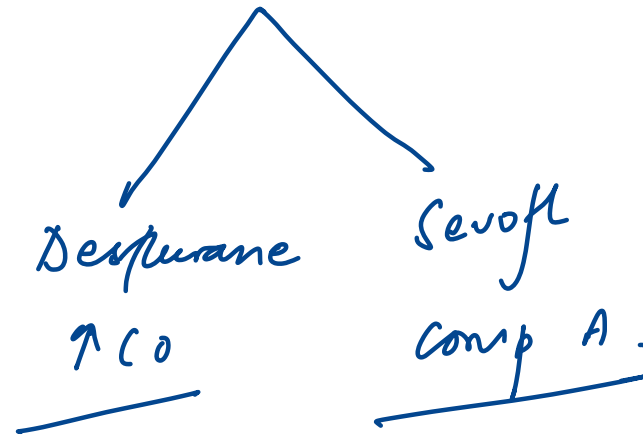
A. Ca(OH)_2 , CaCl_2 , CaSO_4 *Amsorb*

B. Ca(OH)_2 , NaOH , KOH *soda lime* 10-12% H_2O

C. Ca(OH)_2 , NaOH , CaCl_2

D. Ba(OH)_2 , CaSO_4

Barlyme



10. Which is the preferred anaesthetic technique used in a surgery for a patient with severe aortic stenosis?

A. General anesthesia

B. Spinal anesthesia ~~xx~~

C. Epidural anesthesia ~~xx~~

D. Intercostal nerve block ~~xx~~

preclampsia

BP fluctuations

11. Identify the defective enzyme in a patient whose dibucaine number was 20.

- A. Acetylcholinesterase
- B. Monoamine oxidase
- C. Catechol-O-methyltransferase
- D. Butyrylcholinesterase

= pseudochoolinE

atypical

< 30

Sch / Mivacurium
longer half life



12. Which among the following medications must be withheld on the day of surgery due to potential complications?

A. Digoxin

B. Furosemide

C. Propylthiouracil

D. Prednisolone

Stop Clopidogrel: 7d

Warfarin: 5d

LMWH: 24hr

UFH: 4-6hr

Lithium: 48hr

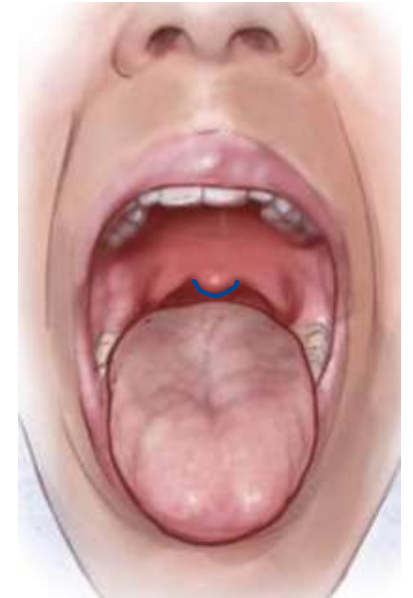
ACE/ARB/Diuretic/OHG/Insulin: stop mg dose

Aspirin stop
5-7d prior
Stent - continue

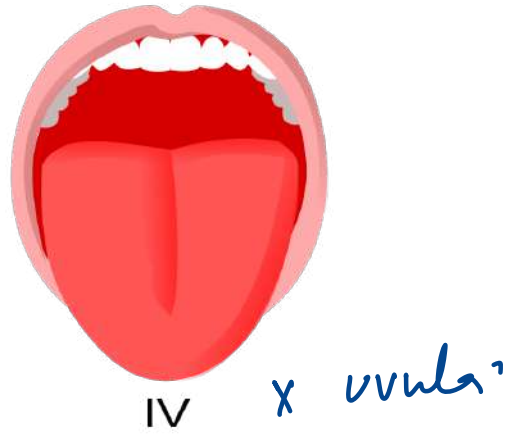
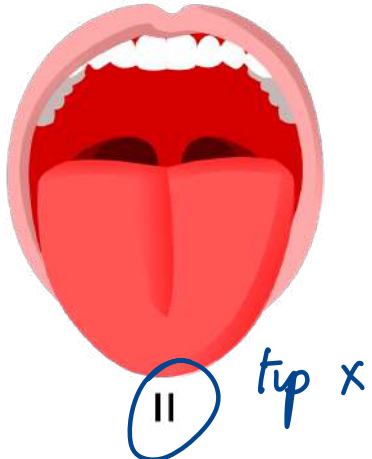
13. A 60-year-old male with a history of myocardial infarction two months back has been planned for elective cholecystectomy. The following image shows an assessment of his airway. He would be classified as:

- A. ASA PS 3, Grade 3 Mallampati
- B. ASA PS 4, Grade 3 Mallampati
- C. ASA PS 2, Grade 2 Mallampati
- D. ASA PS 5, Grade 3 Mallampati

I .
II .
III , > 3 mm
IV < 3 mm



o → epiglottis



14. How to measure the size of the following device?

- A. Incisor teeth and tragus of the ear
- B. Corner of mouth and angle of mandible**
- C. Tip of nose and angle of mandible
- D. Ala of nose and angle of mandible



Size	Age	Colour
000	Neonate (0-6 months)	Pink
00	Infant (6-12 months)	Blue
0	Small child (1-4 years)	Black
1	Older child (4-8 years)	White
2	Small adult / adolescent	Green
3	Medium adult{<50kg}	Yellow
4	Large adult{50-70kg}	Red
5	Extra-large adult{>70kg}	Orange

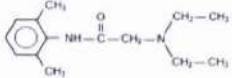
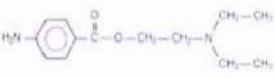
15. Which of the following LA would not need dose readjustment in a case of liver failure?

A. Lidocaine

~~B. Procaine~~

C. Bupivacaine

D. Ropivacaine

	Amides 'I' in stem	Esters
Structure	<p>Amino-amides</p> 	<p>Amino-esters</p> 
Examples	<p>Bupivacaine Lidocaine Ropivacaine Prilocaine Mepivacaine</p>	<p>Cocaine Benzocaine Tetracaine</p>
Volume of Distribution	>	< due to metabolism of pseudocholinesterases
Metabolism	Liver-cytochrome p450	Plasma Pseudocholinesterases
Duration of Action	Longer	Shorter
Allergic Reactions	RARE *methylparaben preservative	PABA metabolite what pts are allergic too Most likely allergic to Esters

16. Identify the correct size and material of MRI compatible gas cylinder

A. Stainless steel, Size E

B. Molybdenum steel, Size A

C. Aluminium, Size E

D. Hard plastic, Size A

A - E
smallest largest

mc: (E)

17. Which of the following peripheral blocks is best for shoulder surgery?

A. Interscalene block

→ R > T

B. Infraclavicular block

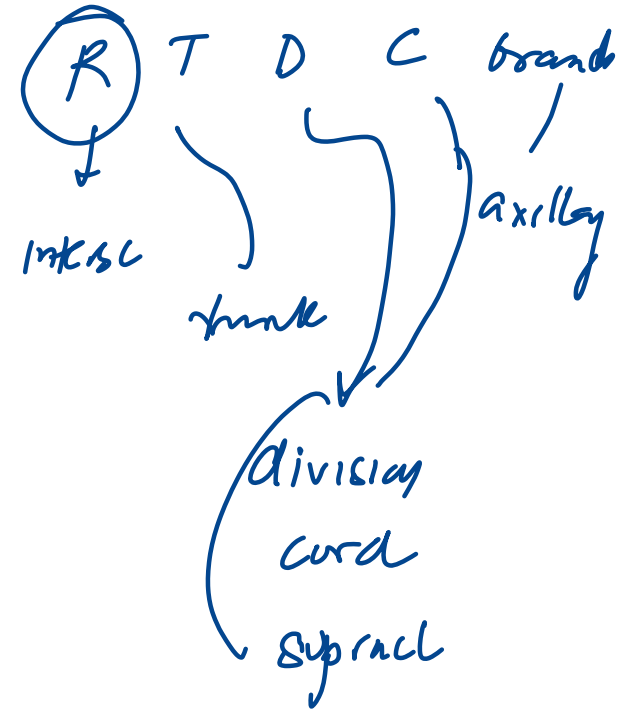
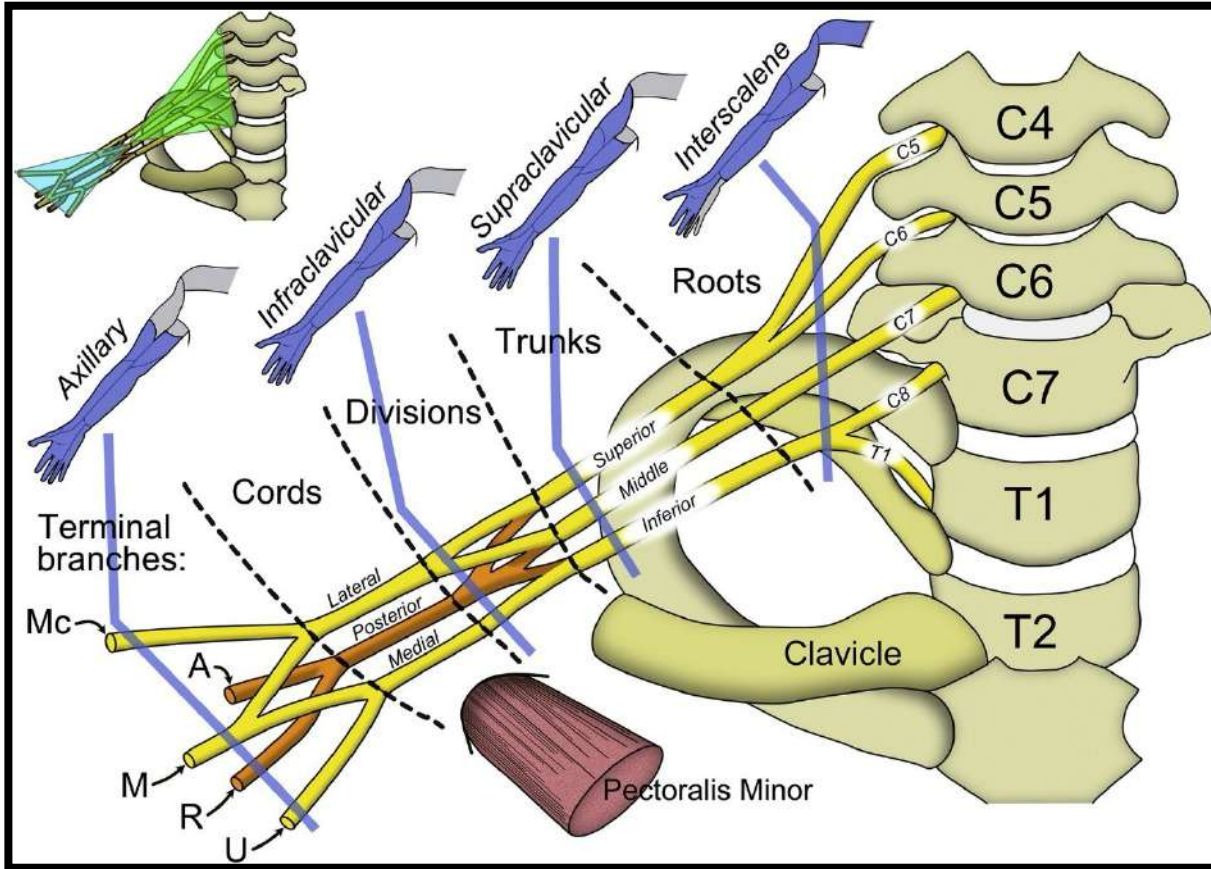
→ D / C

C. Axillary block

→ branches

D. Supraclavicular block

→ T > D



18. Which is the inhalational agent safe a patient of CKD on dialysis, if he is to undergo surgery?

A. Methoxyflurane

~~B. Desflurane~~

C. Enflurane

D. Sevoflurane



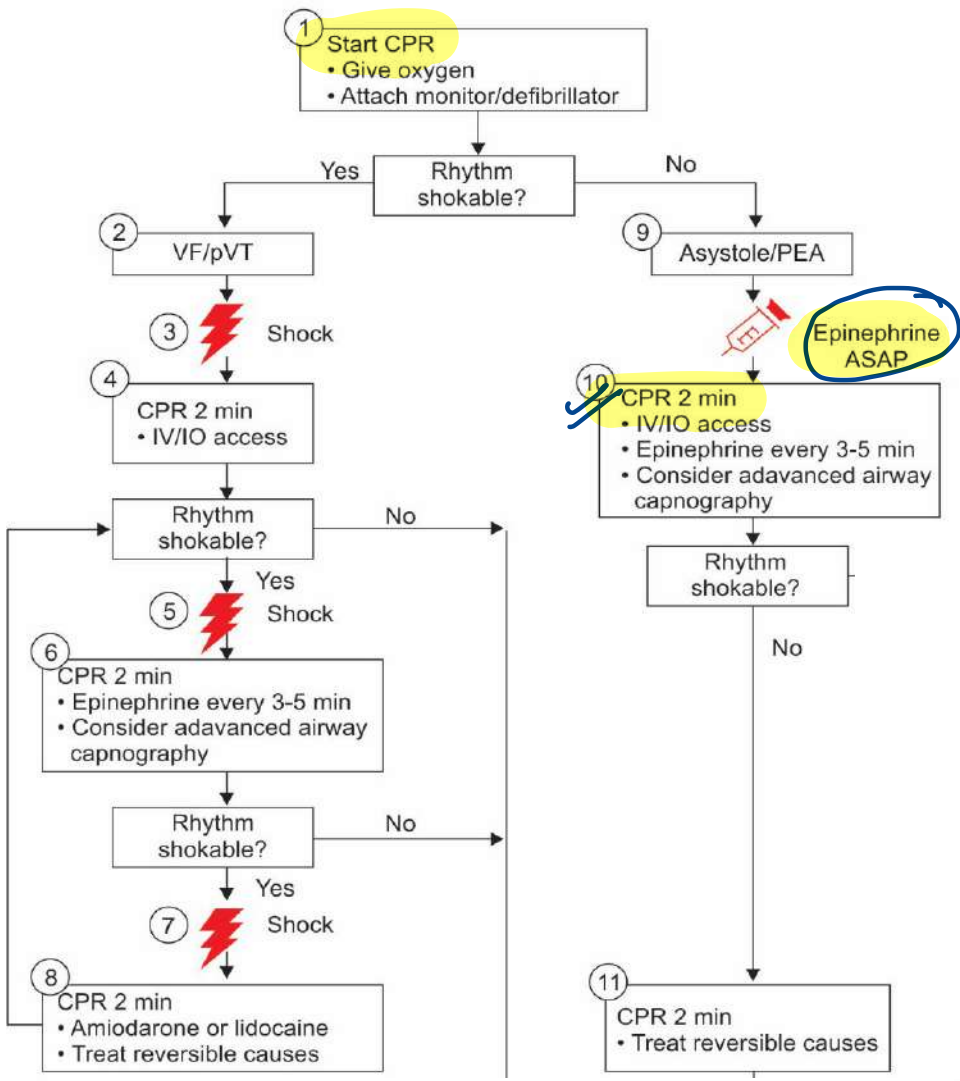
✓ Compound A
✓ Fruity odour
✓ Asthma *DOC*
✓ Liver transplant

Coronary steal?

Min MAC
AI hepatitis

Tec-6 vaporizer
Maintenance agent
of choice
Best for Renal Sx,
Obese
CO with dessicated
soda lime

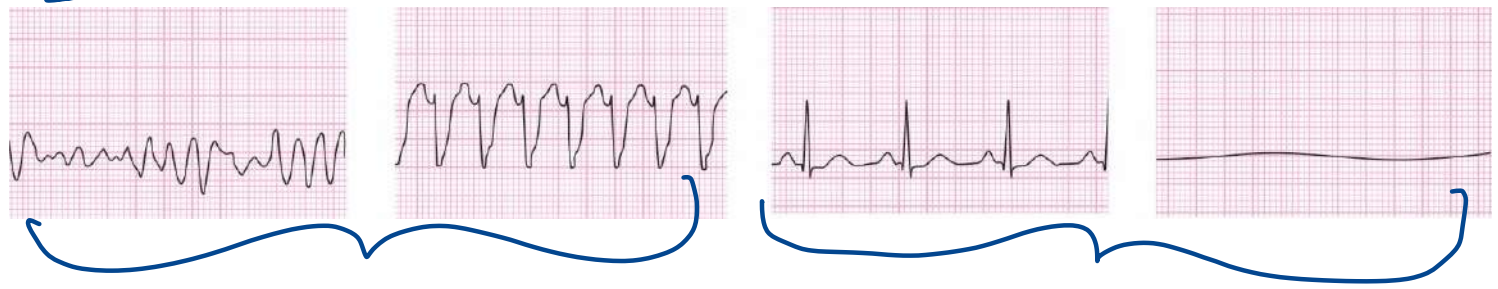
Adult cardiac arrest algorithm (VF/pVT/Asystole/PEA)



Drug therapy

- Epinephrine IV/IO dose: 1 mg every 3-5 minutes
- Amiodarone IV/IO dose: First dose: 300 mg bolus, second dose: 150 mg or
- Lidocaine IV/IO dose: First dose: 1-1.5 mg/kg second dose: 0.5-0.75 mg/kg.

Defibrillator:
 Biphasic: 120-200 J
 Monophasic: 360J



Perform maternal interventions

- Perform airway management
- Administer 100% O₂, avoid excess ventilation
- Place IV above diaphragm
- If receiving IV magnesium, stop and give calcium chloride or gluconate

Perform obstetric interventions

- Provide continuous lateral uterine displacement
- Detach fetal monitors
- Prepare for perimortem cesarean delivery

Continue BLS/ACLS

- High-quality CPR
- Defibrillation when indicated
- Other ACLS interventions (eg, epinephrine)

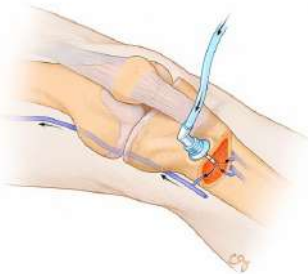
Perform perimortem cesarean delivery

- If no ROSC in 5 minutes, consider immediate perimortem cesarean delivery

**OT?
 Pffanelstein?
 LSCS?**

Reversible Causes of Cardiac Arrest (5-H/5-T), According to the AHA-Algorithm

Hypovolemia *	Tension pneumothorax *
Hypoxia	Tamponade (cardiac) *
Hypothermia	Thrombosis (myocardial infarction) *
H+ ions (acidosis)	Thrombosis (pulmonary) *
Hypo-/hyperkalemia	Toxins



- **ADRENALINE DOSES**
- **Anaphylactic shock / status asthmaticus:**
- **Cardiac arrest:**
- **Vasoconstriction:**
- **With LA for VC:**
- **Labour epidural:**

19. Identify the correct statements:

1. Glycopyrrolate is used as an ~~anxiolytic~~ before anesthesia. *Midazolam* ↓ *secⁿ*
2. Postoperative nausea and vomiting (PONV) is the most common cause for hospital admission after day care surgery. (T)
3. The best type of anesthesia for pre-eclampsia is Epidural anesthesia. (T)
4. Propofol is known to cause maximum pain on injection. *spinal avoid* (T)

A. 1, 2, ~~3~~, 4

B. 1, ~~4~~

C. 2, 3

D. 2, 3, 4

20. A 65-year-old male patient with cirrhosis is being posted for a liver transplantation. Which of the following induction agents will you use?

A. Methoxyflurane

B. Thiopentone

C. Sevoflurane

D. Ketamine

> Isoflurane.

21. Preoperative fasting recommendation is

A. 4 hours for ~~solids~~ in adults

B. 2 hours for liquids in adults

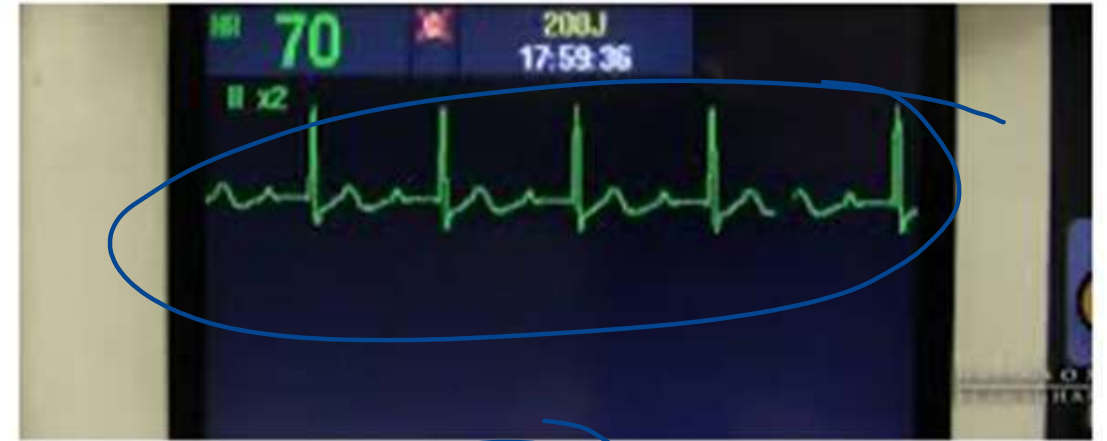
C. 2 hours for breast milk in infants 4hrs

D. 4 hours for solids in infants

Type of intake	Fasting time
Clear fluids ✓	2 hours
Breast milk	4 hours
Light meal/semi solid foods	6 hours
Heavy/fatty meal	8 hours

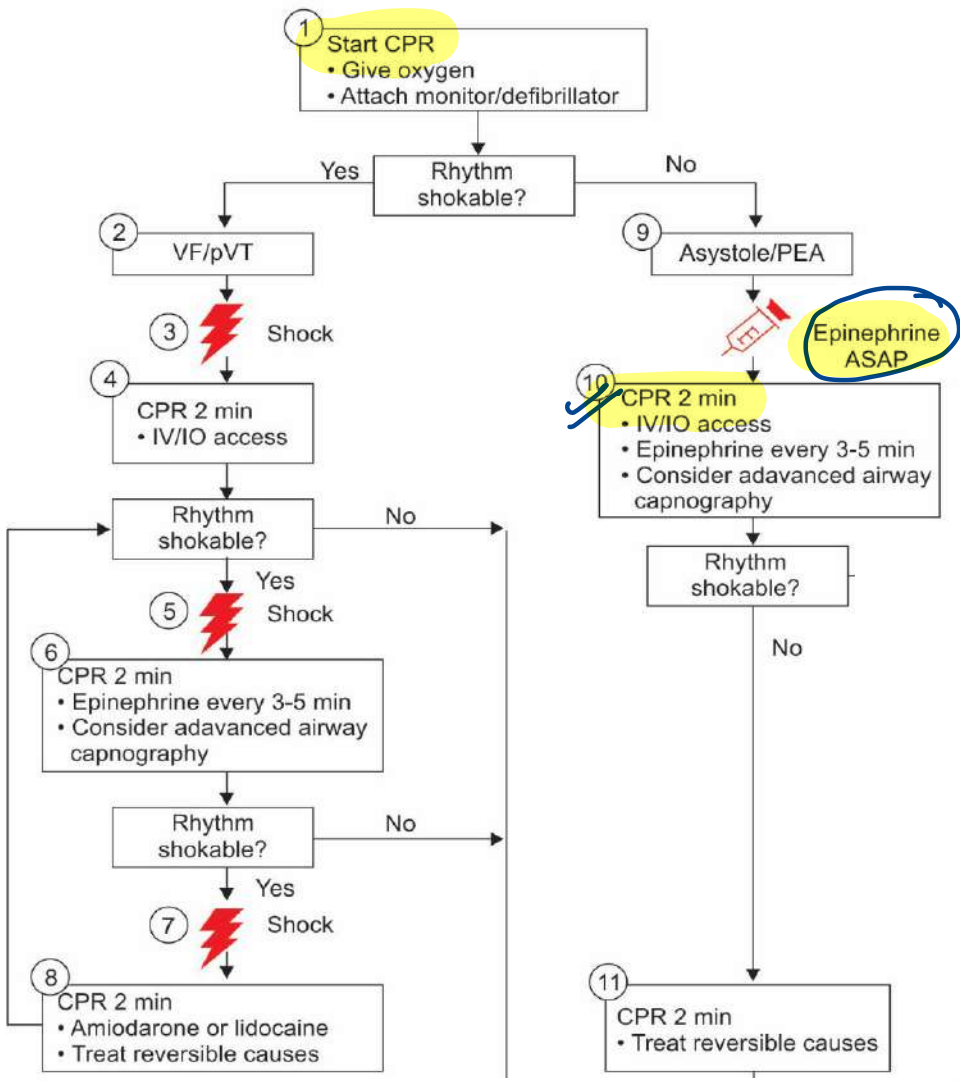
22. A 27-year-old woman was brought to the casualty in an unconscious state after having suddenly collapsed. As there was no pulse, cardiopulmonary resuscitation was started and the defibrillator showed the following. What is the next step?

- A. Defibrillation ~~XX~~
- B. Synchronized cardioversion ~~XX~~ SVT
- C. 1 mg epinephrine IV
- D. 0.5 mg atropine IV ~~XX~~



PEA

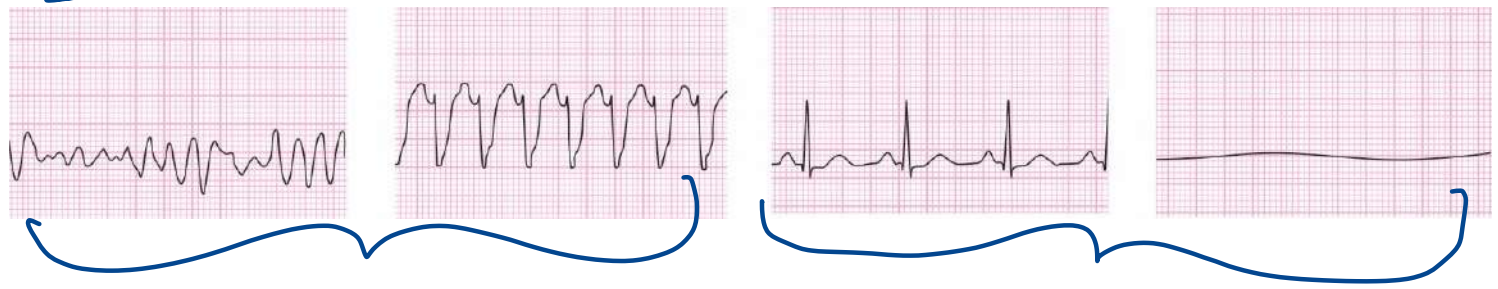
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 Monophasic: 360J



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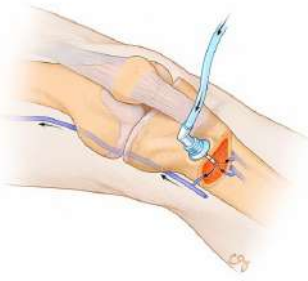
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Hypo-/hyperkalemia	Toxins



- **ADRENALINE DOSES**
- **Anaphylactic shock / status asthmaticus:**
- **Cardiac arrest:**
- **Vasoconstriction:**
- **With LA for VC:**
- **Labour epidural:**

23. Children's Hospital of Eastern Ontario Pain Scale (CHEOPS) for rating postoperative pain includes all of the following, except.

A. Cry

B. Legs

C. Torso position

~~D. Oxygen saturation~~

Score	0	1	2
Cry	No cry	Crying, moaning	Scream
Facial	Smiling	Composed	Grimace
Verbal	Positive	None or other complaints	Pain complaint
Torso	Neutral	Shifting, tense, upright	Restrained
Legs	Neutral	Kicks, squirm, drawn up	Restrained

24. A 45-year-old male with Ischemic heart disease is posted for Coronary artery bypass graft surgery. You want beat to beat blood pressure measurement intraoperatively to guide you through the hemodynamic changes. Which among the following is the ideal artery for invasive blood pressure measurement?

A. Ulnar

B. Radial ✓

PCI ✓

C. Brachial

D. Femoral

25. Which of the following inhalational agents has the highest blood-gas partition coefficient?

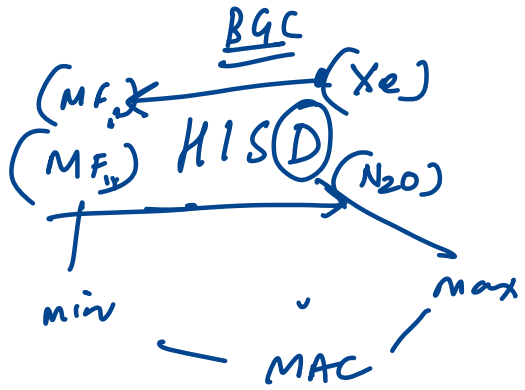
A. Halothane

B. N₂O

C. Desflurane

D. Methoxyflurane

	MAC	BLOOD GAS SOLUBILITY
Methoxyflurane	0.2	<u>12</u>
Halothane	0.75	2.5
Isoflurane	1	1
Sevoflurane	2	0.65
Desflurane	6	<u>0.45</u> (Xenon min)
N20	<u>104</u>	0.47



26. A 26-year-old pregnant woman receives epidural anesthesia. Immediately following the injection of lidocaine with epinephrine through the epidural catheter, the patient complains of perioral numbness and becomes very apprehensive. Her heart rate is 110/min and her BP is 90/60 mmHg. What is this most likely due to?

- A. Accidental subdural injection
- B. Accidental subarachnoid injection
- C. Accidental intravascular injection
- D. Allergic manifestation to lignocaine

LAST

high spinal \rightarrow bradycardia
> T4
total spinal \rightarrow collapse



27. Which of the following statements about sugammadex is false?

- A. Sugammadex is a reversal agent for rocuronium and vecuronium. *Ke / Ro*
- B. Sugammadex does not reverses the effect of succinylcholine.
- C. It is ~~safe~~ for use in patients with renal impairment *CI*
- D. Side effects include tachycardia, blurring of vision

28. Which is not an obvious advantage of the following?

- ~~A. Decreases need of intubation~~ (delays)
- B. Reduces nasopharyngeal dead space
- C. Heating and humidification
- D. PEEP

pyq →



29. Which of these is the definition of effective CPR?

1. Respiratory rate: 20 - 24 breaths per minute. ~~XX~~
2. Chest compressions: 100-120/min.
3. Allow complete chest recoil.
4. 2-2.4 inches depression.

A. 1, 2, 3 and 4

B. 1, 2 and 4

C. 2, 3 and 4

D. 1 and 2 only

push hard - push fast
100-120/min
2-2.4 in (5-6cm)
allow complete

✓ 30:2
- partners → every 2min

10-12/min

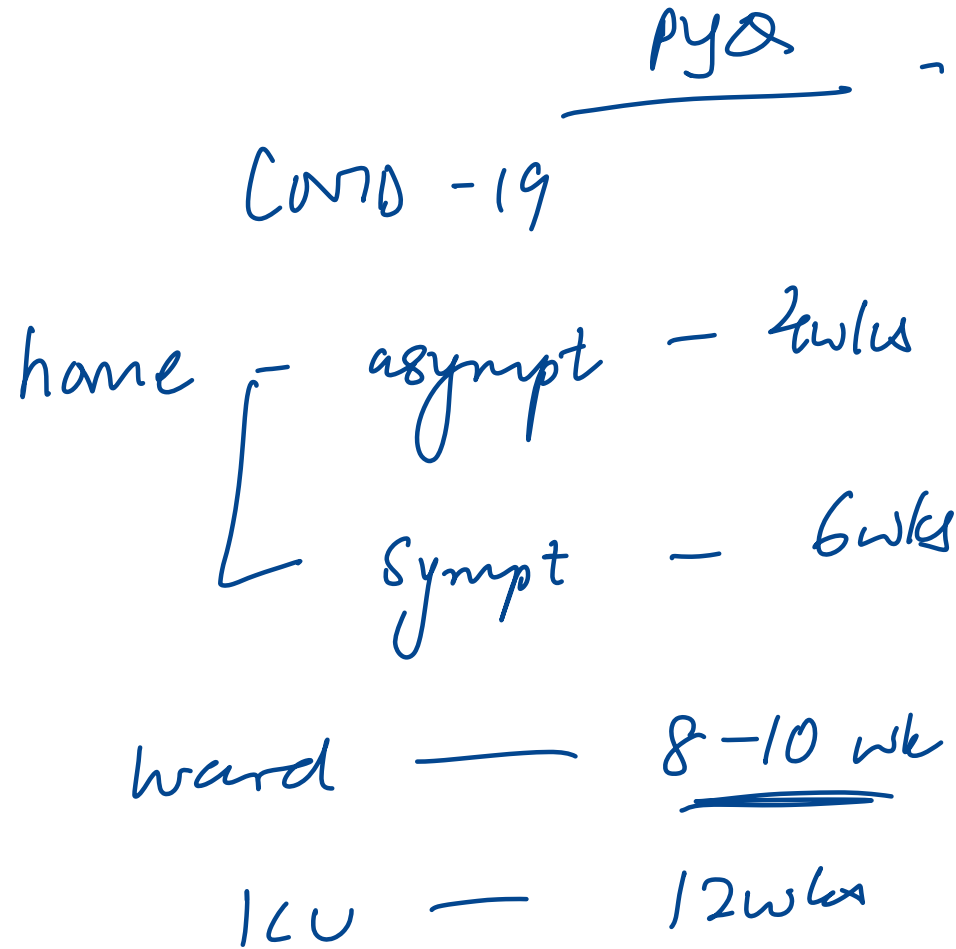
adequate CPR

ETCO₂
>10-20mm

DBP
Intra art
↓
>20mm

30. How long should elective surgery be deferred for a patient who was admitted in the ICU for severe respiratory infection?

- A. 6 weeks
- B. 8-10 weeks
- C. 12 weeks**
- D. 14 weeks



31. Which of the following non-invasive investigations provides the most accurate prognostic information with respect to predicting risks of perioperative cardiac complications?

A. Exercise ECG testing ^r

B. Dobutamine stress echocardiography

C. Myocardial perfusion scintigraphy ~~xx~~

D. Coronary angiography ~~xx~~

Pys

32. Identify A, B and C

A. A-MAP, B-Pulse, C-ETCO₂

B. A-HR, B-MAP, C-ETCO₂

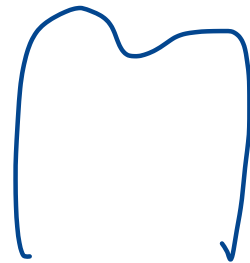
C. A-O₂ saturation, B-Pulse, C-Pulse pressure

D. A-HR, B- O₂ saturation, C-ETCO₂



33. You are a very smart intern and the anaesthetist on duty trusts you with monitoring a patient after induction while he goes to the next case and asks you to give any medications if needed. You keep observing the monitor continuously and is shown in the image below. What is the next step in this patient?

- A. Inject IV dantrolene sodium ~~X~~ ~~X~~
- B. Administer top up NM blocking agent
- C. Reassure yourself that "all is well"
- D. Ask surgeon to limit blood loss



Curare clef's
L spend breaths

34. A 70-year-old male patient was undergoing laparoscopic cholecystectomy. Halfway through the surgery, a sudden drop in EtCO₂ to 8 mm Hg was noted. His SpO₂ became 90% and blood pressure dropped to 70/50 mmHg and peak airway pressure was 18 cm of H₂O. What is the diagnosis?

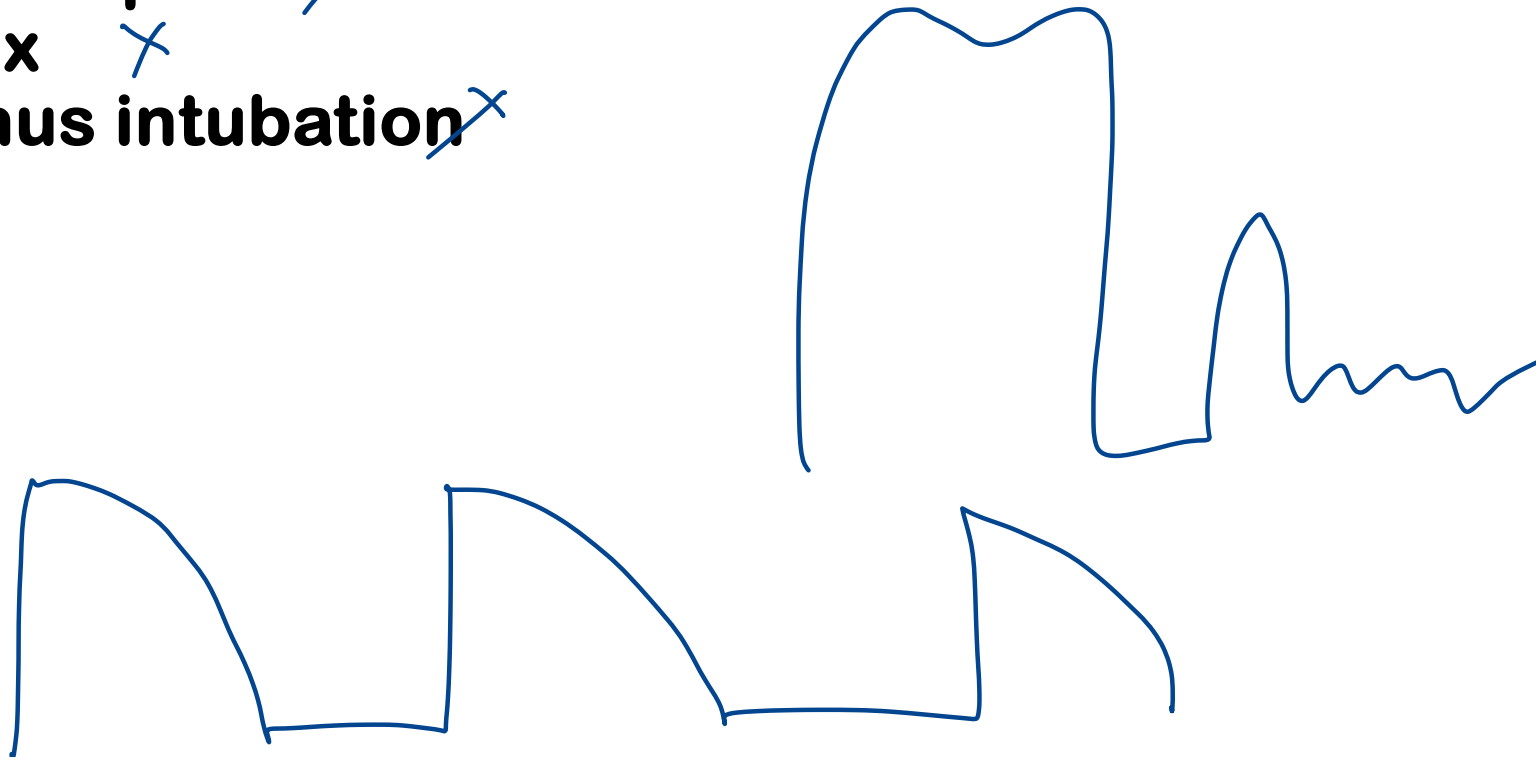
- 1. CO₂ embolism ✓
- 2. Severe bronchospasm ✗
- 3. Pneumothorax ✗
- 4. Single bronchus intubation ✗

A. Both 1 and 2

B. Both 3 and 4

C. 1 only

D. 2 only



35. A 56-year-old male patient was given celiac plexus block with 0.25% bupivacaine for a refractory abdominal pain secondary to carcinoma pancreas. Shortly after the injection, the patient suddenly became unresponsive and the pulse was not recordable. Which of the following would be the best course of management for this patient?

- A. CPR with 20% intralipid
- B. CPR with sodium bicarbonate
- C. CPR with dobutamine
- D. CPR with calcium

LAST

1.5 ml/kg x 1 min
iv bolus

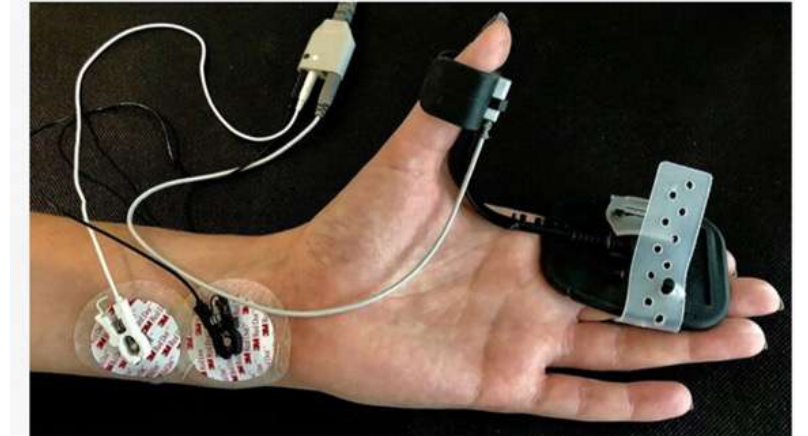
36. The image given below shows neuromuscular monitoring of the patient after anesthesia. What is the most commonly used cranial nerve for monitoring the same?

~~A. Facial nerve~~

B. Ulnar nerve *add pollicis*

C. Auriculotemporal nerve

D. Great auricular nerve



37. A 24-year-old young truck driver has developed a fissure in ano. What would be the ideal anesthesia for this case?

A. Caudal anesthesia

Children — sacrococcygeal lig
epidural

B. Epidural anesthesia

C. Saddle anesthesia

perianal

D. Spinal anesthesia

38. Which of the following drugs should be avoided for a daycare procedure?

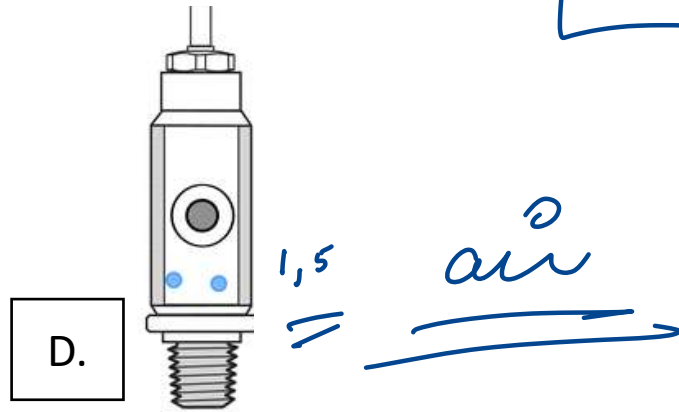
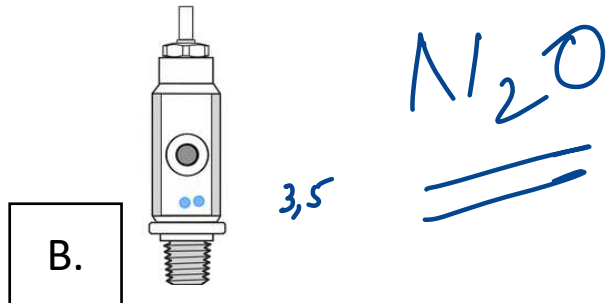
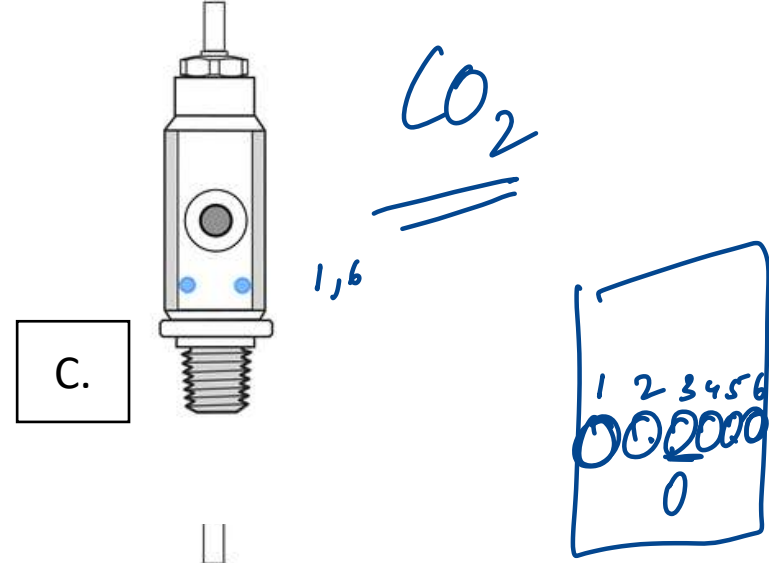
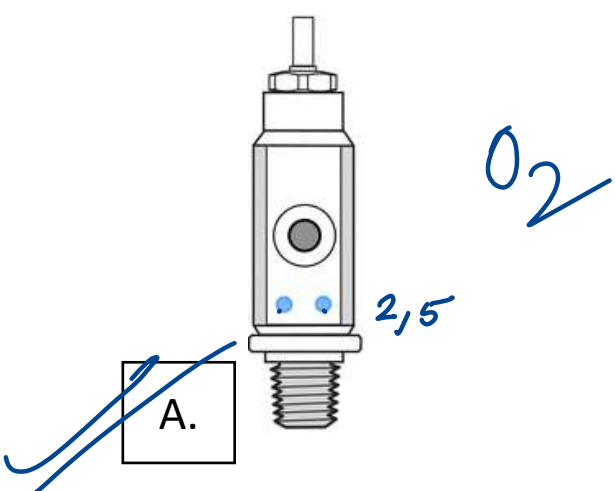
A. Propofol

B. Morphine

C. Sevoflurane

D. Sugammadex

39. A patient is scheduled for surgery, and the anesthesia team needs to ensure the proper connection of the oxygen supply. Which of the following PIN (Pin-Index) configurations corresponds to the oxygen supply in medical gas cylinders?



40. In a patient on mechanical ventilation and placed in prone position which of the following is true?

A. Prevents atelectasis of lung and alveolar collapse

- ↑ recruitment

B. Reduces CO₂ in alveoli ~~xx~~

C. Decreases inspiratory pressure ~~xx~~

D. Increases venous return and thus maintains cardiac output

~~xx~~

41. You are the team leader during a cardiac arrest resuscitation scenario in a hospital setting. A 65-year-old patient has suddenly collapsed and is unresponsive. The monitor displays a rhythm as shown in the image. What is the next immediate step?

- A. Administer epinephrine
- B. Begin high-quality CPR
- C. Defibrillate using monophasic defibrillator at 360 joules
- D. Defibrillate using biphasic defibrillator at 360 joules

100-120 J



V. Fib

Shockable

42. The patient, weighing 70 kg, arrived at the emergency department with acute pancreatitis and was subsequently transferred to the Intensive Care Unit (ICU) and put on a ventilator with the following settings: Fraction of Inspired Oxygen (FiO₂) at 90%, Positive End-Expiratory Pressure (PEEP) set to 12 mmHg, respiratory rate at 16 breaths per minute, and a tidal volume of 420 ml. The results of the arterial blood gas (ABG) analysis are provided below. What would be the appropriate next course of action for managing this patient?

pH - 7.33

PaO₂ - 110 mmHg⁽¹⁾

PaCO₂ - 60 mmHg^{RR}

spO₂ - 98%

A. Increase PEEP to 16

B. Increase tidal volume

C. Increase respiratory rate

D. Reduce FiO₂

3.6ml/kg

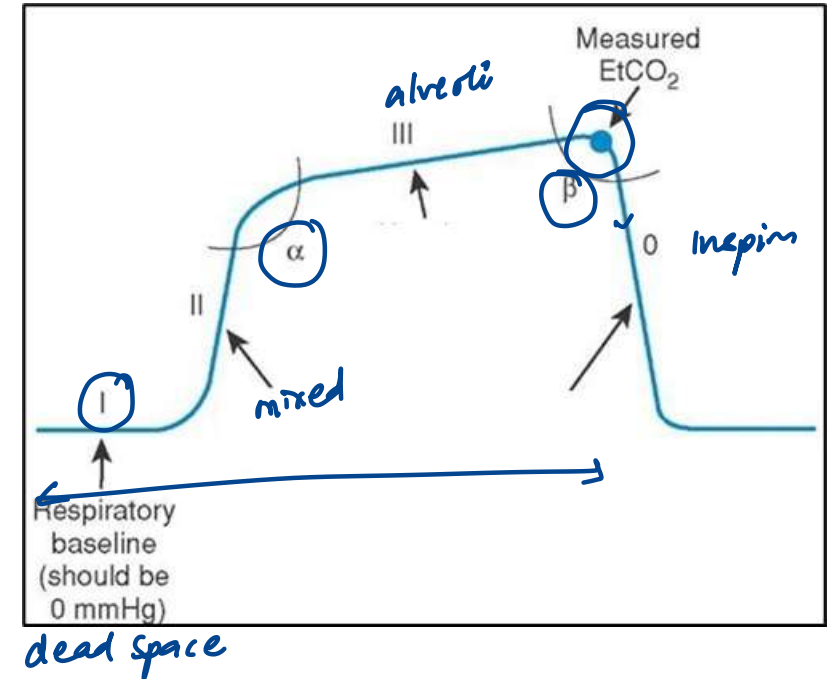
iv

PEEP

↓ RR / FiO₂

43. What does phase II represent in the below image? *NEET 24*

- A. Inspiration
- B. Expiration of dead space air
- C. Expiration of mixed air**
- D. Expiration of alveolar air



44. While resuscitating a newborn in the labor room, after bag and mask ventilation for 1 min at room air, the infant is still pale and hypoxic. What is the next step?

A. Increase FIO₂ to 30% ~~XX~~

Corrective

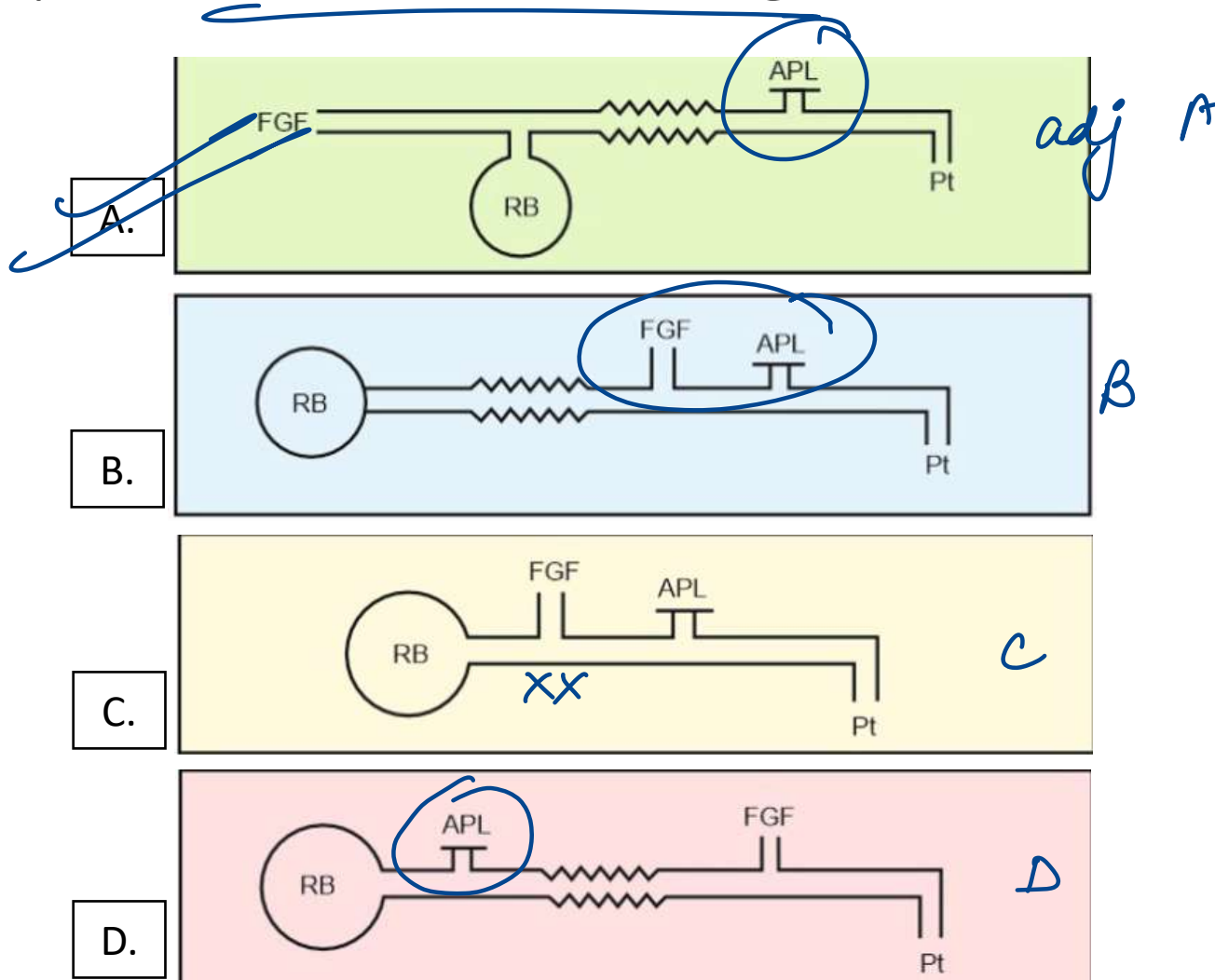
B. Readjust the mask

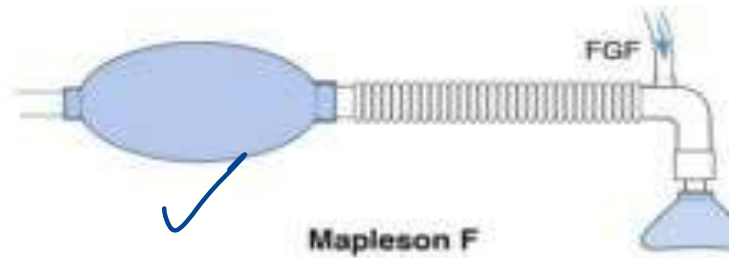
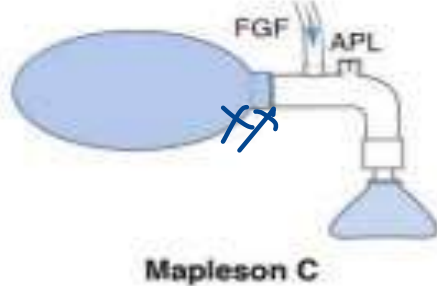
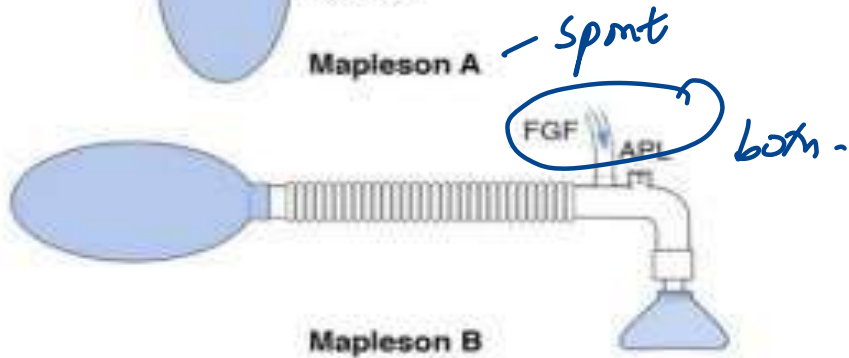
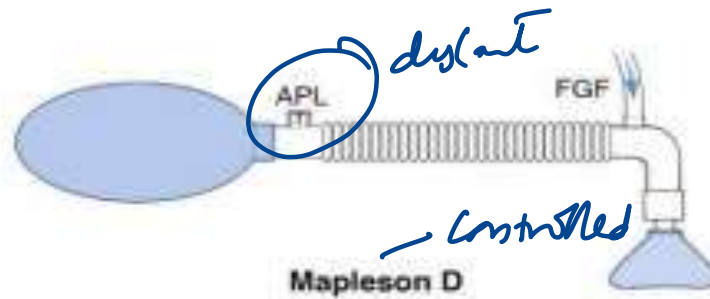
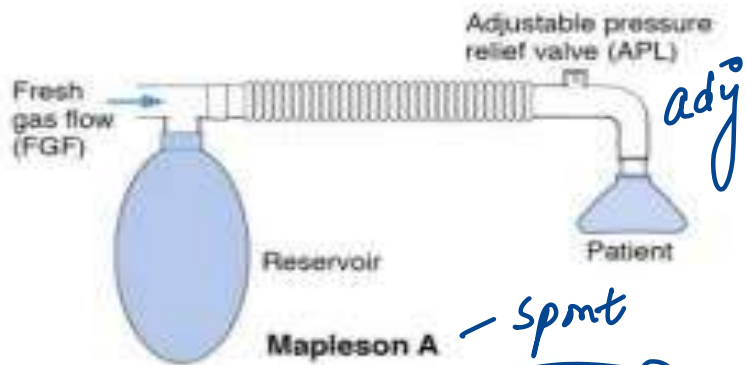
C. Intubate ~~XX~~

D. Start chest compression ~~XX~~

- ✓•M: Mask adjustment — Reapply the mask with proper technique and fit.
- ✓•R: Reposition airway — Place head in neutral or slight extension.
- ✓•S: Suction mouth and nose — Clear secretions that may obstruct airway.
- ✓•O: Open mouth — Open the mouth and lift jaw forward.
- ✓•P: Pressure increase — Increase inspiratory pressure incrementally until chest rise is seen.
- A: Alternative airway — If all else fails, insert endotracheal tube or laryngeal mask airway.

45. What is the most effective circuit for anesthesia under spontaneous breathing in adults?





A → E XX
 B → F XAPL
 C ×
 D

46. What is the recommended dose of adrenaline for a child during cardiac arrest?

A. 0.01 mg/kg (1ml/kg of 1:10,000 solution)

B. 0.1 mg/kg (1ml/kg of 1:1000 solution)

C. 0.001 mg/kg (1ml/kg of 1:1,00,000 solution)

D. 0.5 mg/kg (1ml/kg of 1:2000 solution)

QQ

1:10000 iv

47. The following patient with X-ray as shown below is posted for immediate laparotomy. Which of the following anesthetic agent is contraindicated in this patient?

A. Nitrous oxide

B. Desflurane

C. Halothane

D. Isoflurane

middle ear Sx



48. Which of the following is measured by the device shown in the given image?

A. Percentage of saturated Hb

B. Oxygen content of the blood

C. Partial pressure of oxygen

D. Amount of inspired oxygen



pO_2 → ABG

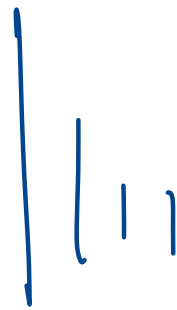
X
 FiO_2

- pulse oximeter

Beer Lambert law
red Hb - red
Oxidant Hb - IR

49. A 70 kg elderly athlete undergoes surgery and is administered succinylcholine due to the unavailability of vecuronium. A total of 640 mg of succinylcholine is given intermittently. During recovery, the patient is unable to breathe spontaneously or move limbs. What is the explanation?

- A. Pseudocholinesterase deficiency increasing action of succinylcholine
- B. Phase 2 blockade produced by succinylcholine
- C. Undiagnosed muscular dystrophy and muscular weakness
- D. Muscular weakness due to fasciculation produced by succinylcholine



Sch: 1-2mg/kg

> 2mg/kg = Phase 2

50. According to the latest AHA guidelines, what is the sixth link added to the "Chain of Survival"?

- A. EMS response
- B. Post-cardiac arrest care
- C. Early discharge
- D. Recovery**



Chain of Survival



BLS

51. What is AMBU aura 40?

- A. First generation supraglottic airway device
- B. Second generation supraglottic airway device
- C. Third generation supraglottic airway device
- D. Fourth generation supraglottic airway device

52. A 45-year-old male is scheduled for elective hernia repair surgery. His preoperative assessment shows normal liver function, but he has a history of moderate asthma, for which he uses an inhaler intermittently. Which inhalational agent is most appropriate for this patient?

A. Sevoflurane

B. Desflurane

C. Halothane

D. Nitrous oxide

most potent bronchodilator

53. A 56-year-old man with acute respiratory distress syndrome (ARDS) is being managed in the ICU. The intensivist decides to implement Positive End-Expiratory Pressure (PEEP) in his ventilatory support. Which of the following statements about PEEP is incorrect?

- A. Useful in situations where PO₂ is low ✓✓
- B. Decreases carbon dioxide ✓✓
- C. Causes impairment in renal function ✓✓ ↓ CO
- D. ~~Decreases~~ intracranial tension (ICT) (↑)

PEEP:

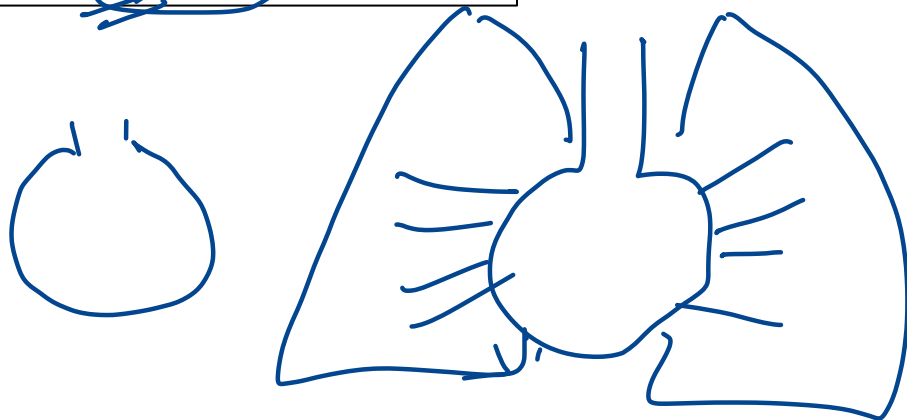
-Prevents collapse, Increase recruitment

-Reduce work of breathing

-Barotrauma, Low CO, Raised ICP

N: 3-5cm

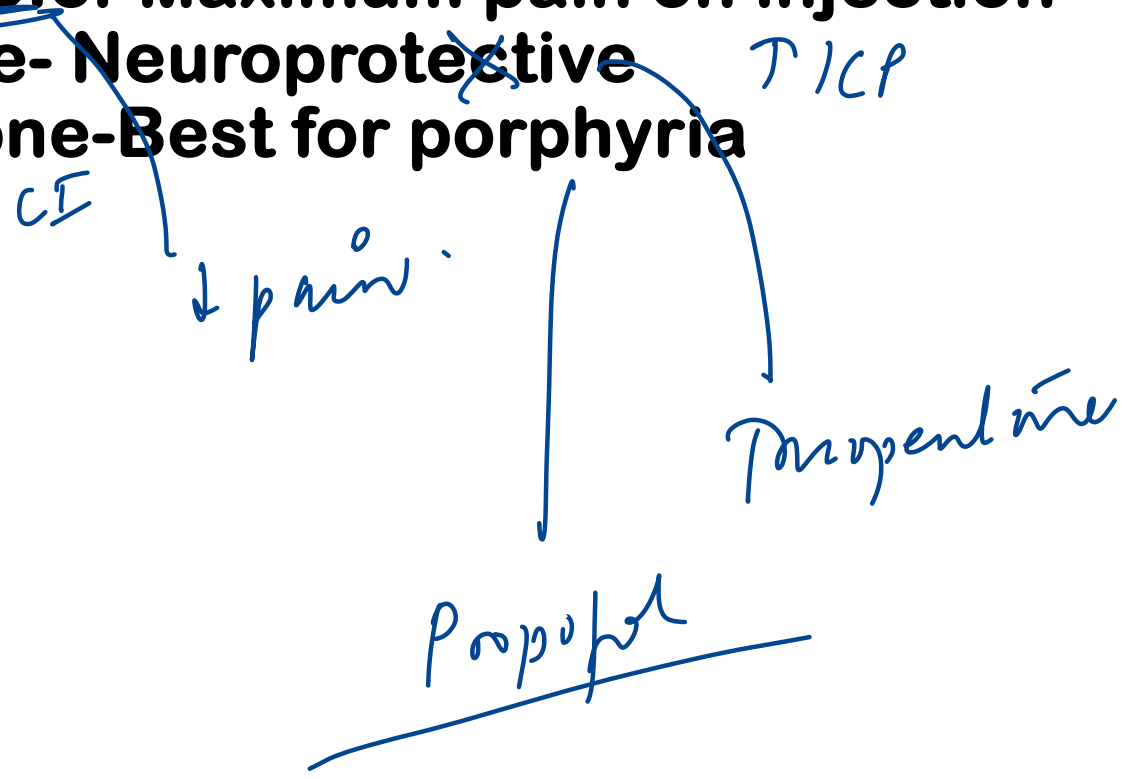
ARDS: 8-12cm



54. Identify the incorrect pair

- 1. Etomidate-Does not cause myocardial suppression ✓✓
- 2. Fospropofol-Maximum pain on injection - Propofol
- 3. Ketamine- Neuroprotective ~~✓~~ TICP
- 4. Thiopentone-Best for porphyria

- A. 2, 3, 4
- B. 1, 2, 3, 4
- C. 3, 4
- D. 2, 3



55. Which of the following is included in high-quality CPR?

1. Compression depth of at least 5 cm (T)
2. Rotate chest compressor every 3 ~~mins~~ ^{2 min}
3. Avoid excessive ventilation (T)
4. Compression - ventilation ratio of 30:2 (T)
5. Allow complete recoil (T)
6. ET co2 <10mm ~~xx~~
7. Intra-arterial DBP >20mm Hg (T)
8. Breaths 20-30 ~~/min~~

A. 1,2,3,4,5,6,7,8

B. 1,2,4,5,7,8

C. 1,3,4,5,7,8

D. 1,3,4,5,7

56. Identify the correct pair of doses:

1. Max dose of lignocaine without adrenaline-300mg
2. Dantrolene sodium-2.5mg/kg
3. Intralipid 20% IV-1.5 mL/kg
4. Epinephrine in cardiac arrest-1mg 1:10000 iv

A. 1,2,3,4

B. 1,2,3

C. 2,3,4

D. 2,3

DOSES



Handwritten notes and corrections:

- 2mg/kg (with a checkmark) and Bupiv (with a checkmark) are written below item 1.
- 5 cont epi (with a checkmark) is written below item 4.
- 7 c epi (with a checkmark) is written below item 4.
- Ligo is written below item 4.

57. What is the appropriate size for ET tube for child aged 8?

A. 6mm

B. 7mm

C. 8mm

D. 9mm

$$\frac{\text{age}}{4} + 4$$

Size of ET tube
Low-pressure, high-volume cuff
 <1000g baby-2.5mm
 1-2kg baby-3mm
 >2kg-3.5mm
Child-3-4
Female: 7mm
Male: 8mm

Tube Sizes in Pediatric



Types of tubes	Formula	4 Y	Unit
Endotracheal tube (uncuffed)	$ETT = 4 + (age/4)$	5	mm
NG or OG tube	$NG = 2 \times ETT$	10	French
Foley tube	$Foley = 2 \times ETT$	10	French
ETT depth (from incisor)	$Depth = 3 \times ETT$	15	cm
Chest tube (max size)	$Chest\ tube = 4 \times ETT$	20	French

Note 1: Minus the ETT size by 0.5 mm if cuffed tubes are used.

Note 2: Do not use cuffed ETT in neonates.



58. Identify the correct statements about muscle relaxants:

1. Gallamine and pancuronium have vagolytic activity (T)
2. Shortest acting approved NDMR is Gantacurium - Not approved
3. MR that may cause hypotension and flushing after injection: Tubocurarine (T)
4. Rocuronium and vecuronium can be reversed by use of Suggamadex (F)

A. 1,2,3,4

B. 2,3,4

C. 1,3,4

D. 2,4

Mivacurium

ML

1. Aminosteroid compounds:

1. Examples: Rocuronium, Vecuronium, Pancuronium, Rapacuronium
2. Features: Steroid nucleus structure, longer duration, primarily metabolized in liver and kidneys.
3. Generally do not cause histamine release.

2. Benzylisoquinolinium compounds:

1. Examples: Atracurium, Cisatracurium, Mivacurium, Doxacurium
2. Features: Non-steroidal, shorter or intermediate duration of action.
3. Undergo organ-independent elimination (Hofmann elimination and ester hydrolysis).
4. May cause more histamine release compared to aminosteroids.

59. Identify the correct statements

1. Lowest MAC=Highest potency

2. Min MAC-N₂O, Max MAC-Methoxyflurane

3. Blood gas partition coefficient (BGC)=Lipid solubility-Speed of induction

4. Lowest BGC-Xenon, Highest BGC-Methoxyflurane

A. ~~1,2,3,4~~

B. 1,3

C. ~~2,4~~

D. 1,4

o
Inv

max MAC

60. Which of the following statements is true regarding sodalime?

1. 100 g of sodalime can absorb 23 liters of CO₂ (T)
2. Amsorb is preferred for Sevoflurane and Desflurane over sodalime
3. The major constituent of sodalime is Ca (OH)₂ (T) (T)
4. Water content of sodalime is 5% ~~×~~ 10-12%
5. Can form a neurotoxic compound with Trilene (T)

- A. ~~2,3,4~~
- B. ~~1,2,3,4,5~~
- C. ~~1,2,3,4~~
- D. 1,2,3,5

61. You are planning to administer spinal anesthesia to a young female. Which of the following needles would be the most suitable for reducing the risk of a post-dural puncture headache?

A. 22G Quincke X

B. 22G Whitacre

C. 25G Quincke X

D. 25G Whitacre

62. Following tube adds additional airway resistance. This is due to:

A. Circumference of the tube

B. Length of the tube

C. Diameter of the tube

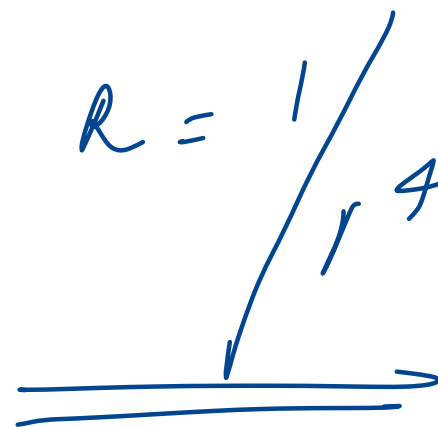
D. Curvature of the tube

E7 tube



$r \downarrow$

$$R = \frac{8l\eta}{\pi r^4}$$

$$R = \frac{l}{r^4}$$
A handwritten diagram in blue ink showing a horizontal pipe with an arrow pointing to the right, indicating the direction of flow. A diagonal line representing the radius of the pipe is drawn from the center of the pipe to the top edge. The letter 'l' is written above the diagonal line, and 'r' is written next to it. A '4' is written to the right of the diagonal line, indicating the fourth power in the denominator of the equation.

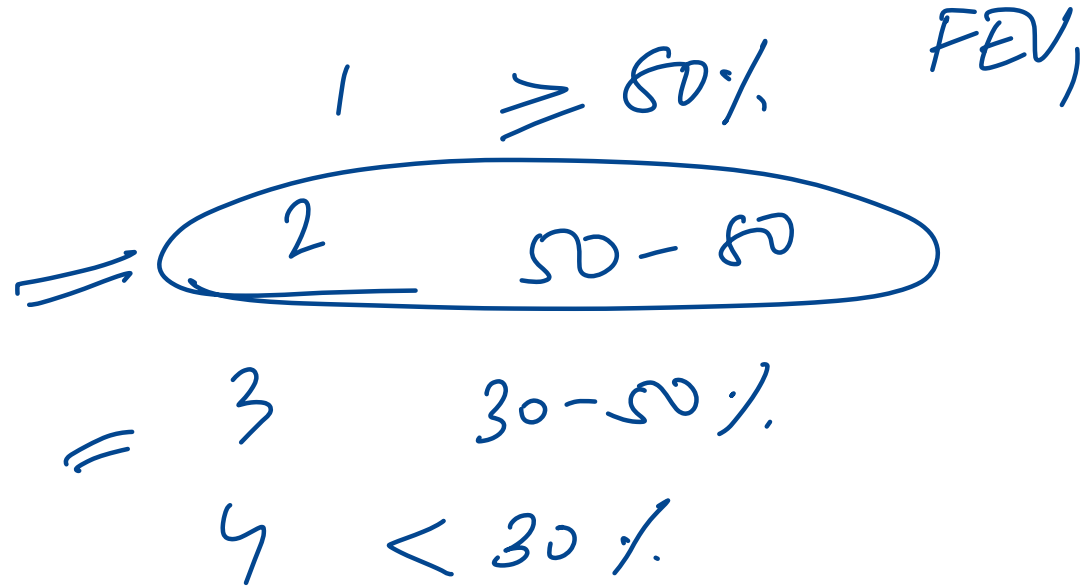
63. A 60-year-old patient with a history of severe (chronic obstructive pulmonary disease) presents for an elective hernia repair. The patient has a forced expiratory volume in 1 second (FEV₁) of 60% predicted and requires supplemental oxygen on activity. Under what ASA-PS classification would you place him?

A. ASA 1

B. ASA 2

C. ASA 3

D. ASA 4



64. A 2 years old child was playing with marbles and suddenly went limp and became unresponsive. Mother of the child was beside and saw him collapse. What is the first step to be done by mother in the situation?

- A. Call emergency medical services
- B. Feel for pulse and assess the breathing
- C. Back thrust ✗
- D. Heimlich manouever ✗

BLS

65. Arrange following parts of Anesthesia machine according to increasing pressure (from low to high):

1. Vaporizer mounting devices
2. Hanger yoke assembly
3. Flow meter assembly
4. Pipelines

A. 1-2-3-4

B. 1-3-4-2

C. 2-3-4-1

D. 2-4-3-1



1. High-pressure system:

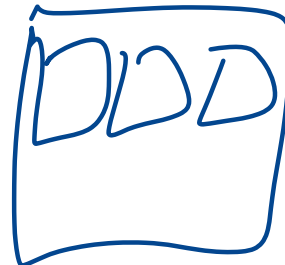
1. Gas cylinders (E-cylinders) and their yokes. ✓
2. Cylinder pressure regulators reducing cylinder pressure (~2000 psi oxygen) to an intermediate pressure (~45-55 psi).
3. Pressure gauges showing cylinder pressure.

2. Intermediate-pressure system:

1. Pipeline gas inlets.
2. Pipeline pressure gauges.
3. Oxygen failure protection device (fail-safe valve). ✓✓
4. Flowmeter valves (where gas flow is controlled). ✓✓
5. Oxygen flush valve (feeds gas directly from the intermediate pressure to the breathing circuit).

3. Low-pressure system:

1. Flowmeters (rotameters). ✓
2. Vaporizers (where anesthetic vapor is added).
3. Common gas outlet leading into the breathing circuit. ✓



66. All of the following are contraindications of neuraxial blockade except:

- ~~A. Spinal deformity~~
- B. Patient refusal
- C. Local infection
- D. Papilledema

67. Identify the correct statements:

1. Best site for measuring the core temperature intra-operatively is lower 1/3 of esophagus MC T

2. Duration of action of propofol is 15-20 minutes T topical

3. T10 level anesthesia is adequate for LSCS X T4

4. Sch can cause hyperkalemia, tachycardia, raised ICP and raised intra-gastric pressure ✓ ✓ ✓ ✓

A. 1, 2, 3, 4

B. 1, 2

C. 3, 4

D. 2, 3

ideal : PA

T MC

T topical

X T4

HR ↓

68. Which of the following is not weaning mode of ventilation:

A. CMV

B. SIMV

C. PSV

D. CPAP

69. Identify the maneuver being performed in the given image?

A. Head tilt, chin lift

B. Jaw thrust

C. Head extension

D. In line manual stabilization



70. Which of the following is an advantage of epidural over spinal anesthesia?

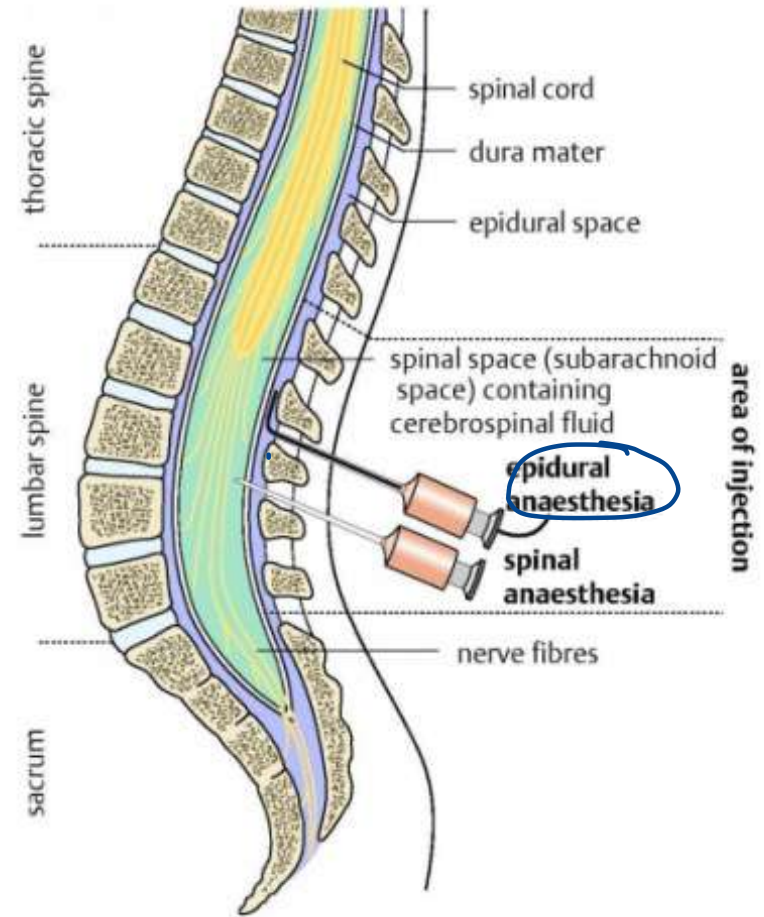
A. Less dose of drug required ↑ dose

B. Duration can be prolonged using an inlaying catheter

C. Easier technique xx ↑ difficult

D. Less traumatic needle xx

Features	Epidural anesthesia (EA)	Spinal anesthesia (SA)
Drug dose	Larger dose than SA	Smaller dose than EA
Onset of anesthesia	Approximately 25–30 minutes	Approximately 5 minutes
Spine level that can be performed	Anywhere along the vertebral column	Lumbar only (mostly below the L2 vertebral body)
Quality of anesthesia	Not as good as SA	High
Intraoperative redosing	Possible, can be continued postoperatively via a catheter	Generally, a single-shot injection
Duration of block	Adjustable, prolonged	Brief, usually 2–4 hours



71. Which of the following is not correct about management of Post-CPR Return of spontaneous circulation?

- A. Targeted temperature management at 32 -36° C if patient is awake
- B. MAP > 65 mm Hg
- C. SpO2 92-98%
- D. Emergent cardiac intervention if STEMI present

Pyo

Comatose

72. A 34-year-old male is brought to the emergency department by his friends after being found unconscious. His friends report that he had been using heroin earlier in the day. On examination, the patient is unresponsive, his respiratory rate is 6 breaths per minute, pupils are pinpoint, and his oxygen saturation is 85% on room air. What is the most appropriate immediate management for this patient?

A. Endotracheal intubation and mechanical ventilation

B. Administer intravenous naloxone

C. Start intravenous fluids and observe

D. Provide oxygen via nasal cannula and monitor

73. Which color of Venturi device will you use to administer a 40% concentration of oxygen to the patient?

A. Yellow

B. White

C. Green

D. Red

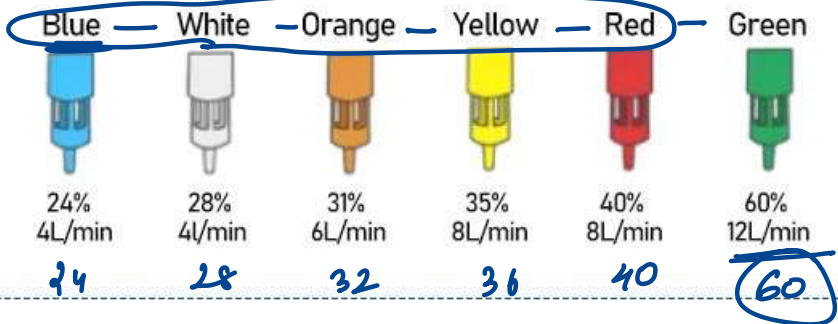
24

.

.



Be equipped with 6 different oxygen concentration diluters which allows to select different oxygen concentration



74. A 42-year-old woman who is on SSRI for major depression for 6 months underwent hernia surgery. Post-operatively the nurse administered an analgesic for the pain. After some time, the patient developed fever, rigidity, restlessness, and delirium. Clonus is demonstrated on examination. Which of the following is unlikely to have caused her symptoms?

A. Meperidine ✓

B. Buprenorphine

C. Tramadol ✓

D. Fentanyl ✓

Opioid + SSRI

75. A 3-minute-old newborn is being resuscitated due to signs of respiratory distress. Where should the clinical team place the pulse oximeter to measure oxygen saturation in this infant?

A. Left upper limb

B. Left lower limb

C. Right upper limb

D. Right lower limb

Thank You
