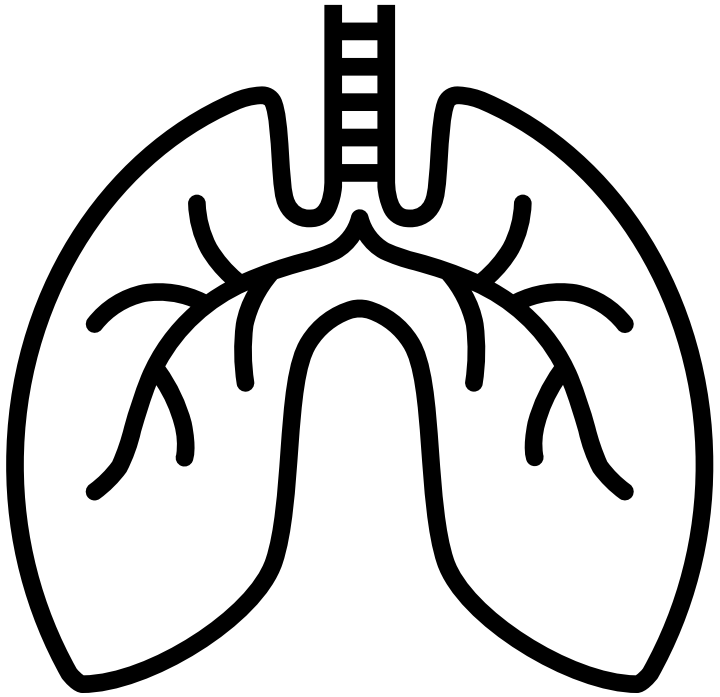

PHYSIOLOGY P.P respiratory system

- **By: Odai AL- refai.**
- **Corrected by: Omar jafar & Osama Rawhi atrash.**

- Regarding HbO2 dissociation curve, P50 increases in:
- A. HbF (fetal hemoglobin).
- B. during exercise.
- C. CO poisoning.
- D. when PCO2 decreases.
- E. alkalosis.
- Answer: b (2020)

- What is common between obstructive and restrictive pulmonary diseases:
- A. low FEV1.0.
- B. low FVC.
- C. low FEV1.0/FVC.
- D. high TLC.
- E. low respiratory vascular resistance.
- Answer: a (according to physio lab lecture, page 17) (2020)

- Regarding carbon monoxide poisoning, one of the following is FALSE:
- A. If sever enough, can leads to death.
- B. causes hypoxia.
- C. affect oxygen availability to the tissues.
- D. associated with low arterial PO2.
- E. hemoglobin-O2 saturation is depressed
- Answer: d (2020)

- Which of the following is the primary regulating variable of the peripheral chemoreceptors:
- A. PaO_2.
- B. $PaCO_2$
- C. arterial pH.
- D. Input from stretch receptors.
- E. CSF PO_2.
- Answer: a (2020)

- A 49 year old coal miner presents with dyspnea and nonproductive cough and decreased exercise tolerance. Lung tests reveal the followings: total lung capacity= 3.34 L (56%of predicted), residual volume = 0.88 L (54% of predicted) and forced vital capacity =1.38 L (30% of predicted). His arterial PO2 is 68 mmHg. Which of the following values will be approximately normal:
- A. FEV1.0/FVC.
- B. Tidal volume.
- C. V/Q ratio.
- D. Diffusing capacity.
- E. Lung compliance.
- Answer: a (2020)

- Regarding the oxygen extraction ratio, all the following are true EXCEPT:
- A. can be calculated if we know the arterio-venous [O2] difference.
- B. increases during exercise.
- C. increases when HbO2 dissociation curve is shifted to the right.
- D. carotid bodies have the lowest arterio-venous PO2 difference.
- E. is fixed under all circumstances.
- Answer: e

- O2 dissociation curve shifts to Right by all of the following EXCEPT:
- A. Increase [H+].
- B. Increase PCO2.
- C. Increase temperature.
- D. Increase Carbon monoxide.
- E. Increase 2, 3, bpG.
- Answer: d (2020)

- If blood Hb concentration is 15 g/dL, arterial PaO_2 is 100 mm Hg, and hemoglobin is 98% saturated with oxygen, the volume of oxygen contained in 100 ml of blood is approximately:
- A. ≈6.6 ml.
- B. ≈13.4 ml.
- C. ≈15 ml.
- D. ≈20 ml.
- E. Cannot be calculated from the above data.
- Answer: d (2020)

- In the lung, when O2 diffuses from the alveoli to the capillaries, most of it:
- A. Remains in solution as O2.
- B. Converted to oxyhemoglobin.
- C. Converted to bicarbonate ions in RBC.
- D. Combines with plasma proteins.
- E. Combines with H2O in plasma to form carbonic acid.
- Answer: b

- TB Bacilli bacteria (Oxygen-loving Bacteria) would prefer to live and build their nests in the apex of the lung. The reason for that is:
- A. the apical alveoli are more ventilated when compared to basal alveoli.
- B. Ventilation/perfusion ratio is more than 1.
- C. apical alveoli are surrounded with less negative intrapleural pressure.
- D. apical alveoli are more compliant when compared to basal alveoli.
- E. apical alveoli are more perfused when compared to basal alveoli.
- Answer: b

- Increase ventilation during exercise, which of the following changes occur:“A=stands for alveolar”
- A. increase P_{AO_2}, increase P_{AH_2O}, increase arterial P_{CO_2}.
- B. increase P_{AO_2}, unchanged P_{AH_2O}, increase arterial P_{CO_2}.
- C. unchanged P_{AO_2}, unchanged P_{AH_2O}, unchanged arterial P_{CO_2}.
- D. decrease P_{AO_2}, unchanged P_{AH_2O}, decrease arterial P_{CO_2}.
- E. decrease P_{AO_2}, unchanged P_{AH_2O}, increase arterial P_{CO_2}.
- Answer: c

- The work of breathing is:
- A. directly proportional to lung compliance.
- B. Remain constant during exercise.
- C. is directly proportional to the airway resistance.
- D. Is less in pulmonary fibrosis.
- E. Is less in IRDS.
- Answer: c

- In Carbon monoxide (CO) poisoning patient but with normal lungs, all the following are expected to decrease EXCEPT:
- A. Arterial oxygen concentration [02]a.
- B. Venous oxygen concentration [02]v.
- C. Arterial P02.
- D. 02 Sat.
- E. 02 availability to the tissue.
- Answer: C

- Which of the following increases the po2 :
- A. increase pco2.
- B. increase temperature.
- C. increase 2,3-BPG.
- D. co poisoning.
- E. fetal Hb.
- Answer: E (not sure) (2020)

- In diving, divers first hyperventilate before they go into water. This hyperventilation allows one to hold one's breath for a longer period of time, because hyperventilation:
- A. Make alveolar air full of O2 which divers can use while diving.
- B. Decreases the pH of systemic arterial blood.
- C. Increases brain blood flow.
- D. Increases the oxygen reserve of systemic arterial blood.
- E. Decreases the PCO2 of systemic arterial blood.
- Answer: e

- Hypoventilation causes one of the following changes in arterial blood gases:
- A. Increase in arterial PO_2, increase in arterial PCO_2, and decrease pH.
- B. Increase in arterial PO_2, decrease in arterial PCO_2, and increase pH.
- C. Decrease in arterial PO_2, decrease in arterial PCO_2, and increase pH.
- D. Increase arterial PO_2, no change in arterial PCO_2, and increase pH.
- E. Decrease in arterial PO_2, increase in arterial PCO_2, and decrease pH.
- Answer: e

- An individual with normal lung compliance and increased airway resistance would face problem mainly during:
- A. Expiration but only during exercise.
- B. Inspiration but at night only.
- C. Both inspiration and expiration but more in inspiration.
- D. Inspiration.
- E. Expiration.
- Answer: e

- In normal person, breathing room air at sea level at rest In standing position. Which of the following statements is true:
- A. Mixed Venus o2 is equal or more than 2oml/dl blood.
- B. Compliance is greatest at lung apex.
- C. Ventilation at the base is more than ventilation at the apex.
- Answer: c

- Normal standing individual, when compared to apical alveolar, the alveoli at the base of the lungs:
- A. At RV, their alveoli reach their resting volume.
- B. Less compliant.
- C. They have a less volume change during inspiration starting from FRC.
- D. higher PAO2.
- E. At FRC they are less inflated.
- Answer: e

- Which of the following is FALSE concerning airway resistance (R):
- a. In the later generations, the radii are smaller, increasing the total resistance at each successive generation.
- b. Under normal conditions, R resides mainly in the large airways
- c. Whenever R is increased FEV1.0/FVC is below normal.
- d. Airway resistance can be increased by loss of tissue elasticity and contraction of bronchial smooth muscles.
- e. Under normal conditions, R is small and negligible.
- Answer: A

- Regarding lung diseases, one of the following is true
- a. Increase in the diameter of the airways by 10% results in a increase in airway resistance by more than 10%.
- b. COPDS are least common seen in clinical Practice.
- c. Pulmonary fibrosis is an example of increase airway resistance.
- d. In pulmonary fibrosis, FEV1.0/FVC is ≥ normal.
- e. In obstructive lung diseases, difficulty is during inhaling rather than during exhaling.
- Answer: d

- Regarding bronchial asthma, all the following statements are true EXCEPT:
- a. Cough suppressants are highly indicated.
- b. Airway resistance is increased.
- c. During the attack, FEV1.0/FVC is 80%.
- d. Bronchodilators can be given to asthmatic patients.
- e. Patients might be allergic to pollens.
- Answer: C

- If Hb concentration is 7.5 g/dl, and the arterial blood 02 sat is 98%, what would be the concentration of arterial O2:
- a. Arterial [02] cannot be calculated.
- b. The dissolved O2 becomes more than the Hb-bound 02.
- c. There is about 15 ml of oxygen per 100 ml of arterial blood.
- d. Arterial [02] equals 10 ml/dl.
- e. When [Hb] equal 7.5 g/dl, the automatically, 02 Sat never exceeds 50%.
- Answer: d

THE END

thanks for omar jafar and osama atrash for revision the answers <3.