

# Cari's story essay sample



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BUSTER**

A. How could an infection in Cari's nasal passages and pharynx spread into her sinuses? The infection could have easily traveled into her sinuses due to the fact of how close the passages and sinuses are to each other. B. What is the cough reflex? Describe the process that Cari's respiratory system is using to clear her lungs by coughing. The cough reflex is deep inhalation followed by complete closure of the glottis and strong exhalation suddenly opening the glottis, and blasting air through the upper respiratory passages. Cari's respiratory system is forcing out mucous in order to maintain enough space within her lungs for oxygen. C. Which structures found in the terminal bronchioles and alveoli normally would protect cari's lungs from infectious pathogens and particulate matter? Normally goblet cells secrete mucous to trap particles while cilia works by moving mucous towards the pharynx for removal. Cigarette smoke damages and destroys cilia, and causes goblet cells to produce increased amounts of mucous. The damaged cilia combined with increased mucous obstructs airflow in and out of the lungs. D. How would the resistance of Cari's airways be affected by excess mucus and fluid in her lungs?

Excess mucous would build up within Cari's lungs and her airflow will be hindered. E. How would Cari's lung compliance be altered as her alveoli fill with fluid due to pneumonia? Cari will have harder time breathing because her alveoli will not be able to efficiently exchange oxygen and CO<sub>2</sub> in the blood. F. How would fluid in Cari's lungs affect her total lung capacity? Her total lung capacity will decrease due to the excess fluid taking up space in her lungs. G. How does the elevation of Cari's respiratory rate alter her minute ventilation? If the rate of her respiration increases then her minute

ventilation increases and she may start to hyperventilate increasing CO<sub>2</sub> in her blood stream leading to respiratory alkalosis. H. Normal blood oxygen saturation levels are greater than 94%; Cari's blood oxygen saturation levels was 90% at the time of her exam and an initial arterial blood gas analysis is done when she was admitted to the hospital revealed her arterial PO<sub>2</sub> was 54 mmHg. How do these clinical findings relate to the internal respiration in Cari's body?

A low PaO<sub>2</sub> level indicates that the patient is not respiring properly or is hypoxemic an oxygen deficiency in the arteries. I. Which of the symptoms Cari has described are due to lack of oxygen and reduced oxygen exchange at her tissues? Symptoms decreasing oxygen saturation of blood 94 to 90, increased respirations and the pH levels in her blood are decreasing. J. As Cari's PCO<sub>2</sub> rose, how was the oxygen-carrying capacity of hemoglobin affected? The hemoglobin would not be carrying as much oxygen carrying capacity. K. How would your have expected Cari's decreased PCO<sub>2</sub> and alkaline blood PH to have affected her breathing? They will have affected her breathing by making it increasingly difficult for blood to transport oxygen throughout her body. L. How would administration of oxygen enhance Cari's central drive to breath? Administering oxygen via mask gives a higher concentration of oxygen.

M. Which anatomical structures in Cari's respiratory system were initially involved? Cari's lungs and accessory muscles were initially involved. N. Why was Cari plagued with chronic smokers cough? Cari was plagued with a chronic smokers cough because after 20 yrs of smoking the buildup of carbon in her lungs caused enough damage to the cilia and alveoli that they

become compromised thus leaving her more susceptible to an inflammatory response. O. Which damaging effects of tobacco smoke led to Cari's impaired respiratory defense mechanisms? Smoking a pack a day for 20 years caused her alveoli to become filled with mucus and the cilia overtime became damaged leading to impaired respiratory defense after the macrophages became trapped in the buildup of mucus. P. How did the pneumonia affect Cari's lung function? The increased secretions sitting in her lungs led to an inflammatory response which caused the pneumonia thus decreasing the space in her lungs causing her to breathe at a faster pace and absorb less oxygen.