

Assignment example

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Respiratory Care Medications (al Affiliation) Respiratory Care Medications

According to Persing, , the respiratory care medications are a culmination of efficient drug usage and drug calculations. The types of drugs used fall under the Nonsteroidal Anti-inflammatory Drug (NSAID). Under these drugs, there are narcotic analgesics and non-narcotic analgesics, all with different chemical characteristics. There are two major complications that occur within the respiratory system; influenza and pneumonia. Both diseases affect people within different age groups. In addition, young children (less than two years) and adults (65 and above) are required to receive vaccination from pneumonia (Persing, 2010).

Persing, (2010), explains how to administer drugs when treating respiratory complications. Dosage calculations always follow the rule that; 1 milliliter of a one percent solution will always amount to ten milligrams (10mg) of solute. Drug calculations are imperative to establish the optimal levels of serum sodium, chloride, and potassium. The drugs administered to patients with respiratory complications have differing side effects. Patients must be consulted about existing medical conditions to identify the type of medication to be administered.

Significance of High and Low Sodium, Chloride, and Potassium Levels

Normal sodium levels range between 135-145 milliequivalents per liter of blood (mEq/L). Hyponatremia will result if the blood sodium levels are lower than 135mEq/L. Hypernatremia is the condition where the blood sodium level exceeds the 145mEq/L limit. Under both conditions; the cells swell up with excess water resulting in cell damage. Excess sodium can result in high blood pressure while inadequate sodium levels may impair the functioning of nerves and muscles.

Normal chloride results range between 96 -106 mEq/L. Hyperchloremia occurs if the chloride level exceeds 106mEq/L, whereas hypochloremia results from extremely low levels (96mEq/L) of chloride. Both conditions result in an electrolyte imbalance within the body to cause an electrolyte disturbance. In addition, the transport of oxygen may also be affected under both conditions.

The levels of potassium in the body vary with age. For adults, the levels range between 3.5 to 5.2mEq/L or 3.5 to 5.2 Milli-moles per Liter (mmol/L). High potassium levels result in hyperkalemia whereas low potassium levels result in hypokalemia. Hyperkalemia may lead to an irregular pulse whereby there is sudden collapse if the heartbeat is too slow. Under both conditions, the nervous system becomes slow and affects the efficient functioning of the muscles.

Reference

Persing, G. (2010). Respiratory care exam review: review for the entry level and advanced exams (3rd ed.). Maryland Heights, Mo.: Saunders Elsevier.