

Intravenous (IV) Therapy Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

Copyright © 2025 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain from reliable sources accurate, complete, and timely information about this product.

SAMPLE

Questions

SAMPLE

- 1. Which IV medication administration method typically requires an IV pump for safety?**
 - A. IV push**
 - B. Volume-controlled infusion**
 - C. Direct bolus injection**
 - D. Intermittent access**
- 2. What is the purpose of changing the IV administration set every 72 hours?**
 - A. To prevent infections and complications**
 - B. To allow for blood transfusion**
 - C. To replace lost fluids**
 - D. To adjust medication dosages**
- 3. What type of therapy frequently utilizes implanted ports for medication delivery?**
 - A. Physical rehabilitation**
 - B. Chemotherapy**
 - C. Cardiac care**
 - D. Wound care**
- 4. What are possible symptoms of an air embolism?**
 - A. Increased energy and decreased heart rate**
 - B. Anxiety, dyspnea, and chest pain**
 - C. Fever and hypothermia**
 - D. Headache and extreme fatigue**
- 5. Which positioning technique may help if an air embolism is suspected?**
 - A. Supine position**
 - B. Left side in Trendelenburg position**
 - C. Right side in Trendelenburg position**
 - D. Fowler's position**

- 6. What is an implanted port primarily used for in medical settings?**
- A. Short term access for blood draws**
 - B. Delivering medications via oral route**
 - C. Long term central delivery access, typically for chemotherapy**
 - D. Blood transfusions only**
- 7. What could potentially prevent site infections?**
- A. Timely dressing changes**
 - B. Pain management strategies**
 - C. Assessing blood pressure every hour**
 - D. Allowing excessive movement of IV site**
- 8. Which type of solution is used to draw water into the cells?**
- A. Hypertonic solution**
 - B. Isotonic solution**
 - C. Colloid solution**
 - D. Hypotonic solution**
- 9. What does the term “timed infusion” refer to in IV therapy?**
- A. An IV medication given all at once**
 - B. An IV medication that is given over a specific period of time**
 - C. An IV medication that is injected rapidly**
 - D. An IV medication that is given intermittently**
- 10. What is a key benefit of using a 2-in-1 IV solution?**
- A. It allows for faster infusion rates**
 - B. It combines multiple electrolytes in a single solution**
 - C. It provides a method to deliver dextrose and amino acids without lipids**
 - D. It is less expensive than other IV solutions**

Answers

SAMPLE

- 1. B**
- 2. A**
- 3. B**
- 4. B**
- 5. B**
- 6. C**
- 7. A**
- 8. D**
- 9. B**
- 10. C**

SAMPLE

Explanations

SAMPLE

1. Which IV medication administration method typically requires an IV pump for safety?

A. IV push

B. Volume-controlled infusion

C. Direct bolus injection

D. Intermittent access

The choice of volume-controlled infusion as the method that typically requires an IV pump for safety is based on its nature and purpose in clinical settings. This method is used to administer medication or fluids in a controlled manner, allowing for precise regulation of the volume and the rate of infusion. When using an IV pump, healthcare providers can set specific parameters for delivery, which is crucial for medications that require consistent blood levels or where patient safety is paramount, such as in the case of critical medications like antibiotics, chemotherapeutics, or fluids. The pump helps prevent accidental over-infusion or under-infusion and can provide alarms and alerts to ensure that the administration is proceeding as expected. In contrast, other methods like IV push, direct bolus injection, and intermittent access do not necessarily require the use of a pump, as they can be administered rapidly or through manual regulation. These methods typically deliver a single dose of medication or fluid without the ongoing monitoring capabilities provided by an IV pump. Therefore, the use of a pump for volume-controlled infusion enhances patient safety by allowing for more accurate and monitored medication delivery.

2. What is the purpose of changing the IV administration set every 72 hours?

A. To prevent infections and complications

B. To allow for blood transfusion

C. To replace lost fluids

D. To adjust medication dosages

Changing the IV administration set every 72 hours is primarily aimed at preventing infections and complications. Over time, the materials used in IV products can become contaminated with microorganisms, which increases the risk of local or systemic infections. Maintaining a regular schedule for changing the IV administration set minimizes the possibility of bacterial growth and helps ensure that the IV line remains safe for delivery of fluids and medications. Moreover, it helps to combat complications such as thrombophlebitis, which can occur if the IV line is left in place for too long without replacement. Following proper protocols for IV maintenance is a crucial part of patient care, making preventing infections a top priority in a clinical setting. While other options might relate to different aspects of IV therapy, they do not directly connect to the reasoning behind the established 72-hour change interval for administration sets.

3. What type of therapy frequently utilizes implanted ports for medication delivery?

- A. Physical rehabilitation
- B. Chemotherapy**
- C. Cardiac care
- D. Wound care

Implanted ports are commonly used in chemotherapy because this method of treatment often requires repeated access to the bloodstream for the administration of various medications, including powerful chemotherapeutic agents. These ports are designed to be durable and are surgically placed beneath the skin, typically in the chest area. This setup allows for the long-term delivery of medication without the need for frequent needle sticks, thus reducing discomfort for the patient. Chemotherapy drugs can be caustic to peripheral veins, making an implanted port a preferred option as it allows the infusion of these medications directly into a central vein, minimizing complications and ensuring better patient safety and comfort. The port can also facilitate other treatments such as blood draws and transfusions, making it versatile in the management of treatment plans for cancer patients. In contrast, while physical rehabilitation, cardiac care, and wound care may involve various forms of therapy and treatment delivery, they do not typically necessitate the use of implanted ports for medication administration. These disciplines primarily engage in non-invasive or less intensive methods of treatment compared to the ongoing needs of patients undergoing chemotherapy.

4. What are possible symptoms of an air embolism?

- A. Increased energy and decreased heart rate
- B. Anxiety, dyspnea, and chest pain**
- C. Fever and hypothermia
- D. Headache and extreme fatigue

Air embolism occurs when air enters the vascular system, which can lead to a range of serious symptoms. The correct choice identifies anxiety, dyspnea (difficulty breathing), and chest pain as potential symptoms associated with an air embolism. Anxiety can result from the body's acute stress response to the sudden symptoms of an air embolism, while dyspnea signifies that air is obstructing circulation or affecting gas exchange in the lungs. Chest pain might occur due to the obstruction in blood flow or irritation of the cardiac tissues, which can happen when air bubbles travel to the heart or lungs. Recognizing these symptoms is crucial for timely intervention, as an air embolism can escalate rapidly, leading to severe complications. Other options listed do not align with the typical symptoms experienced during an air embolism. Increased energy and decreased heart rate are not characteristics of this condition, and while fever and hypothermia could be indicative of other medical issues, they are not directly related to air embolism. Similarly, headache and extreme fatigue might occur in various health contexts but are not specific indicators of an air embolism. Understanding these symptoms is vital for healthcare professionals involved in IV therapy, as prompt recognition and treatment can be life-saving.

5. Which positioning technique may help if an air embolism is suspected?

A. Supine position

B. Left side in Trendelenburg position

C. Right side in Trendelenburg position

D. Fowler's position

When an air embolism is suspected, positioning the patient on their left side in the Trendelenburg position is a critical intervention. This technique utilizes gravity to help prevent the air bubble from moving into the pulmonary circulation, which could lead to severe cardiovascular complications. By lying on the left side, any air emboli that may have entered the venous system are more likely to remain in the right atrium and not travel into the right ventricle or pulmonary artery, where they could cause significant obstruction. The Trendelenburg position, which involves tilting the bed or surface so that the patient's head is lower than their feet, further enhances venous return and tends to keep the air embolism trapped in the right atrium, thereby reducing the risk of serious complications. This combination makes it the most effective and recommended approach for managing a suspected air embolism. Other positioning techniques do not provide the same benefits in this situation. For instance, lying supine does not help in relocating the air embolus away from critical areas of circulation. Fowler's position, which is more upright, could facilitate the movement of air towards the lungs, exacerbating the risk of pulmonary complications. Similarly, positioning on the right side in Trendelenburg may inadvertently allow air to

6. What is an implanted port primarily used for in medical settings?

A. Short term access for blood draws

B. Delivering medications via oral route

C. Long term central delivery access, typically for chemotherapy

D. Blood transfusions only

An implanted port is primarily used for long-term central delivery access, particularly in patients who require frequent treatments, such as chemotherapy. This device is surgically placed under the skin and connected to a vein, allowing for easy and safe access to the bloodstream. It is especially beneficial for patients undergoing therapies that require regular infusions or blood tests, as it minimizes the need for repeated needle sticks and reduces discomfort and potential complications associated with peripheral IV lines. The design of implanted ports allows for the administration of medications, fluids, and blood products, making them an ideal choice for long-term treatment plans. This versatility and long-term access capability distinguish implanted ports from other options like short-term access or purely oral medication delivery, which are not suitable for extensive treatment protocols.

7. What could potentially prevent site infections?

- A. Timely dressing changes**
- B. Pain management strategies**
- C. Assessing blood pressure every hour**
- D. Allowing excessive movement of IV site**

Timely dressing changes are crucial for preventing site infections in intravenous therapy. Keeping the IV site properly covered and clean helps protect it from exposure to pathogens that could lead to infections. Dressings can accumulate moisture, bacteria, and other debris over time, which can increase the risk of infection if not changed regularly. By ensuring that the dressing is timely changed, healthcare providers can maintain a sterile environment around the IV site, significantly reducing the risk of complications such as phlebitis, cellulitis, or systemic infections that could arise from biofilm formation on the catheter. Other strategies, such as pain management and monitoring vital signs, play important roles in overall patient care but do not specifically address infection prevention at the IV site. Allowing excessive movement of the IV site can also increase the risk of trauma or phlebitis, further heightening the chance of infection. In contrast, regular dressing changes directly enhance the integrity of the IV site and help maintain an effective barrier to contaminants.

8. Which type of solution is used to draw water into the cells?

- A. Hypertonic solution**
- B. Isotonic solution**
- C. Colloid solution**
- D. Hypotonic solution**

A hypotonic solution is used to draw water into the cells because it has a lower concentration of solutes compared to the inside of the cell. When a cell is placed in a hypotonic solution, water moves from the area of lower solute concentration (the solution) to the area of higher solute concentration (inside the cell) through osmosis. This influx of water causes the cell to swell and can eventually lead to cell lysis if too much water enters. In contrast, a hypertonic solution contains a higher concentration of solutes, which would cause water to exit the cells, leading to cell shrinkage. An isotonic solution has an equal concentration of solutes inside and outside the cell, so there is no net movement of water, maintaining the cell's normal state. A colloid solution consists of larger particles suspended in fluid and does not primarily affect the osmotic movement of water into the cell in the same way that hypotonic solutions do. This understanding is crucial for IV therapy, as the choice of solution directly influences cell hydration and function.

9. What does the term “timed infusion” refer to in IV therapy?

- A. An IV medication given all at once**
- B. An IV medication that is given over a specific period of time**
- C. An IV medication that is injected rapidly**
- D. An IV medication that is given intermittently**

The term "timed infusion" in IV therapy specifically refers to an IV medication that is administered over a designated period of time. This method ensures that the medication is delivered at a controlled rate, allowing for optimal therapeutic effects while minimizing potential side effects. Timed infusions can be critical for medications that require precise dosing, as they can help maintain stable drug levels in the bloodstream. This method contrasts with other administration techniques, such as giving a medication all at once, which may lead to a rapid spike in drug levels, potentially causing adverse reactions. Rapid injections, similarly, involve a quick delivery of medication, which does not involve the sustained delivery that a timed infusion provides. Additionally, intermittent dosing refers to giving medication at specific intervals rather than continuously over a set duration, which does not align with the definition of timed infusion. Thus, timed infusions are essential for procedures that demand careful control of medication flow and duration of treatment.

10. What is a key benefit of using a 2-in-1 IV solution?

- A. It allows for faster infusion rates**
- B. It combines multiple electrolytes in a single solution**
- C. It provides a method to deliver dextrose and amino acids without lipids**
- D. It is less expensive than other IV solutions**

A key benefit of using a 2-in-1 IV solution is that it provides a method to deliver dextrose and amino acids without lipids. This formulation is particularly beneficial for patients who require nutritional support, as it allows for the provision of essential carbohydrates and proteins in a more controlled manner without the additional calories or complications that might arise from lipids. This option is advantageous in situations where a patient's condition requires careful tracking of nutrient intake or in cases where fat emulsions may not be tolerated or desired. In contrast to other formulations, such as a 3-in-1 solution, the 2-in-1 approach facilitates clearer visibility of changes in the solution's clarity as well as aids in preventing complications related to fat administration, such as hyperlipidemia. The other answer choices do not accurately represent the primary benefits of 2-in-1 solutions. They may involve aspects relevant to IV therapy, but they do not capture the specific advantages of dextrose and amino acid delivery without lipids.