LVN Pharmacology Practice Test (Sample)

Study Guide

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Questions

1. When administering ear drops to a toddler, which technique should the nurse use?

- **A. Administer drops while the child is standing**
- **B. Apply clean gloves and clean the outer ear prior to instilling drops**
- **C. Warm the drops in hands before administration**
- **D. Massage the ear after administering the drops**

2. What is a major issue with administering medication by mouth compared to other routes?

- **A. Medication by mouth is absorbed slower than by any other route.**
- **B. Medication by mouth can cause gastrointestinal disturbances.**
- **C. Medication by mouth may not be suitable for all patients.**
- **D. Medication by mouth has a higher risk of an allergic reaction.**

3. What action should be taken when the label of a medication is illegible?

- **A. Ignore the label and proceed with administration**
- **B. Ask a coworker for their interpretation**
- **C. Relabel the medication correctly**
- **D. Store it away until further notice**

4. What must a nurse ensure when drawing up insulin from a vial?

- **A. Remove air bubbles from the syringe**
- **B. Draw insulin quickly**
- **C. Shake the vial before use**
- **D. Use a filter needle**

5. When a patient experiences a narcotic overdose, which medication is typically administered?

- **A. Atropine**
- **B. Flumazenil**
- **C. Naloxone**
- **D. Acetylcysteine**

6. Which of the following would be considered a minor adverse effect of medication?

A. Nausea

B. Diarrhea

C. Rash

D. Chest pain

7. If a patient engages in behaviors characteristic of withdrawal after receiving medications, what is the likely classification of their response?

A. Idiosyncratic reaction

B. Adverse reaction

C. Tolerance reaction

D. Allergic reaction

8. What is the latest time a medication ordered for 0500 can be given to be considered "on time"?

A. 0500

B. 0530

C. 0600

D. 0700

9. What term describes the effect when one drug increases the action of another drug, such as an anticoagulant and aspirin?

A. Antagonism

B. Synergism

C. Summation

D. Potentiation

10. In the case of administering insulin, what is the importance of rotating injection sites?

A. To minimize discomfort at the site

B. To prevent skin infections

C. To promote consistent absorption of insulin

D. To comply with hospital policies

Answers

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

Explanations

1. When administering ear drops to a toddler, which technique should the nurse use?

A. Administer drops while the child is standing

B. Apply clean gloves and clean the outer ear prior to instilling drops

C. Warm the drops in hands before administration

D. Massage the ear after administering the drops

The correct technique when administering ear drops to a toddler involves applying clean gloves and cleaning the outer ear prior to instilling the drops. This practice is crucial for several reasons. First, it helps to prevent the introduction of bacteria or other pathogens into the ear canal, which is especially important in a young child whose immune system may be more vulnerable. Secondly, cleaning the outer ear ensures that any excess wax, discharge, or debris is removed, allowing for better absorption of the medication. Using clean gloves maintains a sterile environment and protects both the nurse and the child from possible infections. Maintaining hygiene is particularly important in pediatric care since toddlers are often more prone to ear infections. By performing these preliminary steps, the nurse ensures a safer and more effective administration of ear drops, enhancing the treatment's effectiveness. Additionally, this technique shows a systematic approach to medication administration in a pediatric population, emphasizing the importance of hygiene and preparation in nursing practice.

2. What is a major issue with administering medication by mouth compared to other routes?

A. Medication by mouth is absorbed slower than by any other route.

B. Medication by mouth can cause gastrointestinal disturbances.

C. Medication by mouth may not be suitable for all patients.

D. Medication by mouth has a higher risk of an allergic reaction.

The correct answer emphasizes that administering medication by mouth can result in slower absorption compared to other routes, such as intravenous or intramuscular delivery. When medications are taken orally, they must first pass through the gastrointestinal tract, where they can be affected by factors such as the presence of food, gastric pH, and the formulation of the drug itself. This can delay the onset of medication effects, especially when rapid action is required. The oral route also involves first-pass metabolism in the liver, which can further reduce the concentration of the active drug that reaches systemic circulation, making it less efficient than other methods of administration that deliver medication directly into the bloodstream. This slower absorption can significantly impact the timing of the therapeutic effects of the medication, particularly in emergency situations where rapid intervention is critical. Addressing the other options, while gastrointestinal disturbances can occur with oral medications, it is not a universal issue affecting all patients to the same degree. Similarly, while there are certain populations who may not be able to safely take medications by mouth (e.g., those with swallowing difficulties or gastrointestinal diseases), this does not encompass all patients. Lastly, allergic reactions can occur with any route of administration, and the risk is not necessarily higher with oral medications compared to others. Thus, the

3. What action should be taken when the label of a medication is illegible?

A. Ignore the label and proceed with administration

B. Ask a coworker for their interpretation

C. Relabel the medication correctly

D. Store it away until further notice

When faced with an illegible medication label, the most appropriate action is to address the issue in a way that ensures patient safety and adherence to safe medication practices. Relabeling the medication correctly, which is the correct answer, is important as it provides clarity about the contents and instructions for administration. Proper labeling is crucial to prevent medication errors that can lead to serious consequences for patients. It is essential that healthcare providers can identify the medication, its dosage, administration route, and any pertinent information such as expiration dates or storage instructions. If the label is unclear, it poses a risk of administering the wrong medication or incorrect dosage, which could result in adverse effects. The other choices, while they may seem like potential options, compromise patient safety. Ignoring the label disregards the risks associated with administering unknown medications. Asking a coworker for their interpretation does not ensure accuracy and could perpetuate the original error. Storing it away until further notice may delay necessary treatment and does not resolve the issue of the illegibility, allowing for potential confusion when the medication is needed. Therefore, relabeling the medication correctly provides a solution that maintains safety and ensures that the medication can be used properly by those administering care.

4. What must a nurse ensure when drawing up insulin from a vial?

A. Remove air bubbles from the syringe

B. Draw insulin quickly

C. Shake the vial before use

D. Use a filter needle

When drawing up insulin from a vial, it is essential for the nurse to remove air bubbles from the syringe. Air bubbles can lead to inaccurate dosing because they can occupy space in the syringe, causing the total volume of insulin drawn to be less than intended. This can result in the patient receiving a smaller dose of insulin than prescribed, which could potentially lead to inadequate glycemic control. Proper technique for drawing up insulin involves gently tapping the syringe to bring any air bubbles to the top and then pushing them out before administering the medication. Drawing insulin quickly is not ideal, as taking one's time allows for more accuracy and ensures that the insulin is being handled properly. Shaking the vial before use is contraindicated because insulin formulations, particularly long-acting types, can be destabilized by vigorous shaking, which may alter their effectiveness. Using a filter needle is unnecessary and not recommended in this context, as insulin is a clear solution and does not usually contain particulate matter that would require filtering.

5. When a patient experiences a narcotic overdose, which medication is typically administered?

A. Atropine

B. Flumazenil

C. Naloxone

D. Acetylcysteine

In cases of narcotic overdose, Naloxone is the medication typically administered to reverse the effects of opioids. Naloxone acts as an opioid antagonist, which means it competes with opioids at the same receptor sites in the brain but does not activate them. When given to a patient experiencing an opioid overdose, Naloxone can quickly displace the narcotic from the receptors, restoring normal breathing and consciousness, and effectively countering the life-threatening effects of opioid toxicity. This antidotal effect makes Naloxone essential in emergency situations where respiratory depression or unconsciousness has occurred due to opioid overdose. It is administered via various routes, such as intranasally or intramuscularly, allowing for rapid onset of action. Other medications mentioned serve different purposes. Atropine is used primarily to treat bradycardia and to reduce salivation and secretions in surgery, not for narcotic overdose. Flumazenil is a benzodiazepine antagonist and is specifically used for reversing the effects of benzodiazepine overdoses, not opioids. Acetylcysteine is an antidote for acetaminophen (Tylenol) overdose and does not have any effect on narcotics. Therefore, Naloxone is the

6. Which of the following would be considered a minor adverse effect of medication?

A. Nausea

B. Diarrhea

C. Rash

D. Chest pain

In considering what constitutes a minor adverse effect of medication, diarrhea is often regarded in that category. While diarrhea can be uncomfortable and inconvenient, it is frequently not life-threatening or severely debilitating compared to more serious side effects. Nausea is also a common side effect and can significantly impact a patient's quality of life, but it often resolves quickly and typically does not result in serious consequences. Rash, although it can vary in severity, can potentially indicate an allergic reaction or a more serious condition, making it a concern that warrants monitoring. On the other hand, chest pain is generally considered a serious adverse effect as it may suggest underlying cardiovascular issues that require immediate medical attention. Thus, diarrhea, while unpleasant, is less concerning in the realm of adverse effects when compared to nausea, rash, and especially chest pain.

7. If a patient engages in behaviors characteristic of withdrawal after receiving medications, what is the likely classification of their response?

A. Idiosyncratic reaction

B. Adverse reaction

C. Tolerance reaction

D. Allergic reaction

The classification of a patient's response exhibiting behaviors characteristic of withdrawal after receiving medications is best categorized as an idiosyncratic reaction. This term refers to a unique or atypical reaction that occurs in an individual, often not related to the pharmacological action of the drug and can manifest as withdrawal symptoms when a drug is discontinued or its dose is reduced suddenly. Withdrawal symptoms arise when a medication, especially those affecting the central nervous system, is abruptly stopped after prolonged use, indicating the body has adapted to its presence. This adaptation may involve physical dependence, and the resultant withdrawal symptoms can vary significantly among individuals. Idiosyncratic reactions to medications are particularly significant because they highlight the individual variability in drug response. Such variability may stem from genetic factors, pre-existing conditions, or differences in metabolism. This understanding is crucial for patient care, as it emphasizes the need to taper medications carefully to avoid withdrawal symptoms. The other classifications, including adverse reactions, tolerance reactions, and allergic reactions, do not accurately capture the specific nuances involved in withdrawal symptoms. Adverse reactions are generally undesirable effects related to the pharmacological effects of a drug, while tolerance refers to a reduced response to a drug over time, requiring higher doses for the same effect. Allergic

8. What is the latest time a medication ordered for 0500 can be given to be considered "on time"?

A. 0500

B. 0530

C. 0600

D. 0700

For a medication ordered for a specific time, such as 0500, to be considered "on time," there are established guidelines and practices that generally apply in a clinical setting. The latest time that a medication can be administered while still meeting the criteria of being "on time" often falls within a specific window, typically around 30 minutes past the scheduled time. In this case, since the medication is scheduled for 0500, administering it until 0530 is acceptable. This allows healthcare providers some flexibility in cases where delays occur due to various reasons such as patient needs, shifts in priorities, or other unforeseen circumstances. This principle helps ensure that patients receive their medications within a reasonable time frame, optimizing therapeutic effects while maintaining safety and efficacy. Therefore, the choice of 0530 aligns with standard medication administration practices, allowing for a grace period that is frequently adopted in nursing protocols.

9. What term describes the effect when one drug increases the action of another drug, such as an anticoagulant and aspirin?

A. Antagonism

B. Synergism

C. Summation

D. Potentiation

The correct term that describes the effect when one drug increases the action of another drug is synergism. When drugs exhibit synergistic effects, their combined action is greater than the sum of their individual effects. In the case of an anticoagulant and aspirin, both agents work to inhibit blood clotting, and when taken together, they enhance each other's effects, resulting in a more potent anticoagulant action compared to when either drug is used alone. This synergistic interaction can be particularly important in clinical settings where maximizing therapeutic effects is desired, such as in the management of cardiovascular diseases. Understanding drug interactions is crucial for safe and effective medication administration. In contrast, antagonism refers to the interaction where one drug decreases or inhibits the effects of another. Summation involves the combined effects of two drugs that do not enhance each other's actions but simply add up, while potentiation typically describes a situation where one drug enhances the effect of another in a way that is more than merely additive but can be distinct from synergism. In the context of the anticoagulant and aspirin, synergism is the most accurate descriptor of their interaction.

10. In the case of administering insulin, what is the importance of rotating injection sites?

A. To minimize discomfort at the site

B. To prevent skin infections

C. To promote consistent absorption of insulin

D. To comply with hospital policies

Rotating injection sites when administering insulin is crucial for promoting consistent absorption of the medication. Each injection site can have varying absorption rates due to differences in tissue thickness, blood flow, and the type of fatty tissue in the area. If the same site is used repeatedly, it can lead to lipodystrophy, which is the formation of scar tissue or lumps that can impair insulin absorption. By rotating injection sites, patients can help ensure that insulin is absorbed at a predictable rate, leading to more stable blood glucose levels. While minimizing discomfort, preventing skin infections, and complying with hospital policies are important considerations in the administration of insulin, the primary purpose of site rotation is to maintain optimal insulin absorption and efficacy.