

- **Question 1**

1 out of 1 points

In which of the following patients would a nurse expect to experience alterations in drug metabolism?

Response Feedback : The liver is the most important site for drug metabolism. If the liver is not functioning effectively, as with cirrhosis, drugs will not be metabolized normally and toxic levels could develop. Drug dosage will have to be altered to ensure normal levels in the body. The patient with kidney stones and the patient in acute renal failure would most likely have alterations in drug excretion. If there are no complications with the cervical cancer patient, there should be no alterations in drug therapy.

- **Question 2**

1 out of 1 points

A nurse is instructing a patient concerning a newly prescribed drug. Which of the following should be included to help improve patient compliance and safety?

Response Feedback : If patients are aware of certain adverse effects and how to alleviate or decrease the discomfort, they are more likely to continue taking the medication and providing for safe administration. A list of pharmacies can be useful information, but will not improve safety or compliance. Knowing the cost of the brand versus the generic could also be helpful to the patient. However, a substitution may not be allowed, and the cost of a drug does not improve patient safety. Most patients are not concerned with statistics regarding drug testing, and the testing is usually not discussed with patients.

- **Question 3**

1 out of 1 points

An elderly postsurgical patient has developed postoperative pneumonia in the days following abdominal surgery and is being treated with a number of medications. Which of the following medications that the nurse will administer has the slowest absorption?

Response Feedback: Absorption of drugs is dependent primarily on the route of administration. IV, IM, and sublingual administration results in faster absorption than drugs that are given orally.

- **Question 4**

1 out of 1 points

The nurse's assessment of a community-dwelling adult suggests that the client may have drug allergies that have not been previously documented. What statement by the client would confirm this?

Response True allergic reactions include formation of rash or hives,

Feedback : itching, redness, swelling, difficulty breathing, and anaphylactic shock. Nausea and vomiting, however, are adverse effects of drug therapy. Similarly, an unsafe drop in blood pressure and gastric bleeding from aspirin use are adverse drug effects, not allergic reactions.

• **Question 5**

1 out of 1 points

For which of the following patients would a nasogastric tube most likely be considered to aid in the administration of medications?

Response Feedback : The use of an NG tube for medication administration requires a functioning GI tract. An NG tube would not be used if a patient is vomiting frequently or has had recent bowel surgery. Similarly, an NG tube would not be used in the case of a competent adult who wishes to discontinue his or her medications.

• **Question 6**

1 out of 1 points

A nurse has been administering a drug to a patient intramuscularly (IM). The physician discontinued the IM dose and wrote an order for the drug to be given orally. The nurse notices that the oral dosage is considerably higher than the parenteral dose and understands that this due to

Response Feedback : The first-pass effect involves drugs that are given PO and absorbed from the small intestine directly into the portal venous system, which delivers the drug molecules to the liver. Once in the liver, enzymes break the drug into metabolites; they may become active or may be deactivated and readily excreted from the body. A large percentage of the oral dose is usually destroyed and never reaches tissues. Oral dosages account for this phenomenon to ensure an appropriate amount of the drug in the body to produce a therapeutic action. Passive diffusion is the major process through which drugs are absorbed into the body. Active transport is a process that uses energy to actively move a molecule across a cell membrane and is often involved in drug excretion in the kidney. Glomerular filtration is the passage of water and water-soluble components from the plasma into the renal tubule.

• **Question 7**

1 out of 1 points

A nurse is caring for a patient who has had part of her small intestine removed due to cancer. She has also now developed hypertension and has been prescribed a new medication to decrease her blood pressure. While planning the patient's care, the nurse should consider a possible alteration in which of the following aspects of pharmacokinetics?

Response  
Feedback  
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Because absorption takes place mostly in the small intestine, there could be possible alterations with this process. Distribution takes place in the blood vessels; metabolism in the liver; and elimination via the kidneys. Because these systems are not affected by her surgery, these phases of pharmacokinetics would not be altered.

• **Question 8**

1 out of 1 points

A patient has been prescribed several drugs and fluids to be given intravenously. Before the nurse starts the intravenous administration, a priority assessment of the patient will be to note the

Response  
Feedback  
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Baseline body weight and height, heart rate, and blood pressure are all important considerations during the assessment of a patient. However, if a patient has to be given drugs intravenously, it is important to inspect the skin for rashes, moles, or sores, so those areas can be avoided as an insertion or injection site.

• **Question 9**

1 out of 1 points

A patient with a recent diagnosis of acute renal failure has a long-standing seizure disorder which has been successfully controlled for several years with antiseizure medications. The nurse should recognize that the patient's compromised renal function will likely

Response  
Feedback:

Impaired renal function will increase the half-life of drugs that are metabolized by the kidneys. This does not necessarily render such medications ineffective and it does not decrease the first-pass effect. IV administration will not compensate for the patient's impaired renal function.

• **Question 10**

1 out of 1 points

A home health nurse notes that there have been changes to a patient's oral drug regimen. The nurse will closely monitor the new drug regimen to

Response  
Feedback  
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Changes in the drug regimen may cause changes in drug absorption and thereby decrease the anticipated drug effect. This decrease is due to the prevention of binding and loss of absorption and overall drug effectiveness. A change in the drug regimen would not help a nurse to track the route of metabolism or determine the speed of chelation. If any adverse effect were to occur as a result of a drug regimen change, it would not necessarily be immunotoxicity; it could also be nephrotoxicity, ototoxicity, or cardiotoxicity.

• **Question 11**

1 out of 1 points

A nurse who is responsible for administering medications should understand that the goals of the MedWatch program are to (Select all that apply.)

Response Feedback : The goals of the MedWatch program are to increase awareness of serious reactions caused by drugs or medical devices, facilitate the reporting of adverse reactions, and provide the health care community with regular feedback about product safety issues. The MedWatch program does not accredit new medical facilities and hospitals. This is the responsibility of JCAHO. MedWatch is not responsible for reporting medication errors.

• **Question 12**

1 out of 1 points

An older adult patient with a history of Alzheimer's disease and numerous chronic health problems has been prescribed several medications during his current admission to hospital and recent declines in the patient's cognition have impaired his ability to swallow pills. Which of the following medications may the nurse crush before administering them to this patient?

Response Feedback : A tablet that is designed for immediate release into the gastric environment is normally safe to crush and administer to the patient. Enteric coated and sustained release tablets may not be crushed because doing so compromising the delayed release into the GI tract that is intended with these medications. Sublingual medications should be placed under the tongue to dissolve rather than swallowed.

• **Question 13**

1 out of 1 points

A patient has been prescribed 1 mg lorazepam (Ativan) sublingual prior to the scheduled insertion of a peripherally inserted central (PIC) line. How should the nurse direct the patient when administering this medication?

Response Feedback: Sublingual tablets are placed under the tongue where they dissolve and are absorbed into the bloodstream. Swallowing the pill may render it less effective, but is not unsafe. It is not recommended to chew and hold sublingual medications nor to hold them in the mouth for length of time.

• **Question 14**

1 out of 1 points

Tylenol 325 mg/tablet, patient needs 650 mg; how many tables should patient take?

• **Question 15**

1 out of 1 points

During a clinic visit, a patient complains of having frequent muscle cramps in her legs. The nurse's assessment reveals that the patient has been taking over-the-counter laxatives for the past 7 years. The nurse informed the patient that prolonged use of laxatives

Response Feedback: Long-term intake of laxatives, antidepressants, and antibiotics has been found to deprive a person of most essential nutrients, such as vitamins. Prolonged use of laxatives is not known to turn urine acidic, cause urinary tract infections, counter the effect of other drugs, or inhibit the biotransformation of drugs.

• **Question 16**

1 out of 1 points

A patient who has ongoing pain issues has been prescribed meperidine (Demerol) IM. How should the nurse best administer this medication?

Response Feedback: The ventrogluteal site is the preferred site for intramuscular injection. IM injections necessitate the use of a larger gauge needle than is required for subcutaneous injections.

• **Question 17**

1 out of 1 points

In response to a patient's nausea, the nurse has mixed a dose of an antiemetic with 50 mL of sterile normal saline and will administer the dose by IV piggyback. What is the rationale for the use of IV piggyback?

Response Feedback: When the patient receives continuous IV fluids and is also receiving intermittent IV drug therapy, the drug is normally given through a secondary IV tubing. When a secondary IV tubing is used to administer an IV drug, the tubing is added to the main line tubing, usually at a Y port. Adding secondary tubing is called "piggybacking" because the tubing with the drug rides on top of the primary fluid tubing. Failure to adhere to a prescribed regimen, unstable electrolyte levels, and need for continuous monitoring are not rationales for the use of an IV piggyback.

• **Question 18**

1 out of 1 points

Which of the following statements best defines how a chemical becomes termed a drug?

Response Feedback: Even though all the responses are correct, a chemical must undergo a series of tests to determine its therapeutic value and efficacy without severe toxicity or damaging properties before it is termed a drug. Test results are reported to the FDA, which may or may not give approval.

• **Question 19**

1 out of 1 points

30 ml = \_\_\_\_\_tbsp

- **Question 20**

1 out of 1 points

A patient who has been admitted to the hospital for a mastectomy has stated that she has experienced adverse drug effects at various times during her life. Which of the following strategies should the nurse prioritize in order to minimize the potential of adverse drug effects during the patient's stay in the hospital?

Response Feedback: In an effort to minimize the potential of adverse drug effects, it is necessary to closely monitor the patient. It would be inappropriate for the nurse to alter the route or frequency of administration or to encourage herbal remedies that also carry the potential for adverse effects.

- **Question 21**

1 out of 1 points

Which of the following affects drug distribution throughout the body?

Response Feedback: Both protein binding and altered pH of extracellular fluids affect drug distribution. The presence of food in the gastrointestinal tract affects drug absorption, whereas an increase in hepatic enzymes affects drug metabolism. High blood levels are not known to affect drug pharmacokinetics.

- **Question 22**

1 out of 1 points

An unconscious patient has been brought to the hospital, and the physician has prescribed a life-saving drug to be administered parenterally. Which of the following methods would be the most appropriate for the nurse to use when administering the medication?

Response Feedback: Intravenous infusion is the preferred method for use in emergency situations when rapid drug effects are desired. Absorption is considered to be instantaneous, as the drug is placed directly into the bloodstream. The subcutaneous and intramuscular routes could be used but would not ensure rapid drug effects. Intrathecal administration is usually done by a physician or a specially trained health care provider.

- **Question 23**

1 out of 1 points

A 56-year-old female patient has been admitted to the hospital with chronic muscle spasms and has been prescribed a new medication to treat the spasms. She has a poorly documented allergy to eggs, synthetic clothes, and perfumes. What is the priority action of the nurse to ensure that prescribed medication does not experience an allergic reaction?

Response  
Feedback  
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The nurse should post an allergies notice on the front of the chart and document the allergies in the appropriate area of the patient's record; this will allow continuous access of the dietary staff and the other members of the health care team to the information and serve to limit errors. The prescriber would always ask the patient about her allergies before prescribing a new medication. The patient is not having an allergic reaction, so treating her for an allergic reaction is unnecessary. If the allergies are documented in the appropriate area of the patient's record, the dietary staff will be aware that the patient should not be served eggs.

- **Question 24**

1 out of 1 points

The nurse is caring for a patient receiving an aminoglycoside (antibiotic) that can be nephrotoxic. Which of the following will alert the nurse that the patient may be experiencing nephrotoxicity?

Response  
Feedback  
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Decreased urinary output, elevated blood urea nitrogen, increased serum creatinine, altered acid-base balance, and electrolyte imbalances can occur with nephrotoxicity. Ringing noise in the ears (tinnitus) is an indication of possible ototoxicity. Visual disturbances can suggest neurotoxicity, and yellowing of the skin (jaundice) is a sign of hepatotoxicity.

- **Question 25**

1 out of 1 points

A nurse is caring for a postsurgical patient who has small tortuous veins and had a difficult IV insertion. The patient is now receiving IV medications on a regular basis. What is the best nursing intervention to minimize the adverse effects of this drug therapy?

Response  
Feedback  
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Because the patient has small tortuous veins and had a difficult IV insertion, the patient is at high risk for infiltration of the IV site. Recording baseline vital signs or blood sugar level is an important nursing action, but not specific to IV administration of any drug. The patient is not known to take anticoagulants; so unless indicated, the nurse is not required to monitor the patient's bleeding time.

- **Question 26**

1 out of 1 points

An older adult who lives in a long-term care facility has recently begun taking losartan (Cozaar) for the treatment of hypertension. The nurse who provides care for this resident should recognize that this change in the resident's medication regimen make create a risk for

Response  
Feedback:

Angiotensin II receptor blockers such as losartan are associated

with a risk of dizziness and a consequent risk for falls. This risk is more pronounced among older adults. Losartan is not associated with constipation, xerostomia, or depression.

• **Question 27**

1 out of 1 points

A 66-year-old woman has a complex medical history that includes poorly-controlled type 1 diabetes, renal failure as a result of diabetic nephropathy and chronic heart failure (CHF). Her care provider has recently added spironolactone (Aldactone) to the woman's medication regimen. The nurse should consequently assess for signs and symptoms of

Response Feedback: Spironolactone (Aldactone) and eplerenone (Inspra) are potassium-sparing diuretics, so their use increases serum potassium levels. Spironolactone is not known to contribute to dysrhythmias, leukocytosis, or thrombophlebitis.

• **Question 28**

1 out of 1 points

A home health nurse is performing a home visit to an elderly client who has early-stage dementia. The nurse observes that some of the client's pill bottles are empty, even though the client is not due for refills for 2 weeks. What nursing diagnosis should the nurse prioritize when planning this client's care?

Response Feedback: The possibility that the client may be exceeding her prescribed dosages suggests that she is unable to safely manage her drug regimen. The safety risk that is posed by this practice supersedes the importance of coping or home maintenance. This problem is more likely to be rooted in the client's cognitive deficit rather than a lack of knowledge.

• **Question 29**

1 out of 1 points

Mr. Penny, age 67, was diagnosed with chronic angina several months ago and has been unable to experience adequate relief of his symptoms. As a result, his physician has prescribed ranolazine (Ranexa). Which of the following statements is true regarding the use of ranolazine for the treatment of this patient's angina?

Response Feedback: Ranolazine should be used only in combination with other antianginal therapy (either nitrates, beta blockers (metoprolol or atenolol), or amlodipine, a calcium channel blocker. It does not achieve its effects by lowering the heart rate or the blood pressure. Ranolazine has the potential to prevent MI.

• **Question 30**

1 out of 1 points

Medication reconciliation of an 82-year-old man who has recently moved



to a long-term care facility reveals that the man takes 1 to 2 mg of lorazepam bid prn. The nurse should recognize what consequence of this aspect of the resident's drug regimen?

Response Feedback: In a systematic review of medications as risk factors for fall, it was found that one of the main group of drugs associated with this risk were benzodiazepines. Benzodiazepines are not associated with cold intolerance, anorexia, or aggression.

• **Question 31**

1 out of 1 points

An 80-year-old man has been prescribed oxycodone for severe, noncancer, chronic pain. He tells the nurse that he has difficulty swallowing and asks if he can crush the tablet before swallowing. The nurse will advise the patient that

Response Feedback: The nurse should caution the patient against crushing the tablet before ingesting it. Crushing allows an extremely high dose of the drug to be available all at once, instead of being released slowly over time. Severe adverse effects are possible when it is used in this manner. The other options are false statements.

• **Question 32**

1 out of 1 points

A nurse is caring for an 81-year-old patient in a long-term care facility who takes nine different medications each day. The patient has a recent diagnosis of seizure disorder and has begun treatment with phenytoin (Dilantin), a highly protein-bound drug. After 1 month of Dilantin therapy, the patient is still extremely drowsy and sluggish. The nurse determines that the prolonged adverse effect is likely due to

Response Feedback: Because the patient is receiving nine different drugs, there are fewer protein-binding sites to start with. Each drug is competing for a site, and the Dilantin may be unable to locate a binding site. Therefore, the effects of the Dilantin therapy will increase because more free or unbound drug is available to be active. Dilantin is a highly protein-bound drug and less creatinine is available overall to be filtered. Age-related changes in the central nervous system affect the efficiency of the blood-brain barrier, not the drug itself.

• **Question 33**

1 out of 1 points

A 77-year-old man with a long history of absence seizures has been treated with ethosuximide for many years. The man is now in the process of moving to a long-term care facility and a nurse is creating a plan of care. The nurse understands the potential adverse effects of this drug and would consequently prioritize which of the following nursing diagnoses?

Response Feedback: Common adverse effects of ethosuximide are drowsiness, dizziness, and lethargy. Respiration, urinary function, and skin integrity are not normally affected by the use of ethosuximide.

• **Question 34**

1 out of 1 points

A 72-year-old man with pain issues is being given a drug by the intramuscular route. His serum blood level concentrations have been erratic. The nurse suspects that this may be due to

Response Feedback: Decreased blood flow to tissues and muscles can alter the absorption of drugs administered subcutaneously or intramuscularly in older adults. Increased plasma albumin levels, altered gastric pH, and altered gastrointestinal motility would not affect blood concentrations.

• **Question 35**

1 out of 1 points

A nurse is administering drugs to a 70-year-old patient who has a reduced plasma albumin level. When assessing the patient for therapeutic outcomes of drug therapy, the nurse will also be careful to observe for

Response Feedback: Decreased levels of plasma albumin can lead to fewer binding sites for protein-binding drug molecules. Decreased binding sites results in higher concentrations of unbound forms of a drug, which increases the risk of adverse effects and toxicity and can increase therapeutic effects. Plasma albumin does not alter absorption of a drug but is responsible for binding, transporting, and distributing drugs throughout the body. Even though higher concentrations of a free drug increase the amount of the drug available for metabolism, normal age-related decreases in liver function offset any increase in the pharmacokinetic process.

• **Question 36**

1 out of 1 points

A nurse is conducting an assessment of a patient who has recently had several changes made to her drug regimen. What assessment question most directly addresses the safety implications of the patient's drug regimen?

Response Feedback: The use of alternative medications and herbal treatments is high, and increasing; because older adults tend to take more prescribed medications than other age groups, they are at higher risk for drug interactions if they take alternative medications. Questions about the drug route, expectations for treatment and the particular pharmacy are less directly related to the issue of safety.

- **Question 37**

1 out of 1 points

A 79-year-old woman who takes several medications for a variety of chronic health problems has been prescribed an oral antiplatelet aggregator that is to be taken once daily. The nurse has encouraged the woman to take the pill at the same time of day that she takes some of her other medications. What is the most likely rationale for the nurse's advice?

Response Feedback : When new drug therapy begins, plan a new drug schedule to coincide with other prescribed schedules whenever possible. If the patient already takes a drug three times a day with meals, and the new drug must be taken once a day, the patient should take the new drug with breakfast when other drugs are taken. In this way, the patient need not remember another time to take a drug. This kind of planning promotes therapeutic adherence. This strategy does not necessarily benefit drug metabolism or reduce the risk of adverse effects.

- **Question 38**

1 out of 1 points

A 90-year-old frail, elderly woman has arrived at the emergency department with a broken hip and in acute respiratory distress. Succinylcholine will be used because of the need for rapid endotracheal intubation, and then the woman will be sent to surgery. Due to the woman's frail condition, she is at risk for skin breakdown. Which of the following nursing diagnoses would be most appropriate?

Response Feedback : The nursing diagnosis that directly relates to possible skin breakdown is Impaired Physical Mobility related to drug-induced paralysis. Patients who are unable to speak, move, or breathe unassisted can quickly develop pressure sores (decubitus ulcers). It is the responsibility of the nurse to help keep the patient positioned correctly to avoid skin breakdown. The nurse will plan interventions to prevent skin breakdown based on how long the patient will be immobilized. Impaired Spontaneous Ventilation is related to respiratory paralysis. Fear is related to paralysis and helplessness, and Disturbed Sensory Perception is related to CNS depression secondary to drugs used during anesthesia.

- **Question 39**

1 out of 1 points

A 72-year-old man who is unable to sleep since admission into the hospital is given a hypnotic medication at 9 p.m. The nurse finds the patient drowsy and confused at 10 a.m. the next day. The nurse is aware that this behavior is most likely due to

Response Decreased hepatic function may extend the half-life of a drug

Feedback : and increase the patient's response to the drug. Increased renal function would rid the body of the drug faster than normal and would not cause prolonged effects. A toxic effect would be a more serious effect such as inability to awaken the patient. An allergic reaction does not usually manifest itself as a confused and drowsy state.

• **Question 40**

1 out of 1 points

A 76-year-old woman has a complex medical history that includes emphysema, osteoporosis, malnutrition, and hypothyroidism. Recently, the woman fell outside her home as a result of weakness and suffered a fracture to her femoral head. The woman's subsequent hip-replacement surgery has been scheduled and the care team recognizes that the use of isoflurane will be most significantly influenced by

Response Feedback: Impaired lung function may preclude, or complicate, the use of isoflurane. Advanced age, endocrine status, and nutritional status are all variables that warrant careful assessment, but they are less likely to influence the decision to use isoflurane than is her respiratory status.

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