

سؤال 1

غير مجاب عليه بعد

علم هذا السؤال

A 22-year-old woman with a history of motion sickness is prescribed scopolamine patches for an upcoming cruise. Which pharmacokinetic advantage does the transdermal route provide for this indication?

- a. Higher bioavailability than oral route ☐
- b. Complete avoidance of side effects ☐
- c. Immediate onset of action ☐
- d. Localized drug action ☐
- e. Steady drug levels over 24-72 hours ☒

أخل اختياري

سؤال 2

غير مجاب عليه بعد

إزالة الإشارة

:If a non-competitive inhibitor is used, the rate of enzymatic reaction would NOT

- a. ☐ Be affected by the concentration of substrate
- b. ☐ Increase if the inhibitor is removed
- c. ☒ Increase by increasing the concentration of substrate
- d. ☐ None of the above
- e. ☐ Be inversely proportional to the binding affinity of the inhibitor

أخل اختياري

Compound XY is a novel agent that will improve eye muscle contractility through its ability to bind ?to receptors on the eye. Which of the following abbreviations means (drops)

a.c .a ☐

aq .b ☐

ad lib .c ☐

p.r.n .d ☐

.gtt .e ☒

أخلِ اختياري

A 24-year-old man recently diagnosed with severe acne started a treatment that included tetracycline. Which of the following best explains the outcome of the interaction between tetracycline and dairy products

- Decreased drug oral Bioavailability .a ☒
- Decreased bacterial permeability to the drug .b ☐
- Decreased drug binding to bacterial ribosome .c ☐
- Increased drug elimination .d ☐
- Increase drug toxicity .e ☐

أُخِلِ اختياري

A patient with bipolar disorder is prescribed lithium. Regular monitoring shows his lithium level is 1.8 mEq/L (therapeutic range: 0.6-1.2 mEq/L). He has normal kidney function but has been on a low-sodium diet. What is the MOST likely explanation

- Improved bioavailability .a ☐
- Increased renal reabsorption of lithium .b ☒
- Reduced volume of distribution .c ☐
- Enhanced hepatic metabolism .d ☐
- Drug-drug interaction .e ☐

أخل اختياري

سؤال 6

غير مجاب عليه بعد

علم هذا السؤال

A 30-year-old woman weighing 55 kg requires gentamicin therapy. Standard dosing is based on a 70 kg adult. How should her dose be adjusted

- a. ☐ Use standard dose but extend dosing interval
- b. ☐ Double the dose due to increased volume of distribution
- c. ☒ Reduce dose proportionally to her weight
- d. ☐ No adjustment needed
- e. ☐ Increase dose due to higher clearance per kg

أختر اختياري

سؤال 7

غير مجاب عليه بعد

علم هذا السؤال

?Why is selectivity of a drug an important concept to minimize adverse drug reactions

- a. ☐ A and B
- b. ☐ .Selectivity determines the fraction of patients who are nonresponders
- c. ☒ .Selectivity determines the extent of a drug's interaction with off-target receptors
- d. ☐ .Selectivity determines in which organ a drug accumulates
- e. ☐ All of the above

أخل اختياري



سؤال 8

غير مجاب عليه بعد

علم هذا السؤال

A drug has a clearance of 12 L/h and a volume of distribution of 84 L. What is its elimination half-life?

a. 2 hours ☐

b. 12 hours ☐

c. 7 hours ☐

d. 4 hours ☐

e. 5 hours ☒

أخل اختياري

A 45-year-old woman of Asian descent is prescribed clopidogrel after percutaneous coronary intervention. Genetic testing reveals she carries CYP2C19*2 allele. What is the clinical significance

Reduced cardiovascular protection .a ☒

Faster drug elimination .b ☐

Improved bioavailability .c ☐

Increased bleeding risk .d ☐

Enhanced drug efficacy .e ☐

أخل اختياري

A patient with severe chronic obstructive pulmonary disease (COPD) is prescribed a volatile anesthetic. Which elimination route is MOST impaired in this patient

Pulmonary excretion .a ☒

Metabolic clearance .b ☐

Biliary excretion .c ☐

Hepatic metabolism .d ☐

Renal excretion .e ☐

أخل اختياري

A 29-year-old man with tuberculosis is prescribed rifampin, isoniazid, ethambutol, and pyrazinamide. He develops orange discoloration of his urine, tears, and saliva. Which of the following pharmacokinetic properties of rifampin BEST explains this finding

a. Protein binding displacement ☐

b. Extensive tissue distribution ☒

c. Biliary excretion ☐

d. Active tubular secretion ☐

e. Metabolite formation ☐

A 68-year-old man with severe rheumatoid arthritis receives an intra-articular injection of corticosteroids into his knee joint. What is the PRIMARY advantage of this route for treating joint inflammation?

- a. Systemic drug distribution ☐
- b. Avoidance of first-pass metabolism ☐
- c. Localized drug delivery to affected joint ☒
- d. Rapid onset of action ☐
- e. Extended duration of action ☐

أخل اختياري

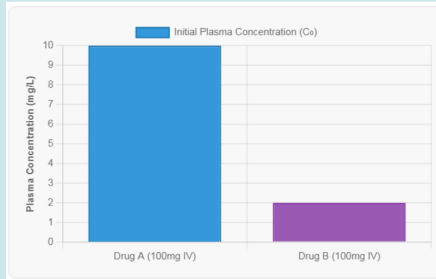


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إخفاء

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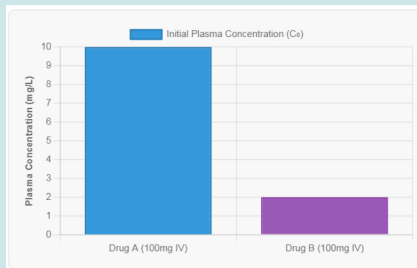


Two drugs (Drug A and Drug B) are administered as IV bolus doses of 100 mg each. The initial plasma concentrations are shown in the following figure. Which of the following statements is correct about the figure shown

- a. ☐ Drug A is more potent than Drug B
- b. ☐ Drug B has higher bioavailability than Drug A
- c. ☐ Drug B has a larger volume of distribution than Drug A
- d. ☐ Drug A has a larger volume of distribution than Drug B
- e. ☐ Both drugs have the same volume of distribution

إخفاء

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Two drugs (Drug A and Drug B) are administered as IV bolus doses of 100 mg each. The initial plasma concentrations are shown in the following figure. Which of the following statements is correct about the figure shown

- a. ☐ Drug A is more potent than Drug B
- b. ☐ Drug B has higher bioavailability than Drug A
- c. ☒ Drug B has a larger volume of distribution than Drug A
- d. ☐ Drug A has a larger volume of distribution than Drug B
- e. ☐ Both drugs have the same volume of distribution

سؤال 15

غير مجاب عليه بعد

علم هذا السؤال

A 50-year-old man receives two drugs simultaneously. Drug A has ED50 of 10 mg and Drug B has ED50 of 20 mg. When combined, they produce the same effect at 5 mg each. This represents

Chemical incompatibility .a ☐

Synergistic effect .b ☒

Additive effect .c ☐

Competitive inhibition .d ☐

Antagonistic effect .e ☐

أخل اختياري

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العودة

إخفاء

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سؤال 17

غير مجاب عليه بعد

علم هذا السؤال

A patient with hyperthyroidism requires drug dosing adjustment. Which pharmacokinetic parameter is MOST likely to be increased

- Half-life .a ☐
- Clearance .b ☒
- Volume of distribution .c ☐
- Protein binding .d ☐
- Bioavailability .e ☐

أخل اختياري



Midterm Exam part 2

[العودة](#)[إخفاء](#)

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سؤال 18

غير مجاب عليه بعد

[علم هذا السؤال](#) 

A 56-year-old woman with rheumatoid arthritis is prescribed methotrexate tablets. The medication is taken once weekly rather than daily. What is the PRIMARY reason for this dosing schedule

a. ☒ To minimize toxicity while maintaining efficacy

b. ☐ To improve patient compliance

c. ☐ To reduce drug costs

d. ☐ To enhance drug absorption

e. ☐ To prevent drug interactions

[أختر اختياري](#)



Midterm Exam part 2

العودة

إخفاء

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سؤال 18

غير مجاب عليه بعد

[اعلم هذا السؤال](#)

A 56-year-old woman with rheumatoid arthritis is prescribed methotrexate tablets. The medication is taken once weekly rather than daily. What is the PRIMARY reason for this dosing schedule?

a. ☒ To minimize toxicity while maintaining efficacy

b. ☐ To improve patient compliance

c. ☐ To reduce drug costs

d. ☐ To enhance drug absorption

e. ☐ To prevent drug interactions

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العودة

إخفاء

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سؤال 19

غير مجاب عليه بعد

[علم هذا السؤال](#)

A new drug is under study in phase 1 trials. It is found that this molecule is avidly taken up by extravascular tissues so that the final total amount in the extravascular compartment at steady state is 100 times the amount remaining in the blood plasma. What is the probable volume of ?distribution in a hypothetical person with 8 L of blood and 4 L of plasma

L 14.14 .a ☐L 404 .b ☒L 8 .c ☐L 100 .d ☐Insufficient data to calculate .e ☐[أخل اختياري](#)



Midterm Exam part 2

[العودة](#)[إخفاء](#)

الوقت المتبقي 0:27:58

سؤال 20

غير مجاب عليه بعد

[علم هذا السؤال](#) 

A 40-year-old patient with schizophrenia receives an antipsychotic that blocks dopamine D2 receptors. The drug has zero intrinsic activity but prevents dopamine binding. The dose-response curve for dopamine would show

- a. ☐ Biphasic response curve
- b. ☐ Downward shift with decreased E_{max}
- c. ☐ No change in curve position
- d. ☐ Leftward shift with increased E_{max}
- e. ☒ Rightward shift with unchanged E_{max}

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Midterm Exam part 2

العودة

إخفاء

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سؤال 21

غير مجاب عليه بعد

[علم هذا السؤال](#) 

A 26-year-old patient with severe depression is prescribed fluoxetine. The psychiatrist explains that the medication must be taken orally rather than by injection. Which property of fluoxetine ?makes oral administration suitable

- a. ☐ It is insoluble in injection vehicles
- b. ☐ It causes local tissue irritation when injected
- c. ☐ It is rapidly metabolized
- d. ☒ It has good oral bioavailability
- e. ☐ It has a very short half-life

أخل اختياري





29



العودة

إخفاء

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سؤال 21

غير مجاب عليه بعد

[علم هذا السؤال](#)

A 26-year-old patient with severe depression is prescribed fluoxetine. The psychiatrist explains that the medication must be taken orally rather than by injection. Which property of fluoxetine ?makes oral administration suitable

- a . It is insoluble in injection vehicles ☐
- b . It causes local tissue irritation when injected ☐
- c . It is rapidly metabolized ☐
- d . It has good oral bioavailability ☒
- e . It has a very short half-life ☐

أخل اختياري

سؤال 23

غير مجاب عليه بعد

علم هذا السؤال

A patient taking St. John's Wort starts a new prescription medication metabolized by CYP3A4.
?What interaction is MOST likely

- a. ☒ Reduced drug efficacy
- b. ☐ Delayed drug absorption
- c. ☐ Improved bioavailability
- d. ☐ Enhanced drug toxicity
- e. ☐ Increased protein binding

أخل اختياري

A 27-year-old woman takes phenytoin to control focal seizures. Most of the phenytoin in her blood is plasma protein bound, and only the free fraction is pharmacologically active. The free fraction must diffuse through many barriers to reach its site of action. Many characteristics influence a drug's ability to diffuse across biological membranes. Which of the following possible drug characteristics would aid such diffusion?

a. Weak acid with a pKa of 7 ☐

b. Hydrophilicity ☐

c. A and D ☒

d. Weak base with a pKa of 7 ☐

e. Large molecular size ☐

أختر إجابة

A 29-year-old woman with multiple sclerosis is prescribed glatiramer acetate 20 mg subcutaneously daily. This synthetic polypeptide requires injection because oral administration would be ineffective. Which of the following factors BEST explains why glatiramer acetate cannot be given orally

- a. ☐ Rapid renal elimination
- b. ☐ Chemical instability in gastric acid
- c. ☐ High protein binding
- d. ☒ Poor gastrointestinal absorption due to large molecular size
- e. ☐ Extensive first-pass metabolism

سؤال 26

غير مجاب عليه بعد

علم هذا السؤال

For bioequivalence tests, C_{max} differs between test and reference formulation if both deliver different doses (assume same rate of absorption for both formulations)

a. False ☐

b. True ☒

أختر اختياري

سؤال 27

غير مجاب عليه بعد

علم هذا السؤال

A 75-year-old man taking azathioprine for inflammatory bowel disease is prescribed allopurinol for gout. To prevent severe myelosuppression, the azathioprine dose should be reduced to

- a. ☒ 25% of original dose
- b. ☐ 75% of original dose
- c. ☐ 90% of original dose
- d. ☐ 50% of original dose
- e. ☐ 10% of original dose

أخل اختياري



سؤال 28

غير مجاب عليه بعد

علم هذا السؤال

A 33-year-old man presents to the emergency department with pain in his right buttock. The pain is constant, 8/10, and increases when he sits down. A CT scan confirms the presence of an abscess. The patient is started on vancomycin for a possible MRSA infection. If the half-life of vancomycin is 5 h, how long will it take to reach clinical steady state

a. 15 h ☐

b. 23 h ☒

c. 12 h ☐

d. 18 h ☐

e. 10 h ☐

أختر اختياري



سؤال 29

غير مجاب عليه بعد

علم هذا السؤال

The P-glycoprotein is a multidrug transmembrane transporter protein that transports medications across cell membranes. Functions of this protein include

- a. ☐ Transport of drugs into liver hepatocytes
- b. ☒ Pumping drugs from the urine during excretion
- c. ☐ Transport of drugs from the bloodstream into brain cells
- d. ☐ Transport of drugs from fetal circulation
- e. ☐ Transport of drugs from the intestinal lumen to the circulation

أخل اختياري





Midterm Exam part 2

[العودة](#)[إخفاء](#)

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سؤال 29

غير مجاب عليه بعد

[علم هذا السؤال](#) 

The P-glycoprotein is a multidrug transmembrane transporter protein that transports medications across cell membranes. Functions of this protein include

- ☐ a. Transport of drugs into liver hepatocytes
- ☒ b. Pumping drugs from the urine during excretion
- ☐ c. Transport of drugs from the bloodstream into brain cells
- ☐ d. Transport of drugs from fetal circulation
- ☐ e. Transport of drugs from the intestinal lumen to the circulation

[أخل اختياري](#)

سؤال 30

غير مجاب عليه بعد

علم هذا السؤال

Drug XA12 is a novel antibiotic agent that is renally excreted. The drug enters the kidney through the renal arteries and ultimately into Bowman's space. The letter (M) in ADME refers to

a. Minimum activity ☐

b. Microbial infection ☐

c. None of the above ☐

d. Metabolism ☒

e. Media ☐

أخل اختياري