PHARMACOLOGY - MID

بسم الله الرحمن الرحيم

# Past Papers

## Routes Of Administration
## Biotransformation

﴿ وَإِن تَتَوَلَّوْا يَسْتَبْدِلْ قَوْمًا غَيْرَكُمْ ثُمَّ لَا يَكُونُوا أَمْثَالَكُم ﴾

اللهم استعملنا ولا تستبدلنا


Done by:

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# Routes Of Administration
# Lecture 6

(2022)

The most convenient route of administration:

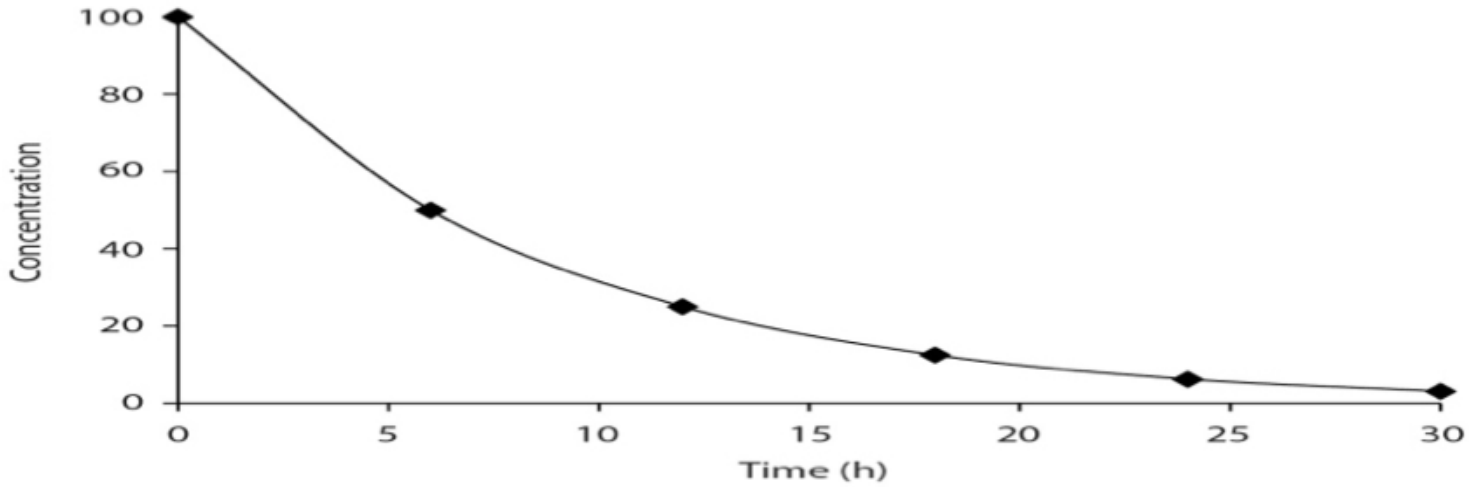
A. Intravenous
B. Oral
C. Transdermal
D. Rectal

Ans : B

(2022)

# Based on this graph, What is the route of administration of this druq:

A. Oral
B. Intradermal
C. Intravenous
D. Intramascular



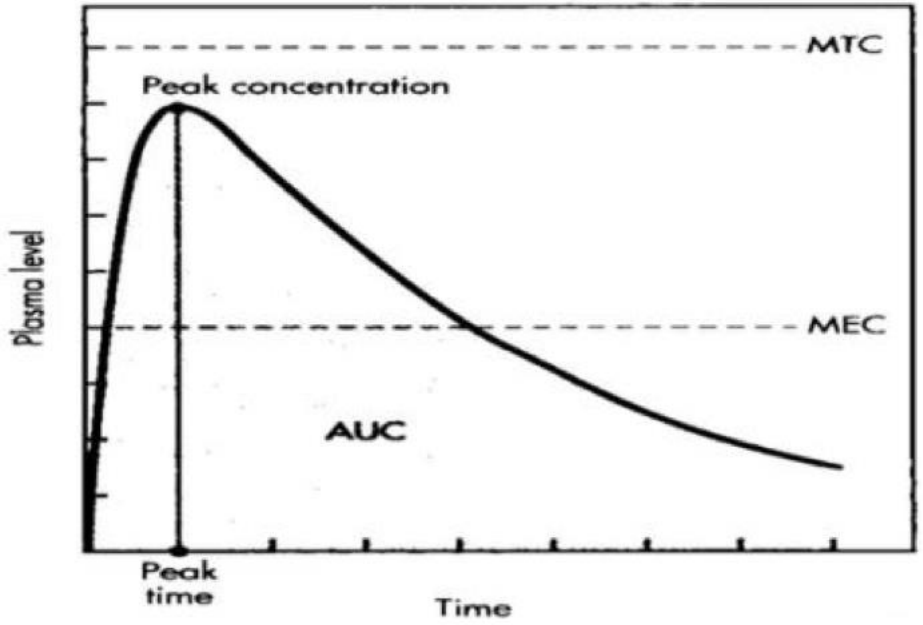

Ans : C

More specifically IV Bolus

(2021)

# The route of drug administration in this picture:

A. rectal
B. Oral
C. Inhalation
D. Bolus Intravenous
E. infusion Intravenous

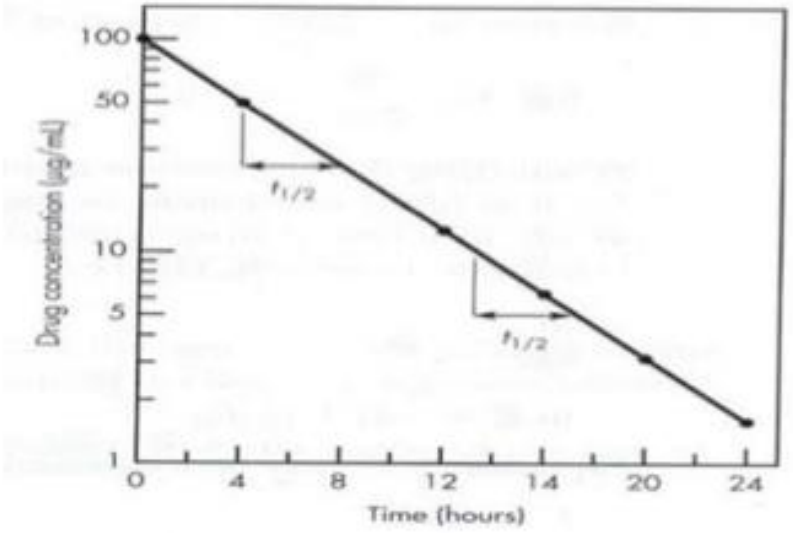



Ans : B

(2021)

# The route of drug administration in this picture:

A. rectal
B. Oral
C. Inhalation
D. Bolus Intravenous
E. infusion Intravenous




Ans : D

(2021)

The safest way of drug administration:

A. Rectal
B. Oral
C. Inhalation
D. Bolus Intravenous
E. infusion Intravenous

Ans : B

(2021)

One of the following is a disadvantage of Intravenous drug administration:

A. Produce high initial concentration of the drug that might be toxic.
B. Rapid onset of action
C. No First pass effect
D. Can be corrected if high dose of the drug is given incorrectly.

Ans : A

(2020)

All of these routes of administration avoid first pass effect EXCEPT:

A. Rectal route
B. Transdermal route
C. Pulmonary route
D. Sublingual route
E. Intravenous route

Ans : A

(2020)

Oral administration is absorbed mainly in the:

A. Duodenum
B. Large intestines
C. Ileum
D. Jejunum

Ans : A

(2020)

# Which of the following is not correct regarding IV drug administration?

A. IV administration provides 100% bioavailability.
B. Rapid drug effect is achieved with IV administration.
C. Oily vehicles should be given IV.
D. IV administration by passes first pass metabolism .

Ans : C

Not exact exam choices (AI generated ☺ )

(2020)

# Which of the following is not correct regarding IV drug administration?

A. IV administration provides 100% bioavailability.
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C. Oily vehicles should be given IV.
D. IV administration by passes first pass metabolism .

Ans : C

Not exact exam choices (AI generated ☺ )

(2020)

# The route of drug administration is determined by?

A. Water solubility of the drug
B. Ionization of the drug
C. Desirability of rapid onset of action of the drug
D. All of the above

Ans : D

(2020)

Pick out the appropriate alimentary route of administration when passage of drug through liver is minimized?

A. Oral
B. Transdermal
C. Rectal
D. Intraduodenal

Ans : C

(2020)

Which route of drug administration is most likely to lead to the first pass effect?

A. Sublingual
B. Oral
C. Intravenous
D. Intramuscular

Ans : B

(2020)

# What is characteristic of the sublingual route?

A. fast absorption
B. Drug exposed to gastric secretion
C. Drug exposed to more prominent liver metabolism
D. Drug can be administrated in a variety of doses

Ans : A

(2020)

## Parenteral administration?

A. Cannot be used with unconsciousness patients
B. Generally, results in a less accurate dosages than oral administration
C. Usually produces a more rapid response than oral administration
D. Is too slow for emergency use

Ans : C

(2020)

Correct statements listing characteristics of a particular route of drug administration include all of the following EXCEPT?

A. Intravenous administration provides a rapid response
B. Intramuscular administration requires a sterile technique
C. Inhalation provides slow access to the general circulation
D. Subcutaneous administration may cause local irritation

Ans : C

ركز it says **EXCEPT**

(2020)

The oral route of drug administration tends to be associated with all of the following EXCEPT?

A. Relative safety
B. Rapid response
C. Convenience
D. Incomplete absorption

Ans : B

ركز it says **EXCEPT**

(2019)

The route of drug administration that gives the most rapid onset of thepharmacological effect is

A. Intradermal injection
B. Intramuscular injection
C. Intravenous injection
D. Subcutaneous injection
E. Peroral administration

Ans : C

(2022)

# Which of the following statements is wrong:

A. IV has the highest risk of adverse effects
B. Protein-drug complex is biologically inactive
C. receptors are inactive without the presence of drug or ligand
D. Addiction isn't considered as an appropriate effect

Probably not Dr yaqoub material but good to know
Some receptors are active without the presence of a ligand (it's an exception )
You can skip the question

Ans : C

# Biotransformation
# Lecture 7

(2019)

IF your patient is taking drug A and prescribe him drug B, after which he start to suffer from a side effect that known to be caused by drug A. Which of the following is not a possible cause?

a. Drug B may displace drug A from the albumin binding site.
b. Drug B enhanced the enzyme that responsible for drug A metabolism
c. Drug A and B are actively excreted from the same nephritic site.
d. Drug B has the same side effect
e. Drug B increase the absorption of drug A

Ans : B

(2019)

A patient with poor CYP2D6 phenotype and you prescribed him a pro-drug with normal (not adjusted) dose. This pro-drug is fully activated by CYP2D6. In comparison with extensive metabolizer patient, which of the following is correct?

a. The patient has faster pro-drug clearance.
b. The patient should benefit more from the pro-drug
c. The patient has shorter pro-drug half life
d. The patient usually has less active drug concentration in blood.
e. The patient is less susceptible to the pro-drug adverse effect

Ans : d+e

(2019)

A patient with ultra rapid CYP 2D6 phenotype and you have prescribed him drug A that is fully metabolized by CYP 2D6. The metabolite of the drug A does not cause adverse effect. In comparison with extensive metabolizer patient,
which of the following is incorrect?

a. The patient has higher drug A clearance.
b. For this patient, You should increase drug A dose.
c. The patient usually benefits more from drug A.
d. The patient has shorter drug A half life.
e. The patient is less susceptible to drug A adverse effect.

Ans : c

(2020)

Which of is responsible for the metabolism of more than 50% of prescription drugs metabolized in the liver?

A. CYP1A2
B. CYP3A4
C. CYP2C9
D. CYP2B6

Ans : B

(2020)

Which of the following is an enzyme inhibitor?

A- Grapefruit
B- St. John's Wort
C-Rifampin
D- Carbamazepine
E-Green tea

Ans : A

(2020)

The addition of glucuronic acid to a drug?

A- Lowers its water solubility
B-Usually leads to inactivation of drug
C- Is an example of phase I reactions
D- Involves cytochrome P450

Ans : B

(2020)

All of the following is true about drug metabolism EXCEPT?

a) pro-drug must be metabolized to their active forms
b) First-order kinetics metabolism means constant amount of drug is metabolized per unit time
c) In zero-order kinetics metabolism. the enzyme is saturable
d) None of the above

Ans : B

(2020)

All of the following is true about drug metabolism EXCEPT?

a) Water soluble drugs must first be metabolized in the liver
b) Phase I reaction function to convert lipophilic molecules into lipophobic
c) Phase II reaction include conjugation with endogenous substances

Ans : A

(2020)

Pick out the right statement?

a) Microsomal oxidation always results in inactivation of a compound
b) Microsomal oxidation results in a decrease of compound toxicity
c) Microsomal oxidation results in an increase of ionization and water solubility of a drug
d) Microsomal oxidation results in increase of lipid solubility of a drug thus its excretion from the organism is facilitated

Ans : C

(2020)

Metabolic transformation (Phase I) is:

a) Acetylation and methylation of substances
b) Transformation of substances due to oxidation, reduction or hydrolysis
c) Glucuronide formation
d) Binding to plasma protein

Ans : B

(2020)

Which of the following is not a conjugation of a drug?

a) Glucuronidation
b) Sulfate formation
c) Hydrolysis
d) Methylation

Ans : C

(2020)

Metabolic (Phase I and Phase II) reactions usually result in increase of substance biological activity:

a) True
b) False

Ans : B

(2021)

One of the following enzymes doesn't participate in the second phase of
biotransformation :

A. glucuronosyl transferases
B. Sulfotransferases
C. N-acetyltransferases
D. esterase

Ans : D

(2021)

Auto-induction refers to a drug that induces its own metabolism , such as :

A. Carbamazepine
B. Acetaminophen
C. Antidote
D. Phenytoin

Ans : A

(2022)

What is the type of this reaction:

A. Aromatic Hydroxylation
B. Alcohol oxidation
C. Aliphatic hydroxylation


Ans : C

This reaction modifies the **side chain** (the aliphatic methyl group), not the aromatic ring itself, so it is classified as **aliphatic hydroxylation**.

(2022)

Which of the following is an inhibitor of metabolism :

A. Smoking
B. Rifampicin
C. Fluconazole
D. Barbiturates

Ans : C

(2022)

cytochrome p450 system (pathway I) catalyzes all following reaction, except:

A. Acetylation
B. Sulfoxidation
C. Aliphatic hydroxylation
D. Aromatic hydroxylation

Ans : A

# For any feedback, scan the code or click on

Corrections from previous versions:

| Versions | Slide # and Place of Error | Before Correction | After Correction |
|---|---|---|---|
| V0 → V1 | | | |
| V1 → V2 | | | |

# Additional Resources:

# رسالة من الفريق العلمي:

اللهم نستودعك أهالي غزّة وفلسطين
فانصرهم واحفظهم بعينك التي لا
تنام، واربط على قلوبهم وأمدهم
بجُندك وأنزل عليهم سكينتك وسخر
لهم الأرض ومن عليها.

Duaa_blessings_