

# Therapeutics

Done by: Mariam Qussay

# Adverse drug reaction



**1. What is the type of ADR seen in lymph node enlargement due to phenytoin?**

- A. Type A
- B. Type B
- C. Type C
- D. Type D
- E. Type E

Answer: B

**2. Which of the following is most suggestive of a causal relation between the drug and adverse effect according to Naranjo scale:**

- A. The effect did not appear after drug administration
- B. The adverse effect didn't improve after discontinuation of the drug
- C. The effect appeared after the placebo was given
- D. The effect increased when the dose increased
- E. The effect is mentioned in the literature for the first time

Answer: D

**3. Which of the following is correct regarding adverse drug reactions:**

- A. Occur at overdose
- B. May have beneficial unintended effects
- C. Warrant prevention and specific treatment
- D. There must be a mechanism of action known to be linked with the drug
- E. They are present in low percentage in primary care relative to inpatients

Answer: C

**4. One of the following is type A Adverse Drug reaction:**

Answer: Dry mouth after take antimuscarinic drug

**5. One of the following is type B adverse drug reaction:**

Answer: Penicillin cause anaphylaxis

**6. True about bizarre drug reactions?**

Answer: Dose-independent.

**7. Characteristic feature of bizarre adverse reaction?**

Answer: Dose-independent.

**8. Atropine side effects?**

Answer: Type A adverse reaction.

**9. A patient with history of asthma took amoxicillin for otitis media and on the 2nd dose he developed a rash and lips swelling what type of drug reaction?**

Answer: Type B

**10. Hypersensitivity (rash)?**

Answer: Type B adverse reaction.

**11. A young man taking phenytoin, developed hirsutism, coarse facial features, and gingival hyperplasia. What kind of adverse drug reaction is this?**

Answer: Type C.

**12. Corticosteroid induced hypothalamic-pituitary-adrenal suppression is?**

Answer: Time and dose dependent drug reaction

**13. Postmenopausal female patient received estrogen for the prevention of CAD even though there is no evidence supporting this. 3 years later developed endometrial carcinoma, what type of adverse drug reaction?**

Answer: Type D.

**14. Patient on beta-blocker for ten years, the physician decided to stop the drug, after 2 days he had myocardial infarction, type of adverse drug reactions attributed to beta blocker is?**

Answer: Type E.

**15) Child received Montelukast for management of asthma developed recurrent nose bleeds 2 years later He wasn't exposed to heat, nor he picked his nose. He has a friend who developed same reaction to the drug after 2 years. His nose bleeds stopped after stopping the drug. How likely is the causality according to Naranjo score?**

Answer: Probable.

**16. Patient took co-trimoxazole, developed anaphylaxis afterwards , improved after stopping it, Naranjo scale adverse drug reaction?**

Answer: Probable.

missing parts in the Q

**Table 1-2. Naranjo ADR Probability Scale**

Question	Yes	No	Do Not Know	Score
1. Are there previous conclusive reports on this reaction?	+1	0	0	
2. Did the adverse event appear after the suspected drug was administered?	+2	-1	0	
3. Did the adverse reaction improve when the drug was discontinued or a specific antagonist was administered?	+1	0	0	
4. Did the adverse event appear when the drug was readministered?	+2	-1	0	
5. Are there alternative causes (other than the drug) that, on their own, could have caused the reaction?	-1	+2	0	
6. Did the reaction reappear when a placebo was given?	-1	+1	0	
7. Was the drug detected in the blood (or other fluids) in concentrations known to be toxic?	+1	0	0	
8. Was the reaction more severe when the dose was increased or less severe when the dose was decreased?	+1	0	0	
9. Did the patient have a similar reaction to the same or similar drugs in any previous exposure?	+1	0	0	
10. Was the adverse event confirmed by any objective evidence?	+1	0	0	
Total Score	ADR Probability Classification			
9	Highly Probable			
5-8	Probable			
1-4	Possible			
0	Doubtful			

Adapted with permission from: Naranjo CA, Busto U, Sellers EM, et al. A method for estimating the probability of adverse drug reactions. Clin Pharmacol Ther 1981;30:239-45.

**17. A question about Naranjo score, what lowers the possibility of an adverse reaction?**

Answer: Concomitant drug use.

**18. Hyper-susceptibility reactions:**

Answer: Reactions occurring in sub-therapeutic doses in susceptible patients.

**Not mentioned in the slides**

**19. Patient used ibuprofen then he was admitted to ER because of bronchospasm and SOB, his medical history is unremarkable...., according to “Naranjo algorithm “the assessment of the causality between Co-trimoxazole and the patient complaints is:**

- A. Highly probable
- B. probable.
- C. possible
- D. doubtful
- E. inaccessible

Answer: D

**20. What is the type of adverse reaction in a drug addict who has bad symptoms because they failed to get their next dose?**

- A. Type A
- B. Type B
- C. Type C
- D. Type E
- E. Type F

Answer: D

**21. 50+ year old female. Takes a statin and ? for her chronic conditions. She has both hyperlipidemia and hypertension. She comes to her provider with a complaint, and they end up prescribing her a new drug. At that visit, laboratory results show that her liver and renal function are normal. 8 weeks later, she comes with fatigue, vomiting, and jaundice. She is diagnosed with acute hepatic failure. She does not drink alcohol and has no prior history of liver disease. After stopping the drug, her liver enzymes and bilirubin return to normal. According to the Naranjo ADR probability scale, what is the likelihood the newly prescribed drug caused an adverse drug reaction? (Table given in quiz)**

- A. Highly probable
- B. Probable
- C. Possible
- D. Doubtful

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**Answer: B**

**22. Which of the following is an incorrect match?**

- A. Slow acetylation of isoniazid > increased risk of neurotoxicity
- B. Slow acetylation of isoniazid > failure of tuberculosis therapy

Answer: B

**23. Which of the following is incorrect regarding Hereditary Warfarin Resistance?**

- A. Warfarin has decreased affinity for 2,3-epoxide reductase
- B. Acquired warfarin deficiency occurs due to hepatic cirrhosis
- C. Increased warfarin is needed for therapeutic effect
- D. It is an autosomal dominant condition
- E. Less vitamin K is needed to reverse warfarin's action

Answer: B

# Drug interactions



**24. Which of the following is an example of useful drug interaction?**

- A. Aspirin+garlic+heparin
- B. Phenytoin and cyclosporine
- C. propranolol and insulin
- D. Isoniazid and pyridoxine

Answer: D

**25. Which of the following does not work directly by inhibiting drug metabolizing enzymes:**

- A. Erythromycin with carbamezipine toxicity
- B. Lanzoprazole inhibiting clopidogrel activity
- C. Allopurinol increasing 6 mercaptourine activation
- D. H1 blockers producing lidocaine toxicity
- E. Grapefruit juice decreases the bioavailability of calcium channel blockers?

Answer: D

**26. Which of the following does not work through enzyme induction:**

- A. Broccoli
- B. Cigarette smoking
- C. Rifampicin
- D. Chamomile
- E. St John's wart

Answer: D

**27. What is the mechanism of Non steroidal anti-inflammatory drugs induced methotrexate toxicity:**

- A. Induction of metabolism and drug accumulation
- B. Inhibition of metabolism and drug accumulation
- C. Inhibition of active renal tubular excretion
- D. Displacement of methotrexate from albumin binding sites

Answer: C

**28. Which of the following drug combinations will cause hyperkalemia:**

- A. Metalazone and furosemide
- B. Lisinopril and amiloride
- C. Hydrocortisone and furosemide

Answer: B

**29. Which of the following is a useful drug interaction:**

- A. Fluticasone and salmeterol
- B. Metalazone and furosemide

Answer: A

**30. Which of the following is not correct about drug interactions:**

- A. Flouroquinolones absorption is decreased by diary products
- B. Cholestyramine decreases the absorption of thyroxine
- C. Bisphosphonates decrease the absorption of calcium
- D. PPI increase the absorption of aspirin
- E. Grapefruit juice increases bioavailability of nifidipine and felodipine

Answer: D

**31. all are enzyme inhibitors except:**

Answer: Carbamazepine

**32. when drug monitoring is useful:**

Answer: When there is individual variety response to the drug

**33.all true except :**

Answer: Cyclosporine =>trough

**34. A kidney transplant patient receiving ciclosporin and steroids developed rejection. Which drug may have caused this?**

Answer: Phenytoin.

**35. Example of useful drug interaction?**

Answer: Use of vitamin B6 in patients taking isoniazid for tuberculosis.

**36. What drug interaction is useful?**

Answer: Beta 2 agonist and inhaled steroids for treatment of asthma.

**37. Patient with drug use history of metoprolol (along with many other drugs) took bupropion and developed bradycardia. What interaction occurred? [same idea different answers / see next question]**

Answer: Bupropion inhibited the metabolism of metoprolol.

38. A 61-year-old male had a 40-year history of smoking a pack of cigarettes per day. He was in fair health and used to swim 60 minutes per week. He was under treatment for hypertension with metoprolol and amlodipine for three years. He was advised to take 150 mg bupropion daily for one week then twice daily. After starting the medication, he went to swim and found himself gasping for breath about 40 meters. The patient visited a clinic and found to have dyspnea and a pulse of 40/min which was regular. He was given an advice after which he had no further episodes of dyspnea with exertion. Which of the following is the most reasonable advice?

- A. reduce amlodipine dose to one half
- B. replace amlodipine with nifedipine
- C. reduce metoprolol dose to one half
- D. stop metoprolol altogether immediately
- E. stop amlodipine

Answer: C

**39. A patient on monoamine oxidase inhibitor for depression and eat cheese. Developed severe occipital headache and blood pressure of 200/130 resistant to nitroprusside infusion. This interaction is cause by?**

Answer: Inhibition of tyramine metabolism in the GI tract by MOAI.

**40. A patient with depression who takes monoamine oxidase inhibitor. Which food he should not take?**

Answer: Fermented cheese.

**41. Drug that causes lithium toxicity by inhibiting its elimination from the body?**

Answer: Thiazide diuretics.

**42. A patient developed lithium toxicity, mostly due to?**

Answer: Hydrochlorothiazide.

**43. NSAID enhance lithium toxicity by?**

Answer: Decreased blood flow.

**44. NSAID increase methotrexate toxicity by?**

Answer: By competing on its active excretion in proximal tubules.

**45. Which doesn't affect the absorption of other drugs?**

Xanthine oxidase inhibitors.

**46. Woman taking a lot of drugs was given a drug with a weird name that's known to prolong QT interval and then she developed torsade de point. After discontinuing her medications, the arrhythmia subsided. What drug is responsible for this interaction?**

Answer: one of the CYP450 inhibitors

**47. Long QT interval is caused by?**

Answer: Macrolides.

**48. Rifampicin and warfarin interaction, wrong about it?**

Answer: A pharmacodynamic interaction.

**49. Patient with hypertension managed with lisinopril, atenolol and nifedipine. Developed tuberculosis and was managed with antituberculosis medications. Several weeks later the patient developed high blood pressure readings. The most likely drug causing this?**

Answer: Rifampin.

**50. Liquorice induces digoxin toxicity with diuretics mostly through?**

Answer: Exacerbation of hypokalemia.

**51. Interaction between digoxin and thiazide diuretics?**

Answer: Thiazide induced hypokalemia increase digoxin toxicity.

**52. Interaction caused by the use of ACEI and spironolactone?**

Answer: Hyperkalemia.

**53. The drug that increases gut motility?**

Answer: Metoclopramide.

**54. Patient with hypothyroidism treated with levothyroxine and recently he has dyslipidemia treated with cholestyramine, the expected outcome is?**

Answer: Return of hypothyroidism symptoms.

**55. The drug which decreases the effectiveness of clopidogrel?**

Answer: Lansoprazole.

**56. Mismatch?**

Answer: Sildenafil and Ritonavir > hypertension.

**57. The drug which antagonizes the action of antihypertensive drug?**

Answer: Naproxen.

**58. The consumption of regular grapefruit will increase the bioavailability of?**

Answer: Ciprofloxacin + Nifedipine.

**59. Interact with dairy products?**

Answer: Ciprofloxacin.

**60. Serotonin syndrome is caused by?**

Answer: Linezolid.

**61. Which of the following drugs may reduce clearance of other drugs by reducing hepatic blood flow?**

- A. Propranolol
- B. Hydralazine
- C. Digoxin
- D. Nifedipine
- E. Lidocaine

Answer: A

**62. Which of the following drugs may reduce the INR when co-administered with warfarin?**

- A. Isoniazid
- B. Garlic
- C. Macrolide antibiotics
- D. Metronidazole
- E. St John' wort

Answer: E

**63. Which of the following is the most dangerous adverse effect of both loop and thiazide diuretics?**

- A. Hyperglycemia
- B. Hypokalemia
- C. Hypocalcemia
- D. Dyslipidemia
- E. Hyperuricemia

Answer: B

- A. Isoniazid
  - CYP inhibitor
  - ↑ warfarin levels → ↑ INR X
- B. Garlic
  - Antiplatelet effect
  - ↑ bleeding risk → ↑ INR X
- C. Macrolide antibiotics
  - CYP inhibitors (esp. erythromycin, clarithromycin)
  - ↑ warfarin → ↑ INR X
- D. Metronidazole
  - Strong CYP2C9 inhibitor
  - ↑ warfarin → ↑ INR X
- E. St John's wort
  - CYP inducer (2C9, 3A4)
  - ↑ warfarin metabolism → ↓ INR ✓

**64. A 52-year-old woman was treated with warfarin for atrial fibrillation (therapeutic INR range: 2-3). She was started on rifampicin therapy as part of treatment for tuberculosis before few days. After that she had a transient ischemic attack and demonstrated subtherapeutic INR values (1-1.5). Three months of sequential increases in the warfarin dosage were necessary to reach a therapeutic INR. However, four weeks after rifampicin discontinuation she had hematuria, and an excessively high INR was observed (7.2). which of the following is the most appropriate action?**

- A. Replace rifampin with isoniazid
- B. Replace warfarin with heparin
- C. Reduction of warfarin dose
- D. Replace warfarin with enoxaparin
- E. Discontinue warfarin

Answer: C

**65. Which of the following is a harmful drug interaction?**

- A. Corticosteroids and beta blockers for the treatment of asthma
- B. Verapamil and atenolol for the treatment of SVTs
- C. Imipenem and cilastatin
- D. Pyridoxine and Isoniazid for the treatment of tuberculosis

Answer: B

**66. Which of the following doesn't increase drowsiness when combined with H1-blockers?**

- A. Alcohol
- B. Anti-epileptics
- C. Cocaine
- D. Hypnotics
- E. Opioids

Answer: C

**67. Which of the following increase gastric emptying?**

- A. Anti-cholinergics
- B. Metoclopramide
- C. Allopurinol
- D. TCAs

Answer: B

**68. Which of the following statements is incorrect?**

- A. OCP failure can occur when given with antibiotics.
- B. Liquorice exacerbates hyperkalemia when given with spironolactone.
- C. Liquorice can exacerbate hypokalemia when given with diuretics.

Answer: B

**69. Which of the following has ultra-rapid, extensive, intermediate, and poor metabolizers?**

- A. CYP2D6
- B. CYP2D4
- C. CYP2C19
- D. CYP2C9
- E. P-acetyl-something

- CYP2D6 → ultra-rapid, extensive, intermediate, poor ✓
- CYP2D4 → not clinically relevant ✗
- CYP2C19 → poor, intermediate, extensive (some ultra-rapid in certain populations) ⚠
- CYP2C9 → mainly poor and extensive/normal only
- N-acetyltransferase (P-acetyl...) → slow vs fast acetylators only

Answer: A

**70. Which of the following statements is wrong?**

- A. Chamomile has anti-coagulant properties and can increase the risk of bleeding when used with warfarin
- B. Tumeric has antiplatelet activity and can increase the risk of bleeding when used with aspirin
- C. Grapefruit accelerates drug metabolism

Answer: C

# Therapeutic drug monitoring



**71. Which of the following drugs is not correct for its monitoring sample?**

- A. Vancomycin – trough and (peak)
- B. Valproic acid - peak and trough
- C. Lithium - 12 hour post dose
- D. Carbamezepine – trough

Answer: B

**72. Which of the following is not correct about therapeutic drug monitoring by clinical practice:**

- A. It is inferior to measuring plasma drug concentration
- B. It depends on continuous graded biological response
- C. It is related to the pharmacological effect of the drug
- D. It is quantifiable
- E. It can be used to detect drug adverse effects

Answer: A

**73. Which of the following drugs is best for therapeutic drug monitoring:**

- A. High therapeutic index
- B. Inter-individual variability in plasma drug concentration of the same dose
- C. Decreased effect with the same concentration
- D. Drugs that irreversibly bind with covalent binding

Answer: B

**74. Which of the following is not correct about therapeutic drug monitoring:**

- A. Plasma drug concentration is measured after the distribution is completed
- B. Plasma drug concentration is used at the terminal phase of beta elimination
- C. Sampling is only useful if the drug concentration in the body is at steady state
- D. Random sampling in monitoring may be suitable
- E. Plasma drug concentrations must always be interpreted in the context of the patient's clinical status

Answer: D

**75. True about therapeutic drug monitoring?**

Answer: Sample should be taken after distribution of the drug is completed.

**76. Which one of the following drugs is not routinely monitored?**

Answer: Ceftriaxone.

**77. Aminoglycoside monitoring at?**

Answer: Both peak & trough.

**78. Lithium monitoring at?**

Answer: 12-hour post dose.

**79. Drug monitoring is not useful in?**

Answer: Prodrugs/ A drug with active metabolite.

**80. Which of the following situations is therapeutic drug monitoring is appropriate?**

Answer: When drug effect can NOT be quantitatively measured.

**81. Patient was on carbamazepine therapy for epilepsy. The physician kept increasing the dose over period of weeks and the patient developed ataxia and nystagmus. Drug serum level was high at that point. Which one of the following is wrong?**

Answer: The drug was monitored correctly.

**82. Which is monitored with known plasma concentration?**

Answer: Aminoglycosides.

**84. Which of the following has a negative impact of monitoring of the effects of a noxious drugs?**

Answer: If the patient has associated comorbidities.

**85. Which of the following drug you monitor by heart rate?**

Answer: Verapamil.

**86. A 32-year-old female previously underwent a kidney transplant. She was compliant with her immunosuppressant and corticosteroid therapy, and monitoring showed the level of drugs within range to prevent rejection. However, rejection still occurred. You discover she has been taking medication for another chronic disease. Which of the following is most likely the medication she has been taking?**

- A. Isoniazid.
- B. Rifampin.
- C. Valproic acid.

Answer: B

**87. Which of the following pairings are wrong concerning a drug and the correct time to monitor its levels?**

- A. Vancomycin - peak and trough
- B. Gentamicin - mid-point between two doses
- C. Carbamazepine - trough
- D. Cyclosporine - trough and 2 hours post dose whole blood sample

Answer: B

**88. Which of the following is wrong regarding TDM?**

- A. A random sample can be taken at any time for TDM.
- B. The sample should be taken after distribution has completed
- C. The levels are best checked during the terminal -elimination phase.
- D. Sampling is only useful if the drug concentration in the body is at a steady state.

Answer: A

# Drug use in the elderly



**89. Which of the following is not a cause of medication non-adherence in elderly?**

- A. Complex regimen
- B. Dysmotility
- C. Dementia
- D. Misunderstanding
- E. Wrong dose

Answer: E

**90. Which of the following drugs is avoided in elderly with creatinine clearance less than 30 ml/min:**

- A. Ciprofloxacin
- B. Spironolactone
- C. Gabapentin
- D. Vancomycin

Answer: B

**91. Which of the following drugs that should not be used in elderly is not matched with acceptable cause of avoiding it according to beers criteria:**

- A. Antidepressants-dependence and abuse
- B. Alpha adrenergic blockers-postural hypotension
- C. H1 receptor blockers-urine retention
- D. Metoclopramide-increased risk of dyskinesia
- E. Proton pump inhibitors-increased risk of clostridium difficile infection

Answer: A

**92. Which of the following drugs has a smaller volume of distribution in the elderly:**

- A. Diazepam
- B. Gentamicin
- C. Metronidazole
- D. Propranolol

Answer: B

**93. mismatch:**

Answer: NSAIDs cause neurotoxicity

**94. Alzheimer's patient take cholinesterase inhibitor his family give him diphenhydramine (out of the counter) after that he start complain of constipation distended bladder ... :**

Answer: Discontinue the diphenhydramine

**95.Which one of the following drugs that's should not be used in elderlies is mismatched with its rationale?**

Answer: Metoclopramide - Vomiting.

**96. Not a risk factor for therapy problems in the elderly?**

Answer: Monitoring efficacy.

**97. Antihypertensive that should be avoided in the elderly?**

Answer: Clonidine.

**98. Which of the following pairs doesn't represent a rational drug-variable for monitoring in the elderly?**

Answer: ACEI and serum sodium.

**99. An elderly with confusion, disorientation and blurred vision. Which drug shouldn't be used?**

Answer: Atropine.

**100. Wrong about elderly rational question?**

Answer: The PPI and neurotoxicity

**101. Proton pump inhibitors carry a potential risk in elderly?**

Answer: Clostridium difficile infection.

**102. Elderly patient on a cholinesterase inhibitor was treated with Diphenhydramine (which is first generation anti-histamine with anticholinergic effect) for insomnia, but the patient started to complain constipation, blurred vision and urine retention, so?**

Answer: Discontinue Diphenhydramine.

**103. Elderly on phenytoin for 25 years controlling his epilepsy, started complaining of incoordination, improved on lowering dose, still complaining of unsteadiness, next?**

Answer: Lower dose again and monitor seizures.

**104. A 70-year-old female with atrial fibrillation, HTN and mild renal impairment was diagnosed with GERD. Which of the following treatment is the most appropriate?**

Answer: Antacids.

**105. Regarding the pharmacokinetic changes in elderly which of the following change is correct?**

Answer: Increase total body fat.

**106. 75-year-old man came with his wife. Has hypertension for 20 years... uncontrolled and not taking medications, cognitive issues; doesn't remember name of children, not oriented to time, no financial issue. Causes of non-adherence?**

- A. High cost, social support
- B. Adverse effect, cognitive function
- C. Adverse effect, multiple regimen

Answer: B

**107. Wrong about age-related altered drug pharmacodynamics?**

- A. Increased hypotensive and bradycardic effect to calcium channel blockers
- B. Reduced blood pressure response to B-blockers
- C. Reduced effectiveness of diuretics
- D. Increased risk of bleeding with warfarin
- E. Decreased sensitivity toward antipsychotics

Answer: E

**108. Which of the following is incorrect monitoring of therapy for elderly?**

- A. ACE inhibitors - serum potassium
- B. Antiepileptics - drug level
- C. Antipsychotics - extrapyramidal symptoms
- D. Thiazide diuretics - bilirubin level

Answer: D

**109. Which of the following is incorrect regarding physiological differences in elderly?**

- A. Reduced GFR
- B. Reduced albumin
- C. Increased hepatic blood flow

Answer: C

**110. The Beer's Criteria for Potentially Inappropriate Medication use indicated what drugs elderly should avoid. Which rationale is incorrectly matched with the drug?**

- A. Peripheral and central -blockers – orthostatic hypotension
- B. Amiodarone - peptic ulcers
- C. PPIs – Clostridium difficile infection

Answer: B

A single flower with a pink circle behind it.

# Drug use during pregnancy

**111. The reason behind why a highly albumin bound drug has measurable concentration in fetus is:**

answer: Decrease maternal albumin through pregnancy.

**112. A pregnant woman at 28 weeks gestation experience regular uterine contractions every 3 minutes, the cervix was closed and elongated. Concerns about preterm labor which of the following therapy is justified?**

answer: The mother should take Dexamethasone for 2 days.

**113. Which one of the following drugs is given to pregnant women in the third trimester (near term) to prevent neonatal jaundice (unconjugated hyperbilirubinemia)?**

answer: Phenobarbital.

**114. A woman received thiopental before her cesarean section. What adverse effect is likely to be seen in her neonate?**

answer: Sedation +/- Apnea

**115. Pregnant developed DVT, first line anticoagulation?**

answer: LMWH.

**116. Pregnant woman with long history of type 2 diabetes and two miscarriages. Her diabetes is poorly controlled on metformin and glyburide. Her Hba1c is 8.5 what is the most appropriate next step in management?**

answer: Discontinue all medications and start her on insulin.

**117. The main purpose of folate supplements in the pregnant?**

answer: Prevent neural tube defects.

**118. A 1-day-old neonates with multiple congenital heart defects and facial abnormalities. His mother was treated for severe acne during the antenatal period what drug was most likely used?**

answer: Isotretinoin.

**119. Wrong way of avoiding a teratogen?**

answer: Using sunscreen with Isotretinoin.

**120. A woman delivered a small baby, preterm, with craniosynostosis. It later showed intellectual activity. What's most likely cause?**

answer: Mother smoking during pregnancy.

**121. Both alcohol and smoking can result (regarding adverse effects on fetus)?**

answer: Learning and intellectual abilities.

**122. Period of gestation that is mostly affected by teratogenic drugs?**

answer: 2-8 weeks of gestation.

**123. G2P1 female presents with elevation blood pressure reading and proteinuria at 20 weeks of gestation. All of the following drugs can be given except?**

answer: Linsopril/ Enalapril.

**124. Which of the following drugs crosses the placenta and achieve high fetal concentration?**

answer: Warfarin.

**125. Pregnant at 6 weeks, all is avoided except?**

answer: Carbamazepine (mostly).

**126. A woman with long history of hypertension poorly controlled despite many medications found out that she is pregnant. Us showed no amniotic fluid and 1000 g weight fetus. Baby was delivered with skeletal abnormalities and enlarged kidneys. Biopsy of kidneys showed tubular abnormalities. What teratogen causes this?**

answer: Losartan.

**127. Wrong mismatch during pregnancy?**

answer: Trimethoprim > Hydrocephalus + Amoxicillin > Aplastic Anemia.

**128. Meaning of FDA risk category B (class B teratogen)?**

answer: No evidence of harm on humans + inadequate research and studies done on it.

**129. Which of the following is the most critical period in which congenital malformations during pregnancy can occur?**

- A. First two weeks
- B. 2nd to 8th weeks
- C. 8th – 18th weeks
- D. 18th week to end of pregnancy.

Answer: B

**130. Which of the following is wrong regarding drug use during pregnancy?**

- A. Older drugs that are known to be safe are better than new drugs
- B. Most drugs are class C and therefore can be used safely.
- C. The smallest possible dose should be used for shortest amount of time
- D. Treating maternal conditions is good for the mother and infant

Answer: B

**131. Which of the following is not a risk factor for congenital malformations?**

- A. Genetic susceptibility of the infant
- B. Mother between 18 and 35
- C. Mother between 14 -16

Answer: B

**132. Which category of FDA pregnancy categories information about fetal risk is not available but risk can not be ruled out?**

- A. Category A
- B. Category B
- C. Category X
- D. Category C
- E. Category D

Answer: D

**133. Which of the following is not a teratogen and pregnant women can take it when needing it?**

- A. Methotrexate
- B. Cyclophosphamide
- C. Warfarin
- D. Amoxicillin

Answer: D

**132. Which category of FDA pregnancy categories information about fetal risk is not available but risk can not be ruled out?**

- A. Category A
- B. Category B
- C. Category X
- D. Category C
- E. Category D

Answer: D

**133. Which of the following is not a teratogen and pregnant women can take it when needing it?**

- A. Methotrexate
- B. Cyclophosphamide
- C. Warfarin
- D. Amoxicillin

Answer: D



# Drug Use During Lactation

**134. Breast milk has pH of 7 compared to plasma that have a pH of 7.4. Penicillin is an acidic drug while erythromycin is a basic drug which of the following is true?**

answer: Erythromycin will be trapped in breast milk.

**135. Wrong about breast milk?**

answer: Trapped weak acids.

**136. Accumulate in breast milk?**

answer: Sotalol.

**137. Not a factor affecting drug passage through milk?**

answer: Taste of the drug.

**138. Which one of the following strategies to reduce risk of breast-fed infants when taking drugs is wrong?**

answer: Select drugs with long half-life to reduce frequency of administration.

**139. Lactating woman is counseled about agents that increase or decrease lactation which of the following drugs decrease lactation?**

answer: Alcohol.

**140. Which of the following shouldn't be used for a breastfeeding woman because it inhibits milk production (suppresses lactation)?**

answer: Nicotine / cigarette smoking.

**141. Increases milk production?**

answer: Metoclopramide.

**142. Which of the following drugs which are contraindicated during breast-feeding is NOT matched with the appropriate hazard to the breastfed infant?**

- A. Etretinate – sedation
- B. Tetracycline – impairment of bone growth
- C. Amiodarone – pulmonary toxicity
- D. Doxepin – sedation
- E. Radioactive iodine – destruction of infant thyroid gland

answer: A. Etretinate – sedation

**143. Which of the following increases milk production and milk let down?**

- A. Alcohol
- B. Nicotine
- C. Dopamine agonists
- D. Metoclopramide

answer: D. Metoclopramide

**144. Which of the following is safe for a woman to take during lactation?**

- A. Benzodiazepines
- B. Anti-cancer drugs
- C. Beta lactam antibiotics
- D. Immunosuppressants

answer: C. Beta lactam antibiotics

**145. Which of the following decreases milk production?**

- A. Barley
- B. Cabergoline
- C. Domperidone
- D. Fenugreek

Answer: B



# Therapy of Certain Disorders During Pregnancy

**146. A pregnant woman is complaining of constipation and hemorrhoids. First line of treatment is?**

answer: Advise her to increase her fiber and fluid intake.

**147. Which of the following is a reasonably safe first choice if dietary fibers fail to relieve constipation during pregnancy?**

- A. Bisacodyl
- B. Castor oil
- C. Psyllium
- D. Senna
- E. Magnesium sulfate

answer: C. Psyllium

**148. Which of the following laxatives should be avoided for treatment of constipation during pregnancy?**

- A. Lactulose
- B. Psyllium
- C. Methylcellulose
- D. Dietary fiber
- E. Castor oil

answer: E. Castor oil

**149. A 25-year-old overweight pregnant female in her second trimester complains of heartburn and epigastric pain when she lies down and during sleep. After examination, you diagnosed her as a case of gastroesophageal reflux disease. You advised her to modify life-style and diet, but without sufficient success. Which of the following is NOT acceptable therapy?**

- A. Ranitidine
- B. Sodium bicarbonate
- C. Omeprazole
- D. Sucralfate
- E. Aluminum and magnesium hydroxides mixture (Maalox)

answer: B. Sodium bicarbonate

**150. Best drug for the management of eclamptic seizures?**

answer: IV magnesium sulfate.

**151. Pregnant developed DVT, first line anticoagulation?**

answer: LMWH.

**152. Pregnant woman urine analysis is positive for nitrite and leukocytes even though she is asymptomatic. What is the most appropriate management?**

answer: Nitrofurantoin.

**153. Pregnant with pyelonephritis with E. coli?**

answer: Ceftriaxone.

**154. Which of the following drugs you would select for treatment of pyelonephritis during pregnancy?**

- A. Levofloxacin
- B. Co-trimoxazole
- C. Cefuroxime
- D. Nitrofurantoin
- E. Amoxicillin

answer: C. Cefuroxime

**155. Pregnant woman with long history of type 2 diabetes and two miscarriages. Her diabetes is poorly controlled on metformin and glyburide. Her Hba1c is 8.5 what is the most appropriate next step in management?**

answer: Discontinue all medications and start her on insulin.

**156. Which of the following antiepileptic drugs has the highest risk during pregnancy?**

- A. Valproic acid
- B. Phenytoin
- C. Carbamazepine
- D. Lamotrigine
- E. Gabapentin

answer: A. Valproic acid

**157. A woman with long history of hypertension poorly controlled despite many medications found out that she is pregnant. US showed no amniotic fluid and 1000 g weight fetus. Baby was delivered with skeletal abnormalities and enlarged kidneys. Biopsy of kidneys showed tubular abnormalities. What teratogen causes this?**

answer: Losartan.

**158. Which drug shouldn't be used for hypertension in the pregnancy?**

answer: Lisinopril.

**159. G2P1 female presents with elevation blood pressure reading and proteinuria at 20 weeks gestation. All of the following drugs can be given except?**

answer: Lisinopril.

**160. Which of the following antihypertensive drugs is absolutely contraindicated during pregnancy?**

- A. Hydralazine
- B. Enalapril
- C. Magnesium sulfate
- D. Methyldopa
- E. Labetalol

answer: B. Enalapril

**161. Which of the following antihypertensive drugs is absolutely contraindicated during pregnancy?**

- A. Valsartan
- B. Methyldopa
- C. Hydralazine
- D. Magnesium sulfate
- E. Labetalol

answer: A. Valsartan

**162. A pregnant woman at 28 weeks gestation experience regular uterine contractions every 3 minutes, the cervix was closed and elongated. Concerns about preterm labor which of the following therapy is justified?**

answer: The mother should take dexamethasone for 2 days.

**163. Which of the following can be administered to the mother near term to prevent respiratory distress syndrome in preterm infant?**

- A. Zidovudine
- B. Valproic acid
- C. Phenobarbital
- D. Thiopental
- E. Dexamethasone

answer: E. Dexamethasone

**164. All the following drugs can be used as tocolytic in preterm labor except?**

answer: Diazepam.

**165. Maternal infection with group B streptococcus is associated with invasive disease of the newborn, and with increased risk of pregnancy loss, premature delivery, and transmission of the bacteria to the infant during delivery. Which of the following is the drug of choice for patients allergic to penicillin?**

- A. Ampicillin
- B. Cefazolin
- C. Vancomycin
- D. Ciprofloxacin
- E. Clindamycin

answer: B. Cefazolin

**166. You want to achieve cervical ripening in pregnant with 42-week gestational age?**

answer: Intracervical Dinoprostone.

**167. Used for constipation in pregnancy:**

answer: Psyllium.

**168. Used for GERD in pregnancy:**

answer: Mg and Al (Antacids).

**169. Treatment of hyperthyroidism in pregnancy:**

answer: PTU and switch to Methimazole.

**170. Treatment of pyelonephritis:**

answer: Ceftriaxone.

**171. Wrong match:**

answer: PPI - increase Ca excretion.

**172. Cervical ripening:**

answer: Dinoprostone.

# Therapy of epilepsy



**173. Therapy of epilepsy: Inhibitor of carbamazepine metabolism?**

answer: Valproate

**174. Patient on carbamazepine therapy for tonic clonic seizure but still had frequent attacks of seizure so valproic acid was added. Several weeks later the patient developed neurological symptoms of diplopia and ataxia. What is the most likely explanation?**

answer: Valproic acid decreased the metabolism of carbamazepine [note: valproic acid and topiramate are inhibitors]

**175. Antiepileptic with most cognitive impairment?**

answer: Topiramate

**176. Which of the following drug pairs metabolize vitamin D and cause osteoporosis with prolonged use?**

answer: Carbamazepine and phenytoin

**177. Patient was on carbamazepine therapy for epilepsy. The physician kept increasing the dose over a period of weeks and the patient developed ataxia and nystagmus. Drug serum level was high at that point. Which of the following is wrong?**

answer: The drug was monitored correctly

**178. Elderly on phenytoin since 25 years controlling his epilepsy, started complaining of incoordination, improved on lowering dose, still complaining of unsteadiness, next?**

answer: Lower dose again and monitor seizures

**179. Elderlies have hypoalbuminemia, decreased hepatic blood flow and renal clearance. Which one of the following antiepileptic drugs is the most appropriate if used for the correct type of seizure?**

answer: Lamotrigine

**180. Elderly with epilepsy?**

answer: Lamotrigine

**181. Young patient with tonic clonic and mixed seizure, what is the best thing to give?**

answer: Carbamazepine [note: carbamazepine is first-line in many seizure types: focal onset seizures, generalized tonic-clonic seizures, and mixed seizure types]

**182. Patient was on carbamazepine treatment for epilepsy and developed cognitive side effects at therapeutic doses, so he was switched to phenytoin. Which of the following you should avoid to tell your patient about this dangerous drug?**

answer: Phenytoin has lower cognitive side effects compared to carbamazepine (mostly)

**183. Was on phenytoin, developed strong skin reaction, switch to?**

answer: Valproate

**184. Which one of the following drugs can cause idiosyncratic acute liver failure?**

answer: Valproic acid

**185. Boy with myoclonic epilepsy. Drug of choice?**

answer: Valproic acid [note: valproic acid is first-line therapy for generalized seizures, including myoclonic, atonic, and absence seizures]

**186. 9-year-old with frequent blank staring, poor concentration ... learning difficulties, awareness lapses and eye blinking, best treatment?**

answer: Ethosuximide [note: ethosuximide is the first-line treatment for absence seizures]

**187. Uncontrolled, mixed-seizure epilepsy, phenytoin, VA and CMZ failed (resistant), next?**

answer: Lamotrigine

**188. What is a dose dependent adverse effect ASD?**

answer: Lamotrigine and diplopia

**189. Anti-seizure drug with carbonic anhydrase inhibitor effect?**

answer: Topiramate

**190. Generalized tonic clonic seizures with neuropathic pain?**

answer: Gabapentin

**191. Wrong combination of antiepileptic drug and its use?**

answer: Ethosuximide – absence seizures and neuropathic pain

**192. Contraindicated in breastfeeding?**

answer: Zonisamide [note: phenytoin, valproic acid, levetiracetam and zonisamide distribute to breast milk and cross the placenta]

**193. Liver disease avoid?**

answer: Carbamazepine

**194. Common side effect caused by ASD:**

answer: Impairment of cognition

**195. Incorrect:**

answer: GI upset is a chronic side effect of ethosuximide

**196. Incorrect:**

answer: Neonates require high dose of ASD

**197. Isoniazid & phenytoin =>increased toxicity**

answer: True

**194. Common side effect caused by ASD:**

answer: Impairment of cognition

**195. Incorrect:**

answer: GI upset is a chronic side effect of ethosuximide

**196. Incorrect:**

answer: Neonates require high dose of ASD

**197. Isoniazid & phenytoin =>increased toxicity**

answer: True

**198. Incorrect about epilepsy treatment**

Answer: If seizures are highly frequent , Start with 2 drugs and titrate up more quickly

**199. Concentration dependent side effect of phenytoin**

Answer: Nystagmus

**200. Not a common adverse effect for many anti epileptics**

Answer: Pseudolymphoma

**201. Anti epileptic with active metabolite**

Answer: Carbamazepine

**202. Incorrect about using anti epileptic**

Answer: Topiramate for focal seizures with neuropathic pain

**203. anti epileptic wrong**

Answer: Levetiracetam induce Valproic acid metabolism

**204. Incorrect**

Answer: Isoniazid and carbamazepine leads to increase adverse effects of isoniazid

**205. Incorrect about measuring plasma concentration for anti epileptic**

Answer: Plasma concentration in the steady state is a therapeutic endpoint by itself

# Therapy of migraine



**206. Long question about migraine patient taking many drugs, what is inappropriate in management?**

answer: Add another drug

**207. Triptans... what can you add?**

answer: Corticosteroids

**208. Drug not preventive in the treatment of migraine?**

answer: Carbamazepine

**209. Not a problematic drug interaction:**

answer: metoclopramide & triptan

**210. Migraine prevention & for anxiety:**

answer: Topiramate

**211. correct:**

answer: valproic acid can be used to treat migraine

**212. Not recommended in mild migraine:**

answer: Acetaminophen

**213. Not a preventive drug for migraine**

Answer: Lamotrigene

**214. Incorrect about triptans**

Answer: It's is an agonist of 5 HT 2 and antihistamine

**215. Incorrect about antiemtics in migraine**

Answer: Given 2 times per day , every 12 hours



Thank you

