

## NR 546 Final EXAM

### Psychopharmacology

MAOIs (monoamine oxidase inhibitors) affect which neurotransmitters?

- A. Serotonin, Dopamine, Norepinephrine
- B. Serotonin, GABA, Glutamate
- C. Acetylcholine, Dopamine, Norepinephrine
- D. Dopamine, GABA, Acetylcholine
- A. Serotonin, Dopamine, Norepinephrine**

Which of the following is considered first line treatment for depression?

- A. SSRI
- B. FGA
- C. SNRI
- D. MAOI
- A. SSRI**

When treating a patient for major depression disorder which medication would the PMHNP consider first?

- A. Depakote
- B. Selegiline
- C. Escitalopram
- D. Isocarboxazid
- C. Escitalopram**

Which of the following medication should be considered for a patient diagnosed with major depressive disorder who reports "always forgetting to take my pills"?

- A. Mirtazapine
- B. Fluvoxamine
- C. Fluoxetine
- D. Carbamazepine
- C. Fluoxetine**

Which of the following medication has a black box warning of a life-threatening skin rash?

- A. Lithium
- B. Lamotrigine
- C. Lurasidone
- D. Lorazepam
- B. Lamotrigine**

Which medication is considered the best tolerated SSRI?

- A. Venlafaxine
  - B. Bupropion
  - C. Setraline
  - D. Escitalopram
- D. Escitalopram**

During a 4 week follow up appointment, Rashida, who is prescribed Sertraline 25mg qAM reports slight improvement in depression symptoms and tolerating medication well. Which of the following should the PMHNP do?

- A. Increase Setraline dose
- B. Switch to an SNRI
- C. Switch to a different SSRI
- D. Add Trazodone qHS for sleep.

**A. Increase Setraline dose**

Which medication should be avoided for the 66 year patient diagnosed with major depressive disorder and anxiety with a reported fall 3 months ago?

- A. Citalopram
- B. Setraline
- C. Paroxetine
- D. Aripiprazole

**C. Paroxetine**

A patient reports upset stomach and diarrhea 3 days after taking new prescription of sertraline. Which of the following is the most appropriate response from the PMHNP?

- A. "Start doubling the dose of sertraline and your symptoms will begin to ease up".
- B. "Most side effects subside after 4-5 days. Your body is getting adjusted to the increased serotonin levels".
- C. "Stop taking it immediately and go to the local emergency department".
- D. "You must take Sertraline with food, otherwise you will continue to experience GI symptoms".

**B. "Most side effects subside after 4-5 days. Your body is getting adjusted to the increased serotonin levels".**

During a 2 week follow up appointment, the patient reports no improvement in depressive symptoms with escitalopram. Which of the following statement made by the PMHNP is correct?

- A. "Let's discontinue escitalopram and start you on something stronger".
- B. "It can take up to 6 weeks before you notice improvements of depressive symptoms".
- C. "I am going to prescribe Trazodone. Take it at night to help you sleep".
- D. "Start taking two pills at a time".

**B. "It can take up to 6 weeks before you notice improvements of depressive symptoms".**

Duloxetine effects which two neurotransmitters?

- A. serotonin and norepinephrine
- B. serotonin and dopamine
- C. norepinephrine and GABA
- D. glutamate and acetylcholine

**A. serotonin and norepinephrine**

Awura, a 70 year old patient diagnosed with major depressive disorder reports a recent 40 pound weight loss within the last 3 months. Which medication should the PMHNP consider adding to her medication regimen?

- A. quetiapine
- B. mirtazapine
- C. valproic acid
- D. paroxetine

**B. mirtazapine**

Which of the following symptoms is NOT an adverse effect associated with the acute use of opioids?

- A. Sedation
- B. Respiratory depression
- C. Immunosuppression
- D. Itching

**C. Immunosuppression**

When dosing citalopram for Lynee, a 72 year old patient, the PMHNP understands to dose at 1/2 dose due to the increased risk of

- A. delirium
- B. polypharmacy
- C. falls
- D. QTc prolongation

**D. QTc prolongation**

Which of the following medication class is approved for first line treatment for OCD?

- A. Atypical antipsychotics
- B. Benzodiazepines
- C. MAOI
- D. SSRI

**D. SSRI**

Which SSRI has a mild antihistamine effect?

- A. Paroxetine
- B. Fluoxetine
- C. Citalopram
- D. Sertraline

**C. Citalopram**

Which medication should the PMHNP prescribe for a patient diagnosed with major depressive disorder but takes multiple medications for other chronic conditions?

- A. Sertraline
- B. Escitalopram
- C. Buspirone
- D. Clonazepam

**B. Escitalopram**

The patient reports suffering from insomnia and anxiety. Which SSRI should be prescribed?

- A. Paroxetine
- B. Duloxetine
- C. Fluoxetine
- D. Venlafaxine

**A. Paroxetine**

Tricyclic antidepressants (TCA) act as antagonists on which of the following neurotransmitters?

- A. Acetylcholine and Dopamine
- B. Histamine and Acetylcholine
- C. Dopamine and Histamine
- D. Serotonin and Norepinephrine

**B. Histamine and Acetylcholine**

Which foods should the PMHNP educate their patient to avoid while they are taking Selegiline?

- A. Nuts, milk and wheat
- B. Aged wine, cheeses, and meats
- C. Green leafy vegetables and tomatoes
- D. Grapefruit and grapefruit juice

**B. Aged wine, cheeses, and meats**

Which neurotransmitter is associated with reward and addiction?

- A. Norepinephrine
- B. GABA
- C. Dopamine
- D. Histamine

**C. Dopamine**

Emily, a 22 year old female, reports she is 4 weeks pregnant and wants to get clean from heroin. Which medication is most appropriate for Emily?

- A. Buprenorphine/ Naloxone
- B. Naltrexone
- C. Buprenorphine
- D. Methadone

**D. Methadone**

Which of the following is the most appropriate response made by the PMHNP to a breastfeeding patient inquiring about a prescription for buprenorphine?

- A. "You can breastfeed 6 hours after you take the buprenorphine".
  - B. "You can only breastfeed before you take buprenorphine"
  - C. "2 hours after taking buprenorphine, pump your breastmilk and discard it. You can resume breastfeeding afterwards".
  - D. "You will need to transition to bottle feeding while taking buprenorphine".
- D. "You will need to transition to bottle feeding while taking buprenorphine".**

Keaton presents to the ED and reports daily drinking of 18 beers for nearly 20 years. Keaton reports a history of withdrawal seizures when he stops drinking. Which medication should the PMHNP order?

- A. disulfiram
  - B. topiramate
  - C. lorazepam
  - D. naltrexone
- C. lorazepam**

A patient reports wanting to abstain from alcohol use. They report a history of abusing opioids in the past, but they have not used any in the last several months. They are concerned that they are at risk of abusing opioids again. Which of the following is the best pharmaceutical option for this patient?

- A. diazepam
  - B. naltrexone
  - C. chlordiazepoxide
  - D. acamprosate
- B. naltrexone**

A Ellie-Ann, 31 year-old patient with a history of abusing opioids and binge drinking, reports they are not committed to abstain from using at this time. Which medication is appropriate for Ellie-Ann?

- A. disulfiram
  - B. naloxone
  - C. naltrexone
  - d. lorazepam
- B. naloxone**

The PMHNP is treating a 27 year old patient diagnosed with ADHD who is actively trying to get pregnant. Which medication is most appropriate?

- A. Methylphenidate
  - B. Lisdexamfetamine
  - C. Atomoxetine
  - D. Selegiline
- C. Atomoxetine**

Which of the following statements best explains the monoamine hypothesis of depression?

- A. Depression is caused by a deficiency of monoamine neurotransmission.
- B. Depression is a result of chemical a chemical imbalance of monoamine neurotransmission.
- C. Depression is caused by an excess of monoamine neurotransmission.
- D. Depression is a result from maladaptive or irrational cognitions taking the form of distorted thoughts core beliefs and judgments

**A. Depression is caused by a deficiency of monoamine neurotransmission.**

Which combination therapy is considered first line for bipolar I, current manic episode, with depressive features?

- A. Bupropion + Aripiprazole .
- B. Lithium + Lamotrigine
- C. Valproic Acid + Duloxetine
- D. Atomoxetine + Risperidal

**B. Lithium + Lamotrigine**

Why should antidepressants be used in combination therapy with mood stabilizers when treating bipolar disorder?

- A. To target depression symptoms quickly and reduce rapid cycling of bipolar depression
- B. To reduce the gastrointestinal side effects caused by antidepressants.
- C. To decrease incidence of death by suicide in children and young adults.
- D. To increase patient medication adherence.

**C. To decrease incidence of death by suicide in children and young adults.**

Which of the following medication should be avoided when the patient has anxiety because it can exacerbate anxiety?

- A. Escitalopram
- B. Sertraline
- C. Fluvoxamine
- D. Duloxetine

**D. Duloxetine**

Which SSRI is most likely to cause discontinuation syndrome if abruptly stopped?

- A. Fluoxetine
- B. Selegiline
- C. Mirtazapine
- D. Paroxetine

**D. Paroxetine**

Which medication should not be prescribed to the patient with a seizure history?

- A. Venlafaxine
- B. Trazodone

- C. Bupropion
- D. Amitriptyline

**C. Bupropion**

"Serotonin antagonist and reuptake inhibitor" describes the neurotransmitter actions for which medication?

- A. Citalopram
- B. Desvenlafaxine
- C. Trazodone
- D. Mirtazapine

**C. Trazodone**

Which medication inhibits the reuptake of both norepinephrine and dopamine?

- A. Methylphenidate
- B. Bupropion
- C. Lithium
- D. Venlafaxine

**B. Bupropion**

Which of the following statements made by the PMHMP is correct for patient medication education related to Trazodone?

- A. "If you had a seizure before, we should try a different medication".
- B. "If you experience a prolonged painful erection, get emergency help as soon as possible."
- C. "This medication can cause breast tissue enlargement in men".
- D. "The best time to take this medication is first thing in the morning to avoid insomnia at night".

**B. "If you experience a prolonged painful erection, get emergency help as soon as possible."**

A patient has been admitted to the emergency department with a suspected overdose. Their EKG is noted to have a widened QRS complex. Which antidepressant does the PMHNP suspect the patient has overdosed on?

- A. Paroxetine
- B. Amitriptyline
- C. Phenelzine
- D. Isocarboxazid

**B. Amitriptyline**

Tricyclic antidepressants (TCA) act as reuptake inhibitors on which of the following neurotransmitters?

- A. Norepinephrine and Serotonin
  - B. GABA and Acetylcholine
  - C. Dopamine and Histamine
  - D. Histamine and Acetylcholine
- A. Norepinephrine and Serotonin**

Which medication is safest for 28 year old patient, diagnosed with major depressive disorder, who is actively trying to conceive?

- A. Sertraline
- B. Topiramate
- C. Lithium
- D. Paroxetine

**A. Sertraline**

Which best describes serotonin syndrome?

- A. Occurs when serotonergic medications deplete levels of norepinephrine in the body.
- B. Occurs when serotonergic medications build an abnormally high levels of serotonin in the body.
- C. Occurs when serotonergic medications are abruptly discontinued.
- D. Occurs when serotonergic medications interact with foods containing high levels of tyramine.

**B. Occurs when serotonergic medications build an abnormally high levels of serotonin in the body.**

Which of the following medications is a serotonin norepinephrine receptor agonist?

- A. Bupropion
- B. Mirtazapine
- C. Trazodone
- D. Nortriptyline

**B. Mirtazapine**

Which medication should the PMHNP consider prescribing for the patient diagnosed with bipolar disorder reporting suicidal ideations?

- A. Valproic acid
  - B. Lithium
  - C. Escitalopram
  - D. Ziprazadone
- B. Lithium

For the past week, Amiee who is prescribed lithium reports using NSAIDs to treat tension headache. Which of the following should the PMHNP anticipate?

- A. decreased levels of lithium
- B. QTC prolongation
- C. elevated levels of lithium
- D. mild diffuse rash throughout body

**C. elevated levels of lithium**

The PMHNP increased their patient's lithium dose from 300mg daily to 600mg daily. When should the patient's lithium level be monitored next?

- A. 3 months for 1 year after dosage change
- B. Next follow up appointment in 6 months



- C. Within the next 14 days
- D. 5 days after dosage change

**D. 5 days after dosage change**

Rebecca presents for treatment of moderate depression. Her medical history includes the use of four medications for comorbid physical diagnoses. Which medication is least likely to interact with other prescriptions?

- A. Fluoxetine
- B. Duloxetine
- C. Paroxetine
- D. Escitalopram

**D. Escitalopram**

Lithium levels can be decreased by which of the following?

- A. Aripiprazole
- B. Grapefruit
- C. ACE inhibitors
- D. Coffee

**D. Coffee**

Patient presents to the ED with the following symptoms: tachycardia, hypertension, and mydriasis. Floor staff reports the patient is constantly making sexual advances towards them. Which substance is this patient most likely intoxicated from?

- A. Marijuana
- B. Benzodiazepines
- C. Methamphetamine
- D. Cocaine

**C. Methamphetamine**

PMHNP was called to assess a patient in the emergency room who reports bruxism. Which recreational stimulant is this patient most likely withdrawing from?

- A. Marijuana
- B. MDMA
- C. Methamphetamines
- D. Methylphenidate

**B. MDMA**

Which antidepressant is paired most appropriately with its mechanism of action?

- A. Mirtazapine - serotonin norepinephrine receptor agonist
- B. Topiramate- serotonin norepinephrine reuptake inhibitor
- C. Bupropion- serotonin antagonist and reuptake inhibitor
- D. Trazodone- serotonin reuptake inhibitor

**A. Mirtazapine - serotonin norepinephrine receptor agonist**

Which of the following best describes the signs and symptoms of intoxication from opiates?

- A. Sedation, amnesia, and ataxia
- B. Euphoria, miosis, and decreased gag reflex
- C. Delirium, hallucinations, and tremor
- D. Agitation, mydriasis, and tachycardia

**B. Euphoria, miosis, and decreased gag reflex**

PMHNP was called to assess a patient in the emergency room who required 5 nurses to restrain them due to increased agitation. Upon assessment the PMHNP noted the patient had nystagmus. Which substance is this patient most likely intoxicated from?

- A. LSD
- B. Herion
- C. PCP
- D. Cocaine

**C. PCP**

Which antidepressant is pharmacologically similar to a combination of an SSRI and buspirone?

- A. Vilazodone
- B. Trazodone
- C. Venlafaxine
- D. Valproic Acid

**A. Vilazodone**

Which of the following statements best defines impulsivity?

- A. Repetitive behavior that has no adaptive functioning.
- B. The inability to terminate ongoing actions.
- C. Behavior that is performed as a means of avoiding perceived negative consequences.
- D. The inability to stop initiating actions with disregard for the negative consequences of these actions

**D. The inability to stop initiating actions with disregard for the negative consequences of these actions**

Which neural circuit is associated with reward and addiction?

- A. Mesolimbic pathway
- B. Tuberoinfundibular pathway
- C. Nigrostriatal pathway
- D. Mesocortical pathway

**A. Mesolimbic pathway**

A client walked into the emergency department and tells the PMHNP that she has run out of money for herion and feels like they are about to start detoxing. Which symptoms are most associated with herion withdrawal?

- A. Miosis, depression, and increased appetite.
- B. Mydrasis, euphoria, and agitation

- C. Mydriasis, piloerection, and diarrhea
- D. Miosis, CNS depression, and decreased gag reflex

**C. Mydriasis, piloerection, and diarrhea**

Which neurotransmitter is associated with reward and addiction?

- A. Norepinephrine
- B. Serotonin
- C. Glutamine
- D. Dopamine

**D. Dopamine**

A patient is suspected of overdosing from morphine. Which medication should immediately be administered?

- A. Naloxone
- B. Naltrexone
- C. Methadone
- D. Meperidine

**A. Naloxone**

Zara, a 34 year old female, is currently a participant in a methadone MAT program. Zara reports she is 8 weeks pregnant and asks if she should stop methadone "cold turkey". Which of the following is the best response to Zara made by the PMHNP?

- A. "You must stop taking Methadone immediately to reduce risk of harm to the fetus".
- B. "You can continue to use Methadone, we will just need to adjust the dose".
- C. "Lets switch you to naloxone which will reduce the risk of neonatal abstinence syndrome".
- D. "Currently, your best option is buprenorphine/naloxone".

**B. "You can continue to use Methadone, we will just need to adjust the dose"**. A patient newly prescribed buprenorphine could be dosed how much by day 2?

- A. 14mg
- B. 8mg
- C. 25mg
- D. 50mg

**A. 14mg**

Robert, 45 year old patient, has a history of alcohol abuse and reports he is unsure if he can abstain from alcohol at this time. Which medication is most appropriate for Robert?

- A. Buprenorphine/naloxone
- B. Acamprosate
- C. Naltrexone
- D. Disulfiram

**C. Naltrexone**

A patient prescribed disulfiram attended a Christmas party, drank a beer, and is now currently in the emergency department. Which of the following symptoms is expected?

- A. Sedation, euphoria, and amnesia
- B. Nystagmus, agitation, and diarrhea
- C. Hallucinations, delirium, and tremors
- D. Palpitations, nausea, and vomiting
- D. Palpitations, nausea, and vomiting**

Which of the following anticonvulsants can be used to reduce the cravings for alcohol?

- A. Valproic Acid
- B. Lorazepam
- C. Carbamazepine
- D. Topiramate
- D. Topiramate**

When can a patient start taking acamprosate for alcohol abuse?

- A. Absence is not necessary to initiate medication
- B. As soon as abstinence is achieved
- C. 12 weeks after abstinence is achieved
- D. 14 days after abstinence is maintained
- B. As soon as abstinence is achieved**

Which opioid can cause respiratory depression if used with benzodiazepines and can be used during acute coronary syndrome or refractory ischemic chest pain?

- A. Hydromorphone
- B. Clonazepam
- C. Fentanyl
- D. Morphine
- D. Morphine**

Which opioid is an opioid agonist but is more potent than morphine?

- A. Methadone
- B. Herion
- C. Lorazepam
- D. Hydromorphone
- D. Hydromorphone**

Which medication is a pure opioid antagonist that is used in the treatment of acute opioid overdose?

- A. Naloxone
- B. Naltrexone
- C. Buprenorphine/naloxone
- D. Buprenorphine
- A. Naloxone**

The PMHNP is rounding on patients on a post-surgical floor in the hospital. Upon entering a patient's room, the PMHNP notices the patient is not responding to voice, has pinpoint pupils, and a respiration rate of 6 breaths per minute. The PMHNP suspects opioid overdose. Which action is correct at this time?

- A. The PHMNP reviews the patient's care to determine which opioid was administered.
- B. The PHMNP instructs the bedside nurse to administer naloxone 2 mg IV Q3 minutes until the patient is responsive.
- C. The PMHNP orders chlorthalidone 50mg to be administered via CIWA-Ar protocols.
- D. The PMHNP instructs the bedside nurse to contact the emergency medicine doctor to assist with an emergent intubation

**B. The PHMNP instructs the bedside nurse to administer naloxone 2 mg IV Q3 minutes until the patient is responsive.**

Which of the following is not true related to the pathophysiology of attention-deficit/hyperactivity disorder (ADHD) across the lifespan?

- A. ADHD symptoms change with age.
- B. ADHD is not only a childhood diagnosis.
- C. Hyperactivity increases with age.
- D. Adults with ADHD may experience occupational stress or anxiety.

**C. Hyperactivity increases with age.**

The PMHNP is considering treatment options for an 18-year-old man with ADHD who has a history of alcohol and marijuana abuse. Which of the following accurately explains the effects of different stimulant formulations on neuronal firing?

- A. Extended-release stimulants result in phasic stimulation of NE and DA signals, but this does not lead to euphoria and abuse.
- B. Tonic firing is the result of rapid receptor occupancy and fast onset of action, as seen with extended-release formulations
- C. Extended-release stimulants lead a sustained increase in NE and DA which enhances tonic firing.
- D. Immediate-release stimulants lead to tonic firing, which can lead to euphoria and abuse.

**C. Extended-release stimulants lead a sustained increase in NE and DA which enhances tonic firing.**

Roy is a 44 year old patient presents with comorbid alcohol abuse, generalized anxiety, bipolar disorder, and ADHD. Which disorder should be treated first?

- A. Generalized anxiety disorder
- B. Alcohol abuse
- C. ADHD
- D. Bipolar disorder

**B. Alcohol abuse**

Which of the following ADHD medications would be most appropriate for a school aged child?

- A. Dexamethylphenidate
- B. Clonidine

- C. Guanfacine
- D. Atomoxetine

**A. Dexmethylphenidate**

Eric, a 25 year old law student, reports ADHD symptoms and wants to start medications. Upon review of Eric's medical history, the PMHNP learns that Eric has battled with opioid addiction his past. Which medication should the PMHNP consider prescribing first?

- A. Atomoxetine
- B. Concerta
- C. Amphetamine
- D. Lisdexamfetamine

**A. Atomoxetine**

"Increases norepinephrine and especially dopamine actions by blocking their reuptake" best described the mechanism of action of which of the following medications except?

- A. Jornay PM
- B. Amphetamine
- C. Mehtylenidate
- D. Guanfacine

**D. Guanfacine**

Which of the formulations of methylphenidate is best for a child who can not swallow pills?

- A. Ritalin
- B. Daytrana
- C. Dexmethylphenidate
- D. Concerta

**A. Ritalin**

What is the difference between methylphenidate and dexmethylphenidate?

- A. Methylphenidate is more appropriate for children.
- B. Dexmethylphenidate is not available in IR or XR.
- C. Methylphenidate is 10x more potent than dexmethylphenidate
- D. Dexmethylphenidate is associated with more adverse effects in comparison to methylphenidate.

**D. Dexmethylphenidate is associated with more adverse effects in comparison to methylphenidate.**

The parent of a child diagnosed with ADHD demonstrates correct understanding dextroamphetamine when they state which of the following?

- A. "I give him a pill every time he has an outburst. We are up to 6 pills a day!"
- B. "We need 2 refills for the winter break".
- C. "He been taking it right before bed".
- D. "Can we plan on giving him a "drug holiday" over the summer break."
- D. "Can we plan on giving him a "drug holiday" over the summer break."**

The PMHNP understand that which of the following ADHD medications is the most abused and desired?

- A. atomoxetine
- B. dexmethylphenidate
- C. dextroamphetamine
- D. lisdexamfetamine

**C. dextroamphetamine**

Which of the following medications has central actions on postsynaptic alpha 2A receptors in the prefrontal cortex in the treatment of ADHD?

- A. clonidine
- B. atomoxetine
- C. lisdexamfetamine
- D. bupropion

**A. clonidine**

Sarah, 39 year old, has a diagnosis of ADHD and is taking clonidine daily reports sleep disturbances. Which statement made by the PMHNP is most correct?

- A. "Start taking clonidine at bedtime. That should help".
- B. "Lets increase the daytime dosage".
- C. "Stop taking the medication immediately".
- D. "Take clonidine with a small snack".

**A. "Start taking clonidine at bedtime. That should help".**

During a followup visit with Coraan 11-year-old who is currently prescribed 5mg methylphenidate IR in the morning, her mother reports slight improvement in Cora's behavior but the medication seems to wear off within a few hours. Which of the following changes would you make to Cora's initial prescription?

- A. Increase dose to 5 mg methylphenidate IR twice daily.
- B. Change dose to methylphenidate 10 mg ER once daily.
- C. Switch to a different stimulant medication
- D. Evaluate client for non-stimulant medication

**A. Increase dose to 5 mg methylphenidate IR twice daily.**

Patient reports difficulty staying asleep and requests for prescription medication. Which of the following should the PMHNP consider?

- A. Ramelteon
- B. Melatonin
- C. Suvorexant
- D. Valerian root

**C. Suvorexant**

Which of the following medications is a dual orexin receptor antagonist (DORA)?

- A. Zolpidem
- B. Ramelteon

- C. Trazodone
- D. Lemborexant

**D. Lemborexant**

During an annual visit, Carol reports her PCP prescribed her diltiazem for her hypertension and chest pain. WH

The PMHNP discontinues the suvorexant prescription due to severe interactions with diltiazem.  
The PMHNP instructs Carol to take suvorexant first thing in the morning prior to taking diltiazem.  
The PMHNP decreased the dose of suvorexant.  
The PMHNP increases the dose of suvorexant.

**C. The PMHNP decreased the dose of suvorexant.**

Which of the following medications bind to benzodiazepine sites on GABA receptors?

- Eszopiclone
- Ramelteon
- Lrmborexant
- Trazodone

**A. Eszopiclone**