Psychopharmacology: A Comprehensive Review

1) The association between a chemical compound and its biological activity, pioneered by Bovet and colleagues in the 1930s is known as
   a) Symbiosis
   b) Structure-activity relationship
   c) Mechanism of Action
   d) Half-life

2) In the context of mental health, there is little doubt that psychopharmacology revolutionized psychotherapy in the
   a) 1940s
   b) 1950s
   c) 1960s
   d) 1970s

3) It is estimated (based on data from the CDC, NHANES and BRFSS) that the occurrence of depression to be _____ of the adult population who participated.
   a) 3.8%
   b) 6.8%
   c) 12.8%
   d) 18.8%

4) A study by Jong H. Hoon in 2013 suggests that the circuit connecting the prefrontal cortex with the _____ is a site of communication disturbance in schizophrenics.
   a) Ventral horn
   b) Basal ganglia
   c) Pons
   d) Medulla

5) The primary function of the hypothalamus is
   a) Homeostasis
   b) Balance
   c) Memory
   d) Communication

6) The thalamus plays an important role in receiving and filtering all sensory information except
   a) Visual
   b) Gustatory
   c) Olfactory
   d) Touch
7) The primary function of the Medulla is
   a) Sensory analysis and movement
   b) Short term memory
   c) Receptive language
   d) Regulation of breathing and heart rate

8) The primary function of the Pons is
   a) Sensory analysis and movement
   b) Short term memory
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9) Which is not a main function of glial cells?
   a) Nourishing neurons
   b) Electrical signaling and synaptic communications
   c) Help in the removal of waste products from the neurons
   d) Insulate neurons

10) In the resting state, there are more _____ outside the neuron than inside it
    and more _____ ions inside than outside it.
    a) Calcium, Sodium
    b) Sodium, Potassium
    c) Potassium, Magnesium
    d) Magnesium, Calcium

11) Which is an example of action potential which inhibits axonal transmission by
    blocking the excitatory channels on the postsynaptic neuron as well as
    lowering the rate of action potential coming from the presynaptic neuron?
    a) Alcohol
    b) Valproic acid
    c) Tetrodotoxin
    d) Amphetamine

12) Which are endogenous chemicals in the human body that are responsible for
    the transmission of nerve impulses between neurons and target cells across a
    synapse?
    a) Signal molecules
    b) Communication enzymes
    c) Generator chemicals
    d) Neurotransmitters
13) Which is the neurotransmitter that plays an important role in conditions related to stress?
   a) Acetylcholine
   b) Glutamate
   c) Serotonin
   d) Norepinephrine

14) A decreased number of norepinephrine transporter (NET) is associated with
   a) Bipolar disorder
   b) ADHD
   c) Personality disorders
   d) OCD

15) Which is the primary excitatory neurotransmitter?
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16) Which refers to the movement of a drug from the site of administration to the blood circulation?
   a) Atomization
   b) Transmigration
   c) Absorption
   d) Meandering

17) Drug dosages are based on the average individual size of
   a) 48 kg
   b) 58 kg
   c) 68 kg
   d) 78 kg

18) The brain is a lipophilic organ, allowing it to receive about _____ of the blood that leaves the heart.
   a) 5%
   b) 10%
   c) 20%
   d) 40%

19) What is the metabolite of Levodopa?
   a) Paliperidone
   b) Meprobamatate
   c) Psilocin
   d) Dopamine
20) Which are surface proteins to which specific signaling molecules may bind?
   a) Receptors
   b) Ion channels
   c) Membrane carriers
   d) Enzymes

21) The binding of drugs with receptors which alters the 3D protein structure of the receptor to cause pharmacological effects is known as
   a) Receptor specificity
   b) Receptor structural change
   c) Receptor population
   d) Receptor occupation

22) What is an increase in the number of receptors as a compensatory response after continual absence of agonists?
   a) Up-regulation
   b) Down-regulation
   c) Withdrawal syndrome
   d) Rebound effect

23) Receptor desensitization is also known as
   a) Tachyphylaxis
   b) Rebound effect
   c) Withdrawal syndrome
   d) Tolerance

24) In general, there are three characteristic features of mental disorders that indicate the need for maintenance therapy on psychoactive medications. They include all the following except
   a) Early onset
   b) Persistence
   c) Genetic predisposition
   d) Risk of relapse

25) The most widely prescribed anxiolytics today, benzodiazepines, were introduced in the
   a) 1950s
   b) 1960s
   c) 1970s
   d) 1980s
26) In general, psychosis is believed to be a product of excessive _____ activation and although all antipsychotics mainly block the pathway leading to this, the atypical antipsychotics also act on the _____ receptors.
   a) Acetylcholine, Endorphin
   b) Endorphin, Dopamine
   c) Dopamine, Serotonin
   d) Serotonin, Acetylcholine

27) In 1989, the first atypical antipsychotic that gained FDA approval was
   a) Clozapine
   b) Olanzapine
   c) Quetiapine
   d) Risperidone

28) Risperidone carries an FDA black box warning because of its propensity to cause death in patients with
   a) High blood pressure
   b) Heart disease
   c) Dementia-related psychosis
   d) Diabetes

29) The antidepressant Atomoxetine is a norepinephrine reuptake inhibitor with received FDA approval for the treatment of
   a) ADHD
   b) OCD
   c) Anxiety
   d) Sleep disorders

30) Which is the only tetracyclic antidepressant to have received FDA approval for the treatment of depression?
   a) Aminipteline
   b) Imipramine
   c) Mirtazapine
   d) Desipramine

31) All the following are uses mentioned for SNRIs EXCEPT
   a) Smoking cessation
   b) Neuropathic pain
   c) Fibromyalgia
   d) Appetite suppression
32) SNRIs carry the black box warning that cautions patients about its propensity to precipitate
   a) Suicidal thoughts
   b) Weight gain
   c) Stroke
   d) Heart palpitations

33) Bupropion is contraindicated in
   a) High blood pressure
   b) Pregnant women
   c) The elderly
   d) Seizure disorders

34) Which is NOT a tricyclic antidepressant?
   a) Thorazine
   b) Wellbutrin
   c) Tofranil
   d) Norpramin

35) Individuals taking MAOIs, should avoid all the following food EXCEPT
   a) Ice cream
   b) Pepperoni
   c) Aged cheddar
   d) Rice with soy sauce

36) The non-selective beta blockers such as propranolol controls
   a) Hunger cravings
   b) Anxiety symptoms
   c) Compulsions
   d) Delusions

37) Amphetamine derivatives are the most commonly prescribed psychostimulants for the management of ADHD. They mimic NDRI’s mode of action by increasing the levels of
   a) Dopamine and Oxytocin
   b) Oxytocin and Histamine
   c) Histamine and Norepinephrine
   d) Norepinephrine and Dopamine

38) Which natural remedy used in the treatment of insomnia, anxiety, depression and migraines is also known as All-Heal, Baldrian, and Garden Heliotrope?
   a) Kava
   b) St. John’s Wort
   c) Valerian
   d) Ephedra
39) When antipsychotics are combined with alcohol, TCAs, benzodiazepines, and antihistamine, the result is
   a) Symbiotic treatment
   b) Sudden death
   c) A rebound effect
   d) Additive sedation

40) Clozapine causes _____ damage in some patients.
   a) Kidney
   b) Heart
   c) Liver
   d) Thyroid

41) Which is commonly used to assess motor movements and the severity of symptoms?
   a) Abnormal Involuntary Movement Scale
   b) Patient Gate Assessment
   c) Range of Motion Inventory
   d) Ambulatory Task List

42) Sexual dysfunction side effects of antipsychotics disappear as soon as the drug is discontinued.
   a) True
   b) False

43) A psychotropic agent implicated in serotonin syndrome is
   a) SSRIs
   b) Lithium
   c) St. John’s Wort
   d) All the above

44) One of the main problems associated with sedative use are their _____ and abuse potential.
   a) Addictive properties
   b) High costs
   c) Interaction with other medications
   d) Food restrictions

45) The FDA database that allows individuals to report adverse events is
   a) WATTO
   b) REVAN
   c) FAERS
   d) EWOK
46) Which are the two main sets of criteria used for classifying mental health disorders worldwide?
   a) TMB and ICD  
   b) ICD and DSM  
   c) DSM and WAG  
   d) WAG and TMB

47) Which is a psychiatric condition that occurs most frequently in the elderly and involves a preoccupation with one or more semi-systematized delusions?
   a) Psychotic disorder due to a medical condition  
   b) Paraphrenia  
   c) Brief psychotic disorder  
   d) Shared psychotic disorder

48) Which personality disorders are characterized by anxious and fearful thinking?
   a) Cluster A  
   b) Cluster B  
   c) Cluster C  
   d) Cluster D

49) Dysthymic disorder is a chronic form of depression lasting for _____ and more.
   a) 6 months  
   b) 9 months  
   c) 1 year  
   d) 2 years

50) Sublingual medications are placed
   a) In a muscle  
   b) Under the skin  
   c) Under an eyelid  
   d) Under the tongue

51) The maximum total daily dose of fluoxetine should not exceed
   a) 40 mg/day  
   b) 80 mg/day  
   c) 120 mg/day  
   d) 200 mg/day

52) Selegiline transdermal patches may be used in pediatric patients if strict dietary modifications are in place.
   a) True  
   b) False
53) The usual dose of lithium required to maintain desired serum levels is between _____ daily.
   a) 900 mg to 1200 mg  
   b) 1500 mg to 1800 mg  
   c) 2000 mg to 2400 mg  
   d) 2600 mg to 3000 mg

54) What demonstrates the relationship between a drug’s toxic dose and effective dose?
   a) Target dose  
   b) Dosage spread  
   c) Therapeutic index  
   d) Safety zone

55) A survey by the American Psychological Association found that only _____ of practicing psychologists have specialized training in treating older adults.
   a) 2.2%  
   b) 4.2%  
   c) 8.2%  
   d) 16.2%

56) 25% of patients over the age of 70 take more than _____ drugs everyday.
   a) 2  
   b) 3  
   c) 5  
   d) 7

57) Up to _____ of women suffer from stress, mood and anxiety during gestational and postpartum periods.
   a) 10%  
   b) 20%  
   c) 30%  
   d) 40%

58) A higher risk for persistent pulmonary hypertension in the newborn has been linked to the use of _____ during the last trimester of pregnancy.
   a) Atypical antipsychotics  
   b) MAOIs  
   c) Tricyclics  
   d) SSRIs
59) More than _____ of stimulant medication use in the world occurs in the United States.
   a) 60%
   b) 70%
   c) 80%
   d) 90%

60) Which has the highest fatality rate among all SSRIs?
   a) Sertraline
   b) Fluvoxamine
   c) Paroxetine
   d) Citalopram

61) People with which diagnoses are most likely to be capable to make treatment decisions?
   a) Dementia
   b) Personality disorders
   c) Psychosis
   d) Delirium

62) Which gives the state sovereign authority to intervene and act on behalf of the mentally ill when they become mentally or physically incapable of caring for themselves?
   a) Doli incapax
   b) Guardian ad litem
   c) Parens patriae
   d) Se defendendo

63) According to the CDC, there was a _____ increase in drug poisoning deaths among teens between the ages of 15 - 19 from 2000 to 2009 due to prescription drug overdose.
   a) 31%
   b) 51%
   c) 71%
   d) 91%

64) Which is a symptom of overdose for narcotics?
   a) Pinpoint pupils
   b) Loss of memory
   c) Rapid pulse rate
   d) Hallucinations

Cont…
65) Marijuana is detected in urine up to _____ after chronic use.
   a) 1 week
   b) 3 weeks
   c) 6 weeks
   d) 12 weeks

66) What is the FDA requirement to demonstrate that an investigational antidepressant is better than placebo in order to approve it?
   a) Placebo is beat in greater than 65% of trials
   b) Placebo is beat in greater than 75% of trials
   c) Placebo is beat in greater than 85% of trials
   d) 2 positive clinical trials