

PSYCHOPHARMACOLOGY

Based on information (written and verbal) from a seminar by
Joseph Wegmann

Psychopharmacology is influenced by the DSM-IV because its descriptive, symptom-based approach to the diagnosis of mental illness allows for a better treatment response and prediction of the prognosis.

BIOLOGY OF PSYCHOPHARMACOLOGY

Body's Effect on Drugs (Pharmacokinetics)

- ∴ Absorption - The drug is broken down into the bloodstream .
- ∴ Distribution - Once absorbed, the drug is distributed to various sites of action throughout the body.
 - First Phase - Organs high in blood such as the heart, brain, kidneys, liver
 - Second Phase - Fat and muscle tissue
- ∴ Metabolism - The drug is changed into a compound which is easily excreted by the kidneys. Metabolism occurs primarily in the liver .
- ∴ Elimination from the body via the kidneys.

Drug's Effect on the Body (Pharmacodynamics)

- ∴ Pharmacological effect - The desired therapeutic effect
- ∴ Side Effects - Typically considered undesirable. Undesirable attachment to receptors in the brain .
- ∴ Allergic reactions - Immune response to medication
- ∴ Discontinuation syndrome - The response to stopping or interrupting medication treatment. Withdrawal.

Neurotransmitters

Norepinephrine

- ∴ Secreted by adrenal glands in response to stress or arousal. (fight or flight response) ∴
Regulates alertness, anxiety, tension

Serotonin

- ∴ Regulates states of consciousness, mood, anxiety
- ∴ Affects appetite, sleep, sexual behavior, states of pain

Dopamine

- ∴ Influences emotional behavior and cognition ∴
Regulates motor activity
- ∴ Regulates endocrine activity
(In Schizophrenics, there is a hyper-production of dopamine in limbic system)

Gamma amino-butyrac acid - inhibitory neurotransmitters ..

Associated with emotional balance

∴ Sleep patterns

∴ Anxiety

Glutamate

∴ Most common neurotransmitter ∴

Always excitatory

TREATMENT BASED ON DIAGNOSIS

Mood Disorders

∴ Major Depression

∴ Bipolar Disorder

∴ "Minor" Depressions: dysthymia, chronic residuals or partially recovered major depression

Core Symptoms Common to All Depressions

- Mood of sadness, despair, emptiness
- Anhedonia (loss of pleasure)
- Low self-esteem
- Apathy, low motivation, social withdrawal
- Excessive emotional sensitivity
- Negative, pessimistic thinking
- Irritability
- Suicidal ideation

Medical disorders That Can Cause Depression

- | | |
|---------------------------|-------------------------|
| •AIDS | Influenza |
| •Anemia | Malignancies |
| •Asthma | Malnutrition |
| •Chronic fatigue syndrome | Multiple sclerosis |
| •Chronic pain | Parkinson's disease |
| •Congestive heart failure | Pre-menstrual dysphoria |
| •Cushing's disease | Rheumatoid arthritis |
| •Diabetes | Syphilis |
| •Hypothyroidism | Systemic lupus |
| •Infectious hepatitis | Ulcerative colitis |