

REYMAR T. B. BOLAGAO, MAN, RN

PREPARED BY:

PSYCHOPHARMACOLOGY

TREATMENT MODALITIES

ANTIDEPRESSANTS

ANTIDEPRESSANT

**Indicated for major
depressions**(Acute and Atypical
Bipolar and Dysthymic Depression)

and anxiety disorders (Panic
Disorders, OCD, Social Phobia, Generalized
anxiety disorder, and PTSD).

ANTIDEPRESSANT

- Usual therapeutic lag of
2-4 weeks.
- Don't drink alcoholic beverages with antidepressant.

ANTIDEPRESSANT

- **First-line agents:** SSRIs, Novel Antidepressant
- **Second-line agents:** TCA's
- **Third-line agents:** MAOIs, ECT

SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRI's)

ANTIDEPRESSANT

SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)

- selectively inhibits
serotonin reuptake

- Fluoxetin (Prozac)
- Fluvoxamine (Luvox)
- Paroxetin hydrochloride (Paxil)
- Citalopram (Celexa)
- Sertraline hydrochloride (Zoloft)

ANTIDEPRESSANT

SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)

- Effective antidepressant that has fewer side effects than TCA's.
- SSRI's are indicated for BULIMIA, OBESITY, and OCD.
- Should be taken in AM for 4 WEEKS for full effect.

ANTIDEPRESSANT

SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRIs)

- **AAS or Antidepressant Apathy Syndrome** is induced by these drugs. This presents with lack of motivation, indifference, disinhibition, and poor attention.



ANTIDEPRESSANT

(SSRIs)

- **Side effects:**

- Dry mouth, Sedation, Blurred Vision, and Cardiovascular Symptoms. (These are uncommon but occurs)
- GI symptoms (Nausea, Diarrhea, Loose Stools, and Weight Loss or Gain)- Due to activation of 5HT3 receptors by increased serotonin levels. (These are common)
- Hyponatremia(For older patients)



ANTIDEPRESSANT

(SSRIs)

- **Side effects:**
 - Headache, Dizziness, Tremors, Anxiety, Insomnia, Decreased in libido, Impotence, ejaculatory delay, and decreased orgasm.
 - Akathisia- treated with Propanolol (Enderal) or Benzodiazepine



ANTIDEPRESSANT

(SSRIs)

Nursing Implementation

- Monitor weight
- Initiate safety precautions, particularly if dizziness occurs
- Instruct the client to take a single dose in the morning to prevent insomnia.
- Administer with snack or with meals to reduce the risk of dizziness and lightheadedness

ANTIDEPRESSANT

(SSRIs)

Nursing Implementation

- For the client on long term therapy, monitor liver and renal function test.
- Instruct the client to avoid alcohol
- If the client forgets a dose, he/she can take it up within 8 hours of missed dose.



ANTIDEPRESSANT

(SSRIs)

- Fluoxetine (Prozac) is approved for the treatment of **BULIMIA**, **PREMENSTRUAL DYSMORPHIC DISORDER** (Sarafem as Brand), **PAIN MANAGEMENT**, and promoting **SMOKING CESSATION**.
- It is associated with suicidal and homicidal behaviors (energizing effects of the drug).

ANTIDEPRESSANT

(SSRIs)

- **Paroxetine hydrochloride (Paxil)**
is indicated for the prevention of
DEPRESSIVE RELAPSE. It is also
TERATOGENIC.

ANTIDEPRESSANT

(SSRIs)

ABRUPT CESSATION causes SSRI WITHDRAWAL SYMPTOMS

✓ SOMATIC SYMPTOMS:

Dizziness, Lethargy, Nausea, Vomiting, Diarrhea, Flulike Symptoms, Insomnia, and Vivid Dreams.

✓ PSYCHOLOGICAL SYMPTOMS:

Anxiety, Agitation, Irritability, Confusion, and Slowed Thinking.

ANTIDEPRESSANT

(SSRIs)

ABRUPT CESSATION causes SSRI WITHDRAWAL SYMPTOMS

✓ SEROTONIN SYNDROME:

- Can occur if combined with MAOIs (Phenelzine, Tranylcypromine, Selegiline, and Moclobemide); Tryptophan (Serotonin Precursor); and St. John's Wort
- SSRI + MAOI=FATAL!

(SSRIs)

ABRUPT CESSATION causes **SSRI WITHDRAWAL SYMPTOMS**

✓ SEROTONIN SYNDROME:

- Signs and Symptoms; Mental Status Changes (Including confusion or hypomania), Restlessness or Agitation, Myoclonus, Hyperreflexia, Diaphoresis, Shivering, Tremor, Diarrhea, Abdominal Cramps, Nausea, Ataxia or Incoordination, and Headaches.**

ANTIDEPRESSANT

(SSRIs)

ABRUPT CESSATION causes SSRI WITHDRAWAL SYMPTOMS

✓ SEROTONIN SYNDROME:

- ☐ Discontinue the offending agent , usually gets resolves on its own in 24 hours.

NOVEL ANTIDEPRESSANTS

ANTIDEPRESSANT

(NOVEL ANTIDEPRESSANTS)

- NOREPINEPHRINE AND DOPAMINE REUPTAKE INHIBITORS (NDRIs)**
 - 1. Bupropion (Wellbutrin, Zyban)**
- SELECTIVE SEROTONIN-NOREPINEPHRINE REUPTAKE INHIBITOR (SNRI's)**
 - 1. Venlafaxine (Effexor)**
 - 2. Duloxetine (Cymbalta)**

ANTIDEPRESSANT

(NOVEL ANTIDEPRESSANTS)

- NORADRENERGIC-SPECIFIC SEROTONERGIC
AGENT (NaSSA)**
 - 1. Mirtazapine (Remeron)**



ANTIDEPRESSANT

(NOVEL ANTIDEPRESSANTS)

- NOREPINEPHRINE AND DOPAMINE REUPTAKE INHIBITORS (NDRIs).
 - Is the **only antidepressant** that primarily inhibits **dopamine uptake** and the only one that does not affect **serotonin systems**.

ANTIDEPRESSANT

(NOVEL ANTIDEPRESSANTS)

- **Bupropion** is given in low doses along with SSRI's to offset SSRI-mediated sexual inhibition.
- It has a narrow therapeutic index but is far less fatal than TCA's. Zyban is used as smoking cessation agent.
- **Bupropion** is contraindicated to patients with Seizure Disorders, this causes seizure.

ANTIDEPRESSANT

(NOVEL ANTIDEPRESSANTS)

- SELECTIVE SEROTONIN-NOREPINEPHRINE REUPTAKE INHIBITOR (SNRI's)
 - Have an inhibition activity that is dose dependent. At lower doses, it inhibits serotonin reuptake; at moderate to high doses, norepinephrine reuptake is inhibited; at higher doses, dopamine uptake is added.

ANTIDEPRESSANT

(NOVEL ANTIDEPRESSANTS)

- SELECTIVE SEROTONIN-NOREPINEPHRINE REUPTAKE INHIBITOR (SNRI's)
 - SNRI's appear to combine the best qualities of TCA's and SSRI's
 - **Venlafaxine** has lower potential for drug interactions and does not exaggerate the effects of alcohol.
 - **Duloxetine** is approved for the treatment of diabetic neuropathy.



ANTIDEPRESSANT

(NOVEL ANTIDEPRESSANTS)

- NORADRENERGIC-SPECIFIC SEROTONERGIC AGENT (NaSSA).
 - Increases the availability of both serotonin and norepinephrine by its antagonism with Alpha-2 Autoreceptors (Triggers feedback system).

ANTIDEPRESSANT

(NOVEL ANTIDEPRESSANTS)

- **Mirtazapine** is approved for major depression and to reduce SSRI-induced sexual dysfunction.
- **Mirtazapine**, due to antihistaminic effect causes sedation. Paradoxically, sedation decreases at the higher dosage levels. An increase in the serum cholesterol level occurs in some patients.

ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS (TCA's)

ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS (TCA's)

- Amitriptylline** (Elavil)
- Amoxapine** (Asendin)
- Clomipramine** (Anafranil)
- Desipramine hydrochloride** (Norpramin)
- Doxepin hydrochloride** (Sinequan)
- Imipramine hydrochloride** (Tofranil)
- Maprotiline** (Ludiomil)
- Nefazodone** (Serzone)
- Nortriptylline hydrochloride** (Aventyl)
- Protriptylline hydrochloride** (Vivactil)
- Trazodone** (Desyrel)
- Trimipramine maleate** (Surmontil)

TO NOEL SI

ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS (TCA's)

- Blocks reuptake of serotonin and norepinephrine at the presynaptic neuron and blocks cholinergic neurons (Non-Selective).
- May reduce seizure threshold.
- May reduce effectiveness of antihypertensive agents.
- **Concurrent use with alcohol or antihistamines can cause CNS depression.**
- **Concurrent use with MAOIs can cause hypertensive crisis..**



ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS (TCA's)

- **Secondary Amines**- **Activating Antidepressants** (increases norepinephrine greater than serotonin availability).
- **Tertiary Amines**- **Sedating Antidepressants** (increases serotonin greater than norepinephrine availability)



ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS (TCA's)

- Overdose is an issue since the difference between therapeutic and lethal dose is small (needs to be hospitalized for monitoring).
- Therapeutic Lag of 2-4 weeks.



ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS (TCA's)

- Sedation- A therapeutic effect of these drugs (patients experience insomnia and agitation). Tolerance to sedation usually develops.
- Activating Antidepressants combat lethargy (common symptoms of depression)
- Improved Appetite- Related to antihistaminic effect.
- Urinary Hesitancy- Therapeutic for childhood enuresis.



ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS (TCA's)

Side effects:

- PNS: **Anticholinergic effects** (Dry mouth, Anhydrosis, Visual Disturbances, Constipation, and Bladder Dysfunction) **Cardiac Effects** (Reflex tachycardia, arrhythmia, heart block, and MI), and **Anti-Adrenergic Effects** (Orthostatic Hypotension, and Prevention of Vasoconstriction)

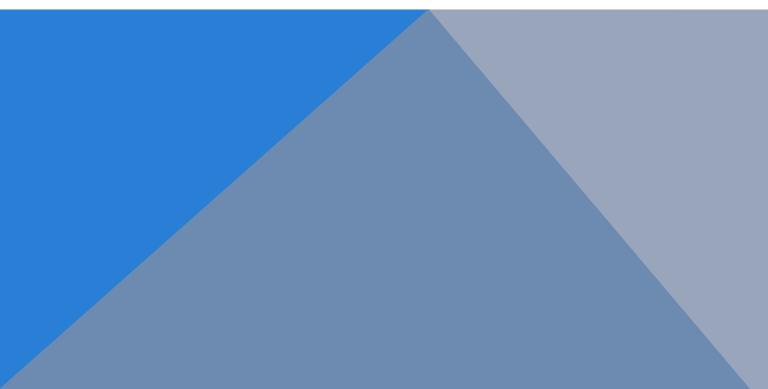


ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS (TCA's)

Side effects:

- CNS: Sedation, Cognitive or Psychiatric Effects (Confusion, Disorientation, Delusions, Agitation, Anxiety, Ataxia, Insomnia, Nightmares, and Aggravates Existing dementia or mimic dementia), and Suicide (after 10-14 days)**



ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS (TCA's)

- Mydriasis and Blurred Vision** may precipitate Acute Glaucoma.
- Amitriptyline** is most Cardiotoxic!
- Sunblock** is required (**Photosensitivity**)



ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS (TCA's)

Nursing Implementation

- Instruct the client that the medication may take several weeks to produce the desired effect (2-4 weeks after the first dose).
- Monitor pattern of daily bowel activity.
- Administer with milk or food if G.I. distress occurs.



ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS (TCA's)

Nursing Implementation

- Administer the entire daily oral dose at one time, preferably at bedtime.
- Assess for urinary retention.
- Instruct the client to change position slowly to avoid hypotensive effect.
- For the client on long-term therapy, monitor liver and renal function test.



ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS(TCA's)

Nursing Implementation

- Instruct the client to avoid alcohol and nonprescription medications to prevent adverse medication interaction
- Instruct the client to avoid driving and other activities requiring alertness.



ANTIDEPRESSANT

TRICYCLIC ANTIDEPRESSANTS(TCA's)

Nursing Implementation

- When the medication is discontinued, it should be tapered gradually
- If the client forgets a dose, he/she should take it within 3 hours of missed dose or omit the dose for that day.



ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

- REVERSIBLE INHIBITOR OF MAO-A (RIMA)**

- 1. Moclobemide (Manarex, Marplan)**

- IRREVERSIBLE NONSELECTIVE INHIBITOR OF MAO**

- 1. Phenelzine (Nardil)**

- 2. Tranylcypromine (Parnate)**

PA-MA-NA

ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

- Inhibit MAO enzyme to increase Dopamine, Norepinephrine, and Serotonin.
- The only antidepressant that inhibits neurotransmitter breakdown as their primary mechanism of action.



ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

- Inhibit MAO enzyme present in the brain, blood platelets, liver, spleen, kidneys.
- Concurrent use with Amphetamines, Antidepressants, Dopamine, Epinephrine, Guanethidine, Levodopa, Methyldopa, Nasal Decongestants, Reserpine, Tyramine-containing foods may cause **HYPERTENSIVE CRISIS**.



ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

- Usually administered to hospitalized patients or individuals who can be closely supervised.
- Not used much because they have potentially fatal interactions.



ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

- Concurrent use with narcotic analgesics may cause hyper/hypotension, coma or seizures
- Moclobemide does not interact with Tyramine containing foods hence it doesn't cause hypertensive crisis.



ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

Adverse Effects:

- Dry mouth
- Peripheral edema
- CNS stimulation including anxiety, agitations and mania
- Delay in ejaculation
- **Hypertensive Crisis**
- hypertension, occipital headache radiating frontally, neck stiffness, sweating, fever and chills, clammy skin, dilated pupils, chest pain, palpitations, tachycardia, bradycardia
- antidote.: **Phentolamine 5 – 10 mg IV**

ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

Adverse Effects:

- Orthostatic hypotension
- Restlessness
- Insomnia, daytime sedation
- Weight gain
- Dizziness
- Weakness, lethargy
- GI upset



ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

Nursing Implementations:

- Monitor BP frequently for hypertension/hypertensive crisis
- **If palpitations or frequent headaches occur, discontinue the medication and notify the physician**

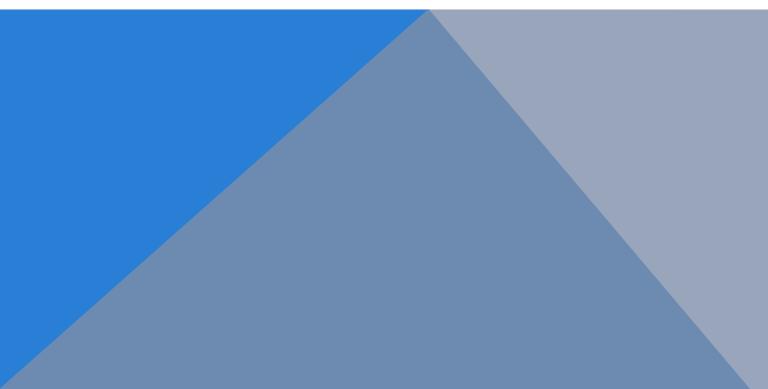


ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

Nursing Implementations:

- Administer with food if GI distress occurs.
- Instruct the client that the medication effect may be noted during the first week of therapy, but maximum benefit may take up to 3 weeks.
- Instruct the client to report headache, neck stiffness immediately.



ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

- Instruct the client to change position slowly to prevent orthostatic hypotension
- Instruct the client to avoid caffeine or OTC medications such as weight reducing pills or cold remedies
- Avoid administering the medication in the evening because insomnia may result.



ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

- MAOIs should be tapered and discontinued 7-14 days before surgery
- When the medication is discontinued it should be discontinued gradually
- Instruct the client to avoid foods that contain Tyramine.



ANTIDEPRESSANT

MONOAMINE OXIDASE INHIBITORS (MAOI's)

Tyramine-containing Foods

- Cheese especially aged, except cottage cheese
- Sour cream; pickled herring
- Avocado; banana; papaya; overripe fruits
- Broad beans; figs; brewer's yeast; yogurt
- Meat extracts and tenderizers
- Sausage, bologna, pepperoni, salami
- Soy sauce; raisins
- Red Wine, beer
- Beef or chicken liver
- Caffeine as coffee, team chocolate

ANTIDEPRESSANT

ANTIPSYCHOTICS

ANTIPSYCHOTICS

- Also called as neuroleptics or major tranquilizers. Indicated for Schizophrenia, Schizoaffective Disorder, Organic Brain Syndrome with Psychosis and Delusional Disorder.

ANTIPSYCHOTICS

ANTIPSYCHOTICS

- Most common side effects of all antipsychotics is dizziness.



ANTIPSYCHOTICS

ANTIPSYCHOTICS

- Blocks dopamine receptor in the brain reducing psychotic symptoms; also blocks CTZ in the brain producing an antiemetic effect.
- Phenothiazines may lower seizure threshold.
- Antipsychotic should not be given with other antipsychotic or antidepressant medications.



ANTIPSYCHOTICS

Target Symptoms:

- Typical and Atypical Antipsychotic
 - ✓ Disorders of thinking:
 1. Delusions
 2. Hallucinations
 - ✓ Disorganization of Speech and Behavior

ANTIPSYCHOTICS

Target Symptoms:

- Atypical Antipsychotic

- ✓ Negative Symptoms:

- 1. Affective flattening

- 2. Avolition/Apathy

- ✓ Disorganization of Speech
and Behavior



ANTIPSYCHOTICS

ANTI~~P~~SYCHOTICS

Adverse Effects

- dry mouth; tachycardia
- urinary retention; constipation
- Hypotension; drowsiness
- blood dyscrasias; pruritus
- Photosensitivity; **EPS (Extra-Pyramidal Symptoms)**



ANTI~~P~~SYCHOTICS

ANTIPSYCHOTICS

TYPICAL / CONVENTIONAL ANTI~~PSYCHOTICS~~

Phenothiazines

- Chlorpromazine (Thorazine)
- Perphenazine (Trilafon)
- Fluphenazine (Prolifin)
- Thioridazine (Mellaril)
- Trifluoperazine (Stelazine)
- Thiothixene (Navane)



ANTIPSYCHOTICS

ANTIPSYCHOTICS

TYPICAL / CONVENTIONAL ANTI~~PSY~~PSYCHOTICS

Butyrophenones

- Haloperidol (Haldol)
- Droperidol (Inapsine)



ANTIPSYCHOTICS

ANTIPSYCHOTICS

ATYPICAL ANTIPSYCHOTICS

- Clozap**ine** (Clozaril)
- Olanzap**ine** (Zyprexa)
- Quetiap**ine** (Seroquel)
- Risperid**one** (Risperadol)

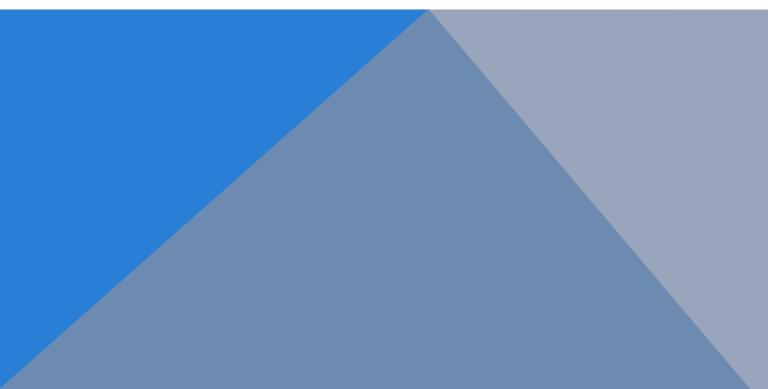


ANTIPSYCHOTICS

ANTIPSYCHOTICS

NEW GENERATION ANTIPSYCHOTIC

- **Aripiprazole (Abilify)**



ANTIPSYCHOTICS

Nursing Implementation

- Monitor VS
- Note that liquid concentrate has faster absorption rate
- Avoid direct contact with liquid concentrate to prevent dermatitis

ANTIPSYCHOTICS

Nursing Implementation

- Protect the liquid concentrate from light.
- Inform the client that a full therapeutic effect may not be evident for 3 to 6 weeks following initiation of therapy; however observable therapeutic response may be observed after 7 to 10 days.



ANTIPSYCHOTICS

Nursing Implementation

- Inform the client that phenothiazines may cause pinkish to red-brown urine color
- Instruct the client to use sunscreen, hats and protective clothing when outdoors



ANTIPSYCHOTICS

Nursing Implementation

- Instruct the client to avoid alcohol or other CNS depressants
- Instruct the client to report sore throat, fever and malaise, jaundice, RUQ pain.

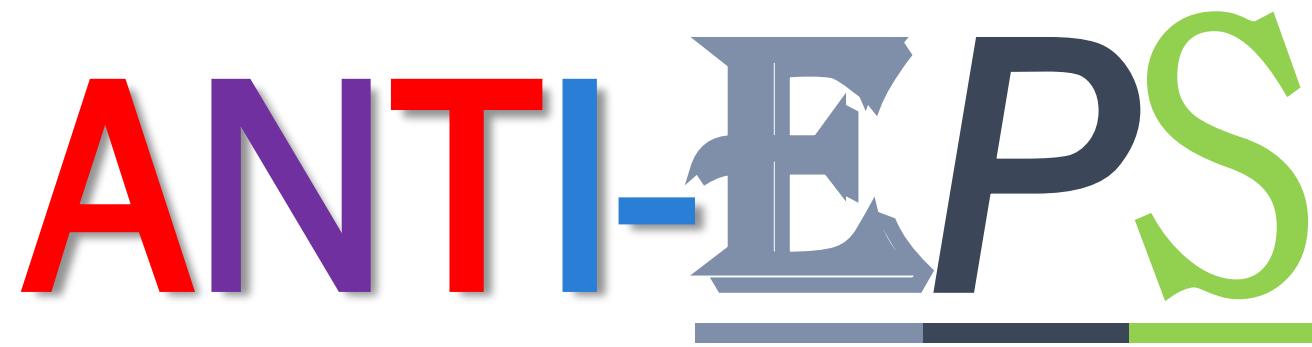
ANTIPSYCHOTICS

Nursing Implementation

- When discontinued, it should be withdrawn gradually to avoid sudden recurrence of psychotic symptoms
- Administer medications for extrapyramidal symptoms

ANTIPSYCHOTICS

ANTI-EPS



The logo consists of the word "ANTI-EPS" in a bold, sans-serif font. The letters are colored in a gradient: red, purple, blue, grey, dark blue, and green. The letter "E" is unique, showing a jagged, torn appearance as if it has been shredded or broken. Below the letters is a horizontal bar divided into three segments: blue on the left, dark blue in the middle, and green on the right.

- Amantadine (Symmetrel)
- Benztropine (Cogentin)
- Biperiden (Akineton)
- Diazepam (Valium)
- Diphenhydramine (Benadryl)
- Lorazepam (Ativan)
- Propranolol (Inderal)
- Trihexyphenidyl (Artane)



ANTI-EPS

MOOD

STABILIZERS

- **ANTIMANIC MEDICATIONS**
- Affects cellular transport mechanism and alter both the presynaptic and postsynaptic events affecting serotonin, thus enhancing serotonin function
- Normalizes the reuptake of NE, serotonin, acetylcholine, dopamine; also reduces release of NE



MOOD STABILIZERS

- **ANTIMANIC MEDICATIONS**
- Concurrent use with diuretics, fluoxetine, methyldopa, or NSAIDs increases renal reabsorption and/or excretion, either of which increases the risk of toxicity
- Acetazolamide, aminophylline, phenothiazines, or sodium bicarbonate may increase renal excretion.



MOOD STABILIZERS

- **ANTIMANIC MEDICATIONS**
- Dosages generally range from 900-3,600 mg
- Therapeutic serum level: 0.6 to 1.2mEq/L
- Decrease sodium intake, fluid, electrolyte loss due to severe sweating, DHN, diuretic therapy, illness may cause increase in lithium level.



MOOD STABILIZERS

- **ANTIMANIC MEDICATIONS**
- Serum levels should be checked every 1-2 months or whenever behavioral changes suggest altered serum level.
- Blood samples should be checked in the morning, 12 hours after the last dose was taken.



MOOD STABILIZERS

- LITHIUM CARBONATE
(Eskalith, Lithane, Lithobid)
- LITHIUM CITRATE
(Cibalith-Si)



MOOD STABILIZERS

Adverse Effects:

- Polyuria
- Polydipsia
- Metallic taste
- Dry mouth
- Weight gain, acne
- Abdominal bloating
- Nausea, soft stools, diarrhea



MOOD STABILIZERS

Adverse Effects:

- Fine hand tremors
- Inability to concentrate
- Muscle weakness
- Lethargy, Headache
- Hair loss



MOOD STABILIZERS

Nursing Implementations

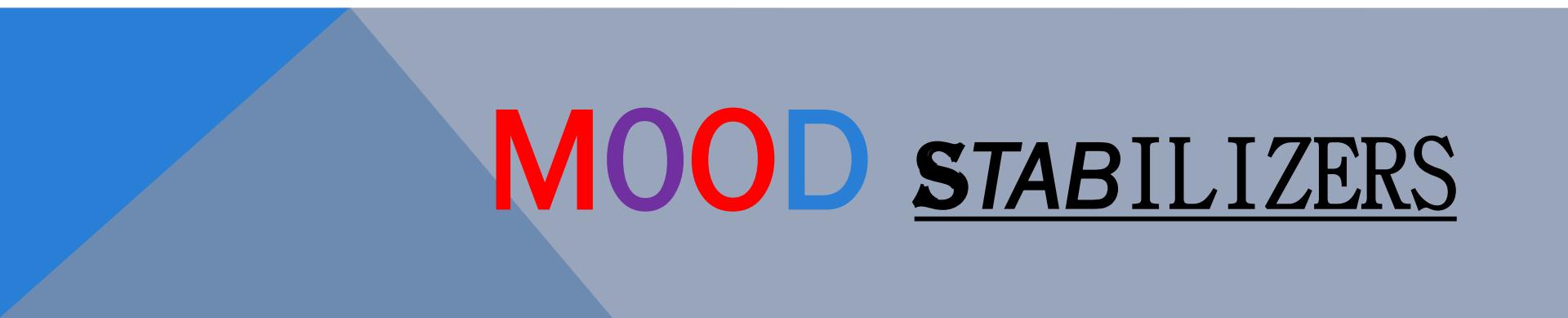
- Administer with food to minimize GI irritation
- Instruct the client to maintain a fluid intake of 6-8 glasses or water a day
- Instruct the client to avoid excessive amounts of coffee, tea, or cola, which have a diuretic effect.



MOOD STABILIZERS

Nursing Implementations

- Instruct the client to maintain adequate salt intake
- Do not administer diuretics while client is taking Lithium
- Instruct the client to avoid alcohol.



MOOD STABILIZERS

Nursing Implementations

- Instruct the client to avoid OTC medications
- Instruct the client that he/she may take a missed dose within 2 hours of the scheduled time; otherwise the client should skip the missed dose and take the next dose at the scheduled time.



MOOD STABILIZERS

Nursing Implementations

- Instructing the client not to adjust the dosage without consulting the physician, because lithium should be tapered off and not discontinued abruptly
- Instruct the client that the therapeutic response will be noted in 1-3 weeks.
- Monitor ECG, renal function and thyroid tests.



MOOD STABILIZERS

Lithium toxicity

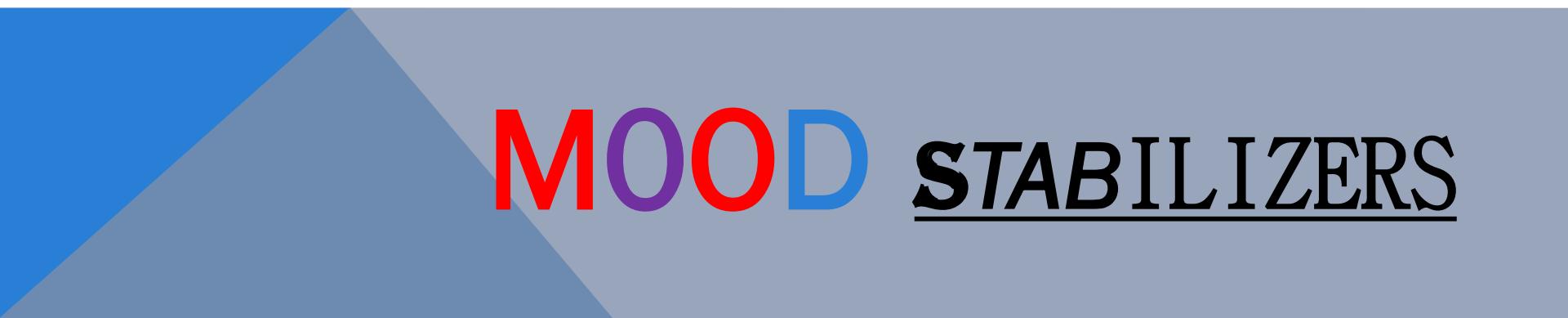
- Symptoms occur when serum level is 1.5 to 2.0 mEq/L

MOOD STABILIZERS

Assessment

Mild - Lithium toxicity

- 1.5 mEq/L
- apathy, lethargy, diminished concentration, mild ataxia, coarse hand tremors, slight muscle weakness.



MOOD STABILIZERS

Assessment

Moderate - Lithium toxicity

- 1.5 to 2.5 mEq/L
- nausea/vomiting, severe diarrhea, moderate ataxia and incoordination, slurred speech, tinnitus, blurred vision, muscle twitching, irregular tremor



MOOD STABILIZERS

Assessment

Severe - Lithium toxicity

- 2.5 mEq/L
- Nystagmus, muscle fasciculation, hyperreflexia, visual or tactile hallucinations, oliguria/anuria, impaired LOC, seizure, coma



MOOD STABILIZERS

Lithium toxicity

Nursing Implementation

- Hold Lithium and notify physician
- Monitor cardiac status
- Prepare to obtain Lithium level; electrolyte, BUN, creatinine, CBC
- Monitor for suicidal tendencies and institute suicide precautions

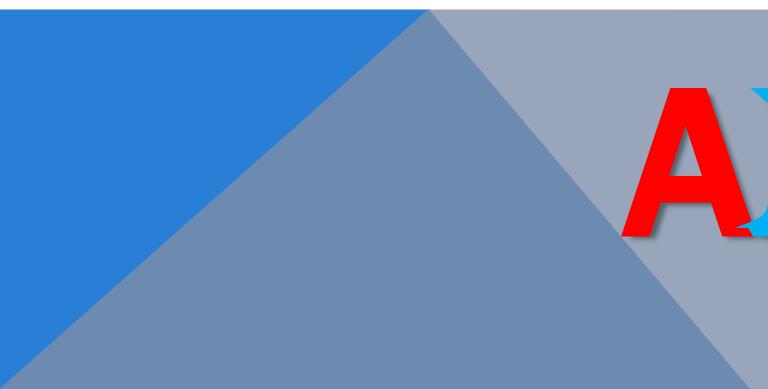


MOOD STABILIZERS

ANXIOLYTICS

ANXIOLYTIC MEDICATIONS

- Depress the CNS, increasing the effects of gamma-aminobutyric acid (GABA), which produces relaxation and may depress the limbic system.



ANXIOLYTICS

ANXIOLYTIC MEDICATIONS

- Benzodiazepines have anxiety-reducing (anxiolytic), sedative hypnotic, muscle relaxing and anticonvulsant actions.



ANXIOLYTICS

ANXIOLYTIC MEDICATIONS

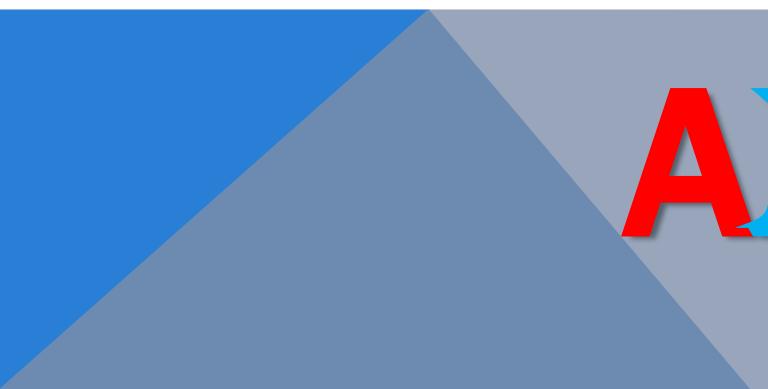
BENZODIAZEPINES

- Clonazepam (Klonopin)
 - Diazepam (Valium)
 - Alprazolam (Xanax)
 - Estazolam (ProSom)
- Chlordiazepoxide (Librium)
- Clorazepate (Tranxene)

ANXIOLYTICS

BENZODIAZEPINES

- Flurazepam (Dalmane)
- Halazepam (Paxipam)
- Lorazepam (Ativan)
- Oxazepam (Serax)
- Prazepam (Centrax)
- Quazepam (Doral)
- Temazepam (Restoril)
- Triazolam (Halcion)



ANXIOLYTICS

ANXIOLYTIC MEDICATIONS

- Adverse Effects:
 - Daytime sedation
 - Dizziness, poor coordination, impaired memory, clouded sensorium
 - Blurred or double vision
 - Tremor
 - Amnesia
 - Slurred speech
 - Urinary incontinence
 - Constipation
 - Paradoxical CNS stimulation
 - Physical dependence except Buspirone (BuSpar)



ANXIOLYTICS

The word "ANXIOLYTICS" is written in a large, bold, sans-serif font. The letters are colored in a gradient: A (red), N (blue), X (dark blue), I (pink), O (black), L (yellow), Y (black), T (dark grey), I (dark grey), C (blue), S (purple).

Acute Benzodiazepine Toxicity

- somnolence
- confusion
- diminished reflexes and coma
- antidote: **Flumazenil (Romazicon)** – a benzodiazepine antagonist, administered IV, will reverse intoxication in 5 minutes
- the client being treated for an overdose may experience agitation, restlessness, discomfort and anxiety



ANXIOLYTICS

Nursing Implementation

- Monitor for responses such as agitation, trembling, and tension
- Monitoring for autonomic responses such as cold, clammy hands and sweating
- Monitoring for paradoxical CNS stimulation during early therapy, particularly in elderly or debilitated individuals
- Monitor for visual disturbances; it can worsen glaucoma
- Monitor liver, renal function test and blood count
- Initiate safety precaution especially elderly client due to risk of falling

ANXIOLYTICS

Nursing Implementation

- Instruct the client that drowsiness usually disappears during continued therapy
- Instruct the client to avoid tasks that require alertness until the response to the medication is established
- Instruct the client to avoid alcohol
- Instruct the client not to withdraw the medication abruptly; the dosage should be tapered gradually over 2 to 6 weeks.



ANXIOLYTICS

ANTI-INSOMNIA AND ANXIOLYTIC

- enhances the inhibitory effect of GABA
- used for short term treatment of insomnia or for sedation to relieve anxiety, tension and apprehension.

**ANTI-INSOMNIA AND
ANXIOLYTICS**

BARBITURATES

- Amobarbital (Amytal)
- Aprobarbital (Alurate)
- Butabarbital (Butisol)
- Pentobarbital (Nembutal)
- Phenobarbital (Luminal)
- Secobarbital (Seconal)

ANXIOLYTICS

SEDATIVE-HYPNOTIC ANXIOLYTICS

- Buspirone (BuSpar)
- Chloral Hydrate (Noctec)
- Ethylchlorvynol (Placidyl)
- Hydroxyzine hydrochloride (Atarax)
- Meprobamate (Equanil)
- Zolpidem tartrate (Ambien)



ANXIOLYTICS

Adverse Effects:

- Confusion
- Irritability
- Allergic reactions
- Agranulocytosis
- Thrombocytopenic purpura
- Megaloblastic anemia



ANXIOLYTICS

The word "ANXIOLYTICS" is written in a large, bold, sans-serif font. The letters are colored in a gradient: A (red), N (blue), X (light blue), I (dark blue), O (pink), L (black), Y (yellow), T (dark grey), I (dark grey), C (blue), S (purple).

Overdosage:

- Tachycardia; hypotension
- cold and clammy skin
- dilated pupils; weak and rapid pulse; signs of shock; depressed respirations
- absent reflexes
- coma and death may result from respiratory and cardiovascular collapse



ANXIOLYTICS

Withdrawal

- begin within 24 hours after the medication is discontinued in an individual with severe drug dependence
- gradual withdrawal is used to detoxify a dependent person



ANXIOLYTICS

Withdrawal

- Anxiety
- Insomnia
- Nightmares
- daytime insomnia
- tremors
- Delirium
- seizures



ANXIOLYTICS

Nursing Implementation

- Medication should be used with caution in the client who has suicidal tendencies or has a history of drug addiction
- Maintain safety; supervise ambulation; use side rails at night
- Instruct the client to avoid driving or operating hazardous equipment if drowsiness, dizziness or unsteadiness occurs



ANXIOLYTICS

The word "ANXIOLYTICS" is written in a large, bold, sans-serif font. The letters are colored in a gradient: A (red), N (blue), X (light blue), I (dark blue), O (pink), L (black), Y (yellow), T (dark grey), I (dark grey), C (blue), S (purple).

Nursing Implementation

- Instruct the client to avoid alcohol
- For insomnia, instruct the client to take the medication 30 minutes before bedtime
- Instruct the client not to discontinue the medication abruptly
- Instruct the client to take Chloral Hydrate with food to improve taste and prevent gastric irritation



ANXIOLYTICS

The word "ANXIOLYTICS" is written in a large, bold, sans-serif font. The letters are colored in a gradient: A (red), N (blue), X (light blue), I (dark blue), O (pink), L (black), Y (yellow), T (dark grey), I (dark grey), C (blue), S (purple).

ANTIDEMENTIA

ANTIDEMENTIA

1. Cholinesterase Inhibitors
2. NDMA (Non - Methyl D Aspartate Receptor) Antagonist



ANTIDEMENTIA

1. Cholinesterase Inhibitors

- Tacrine (Cognex)
- Donepezil (Aricept)
- Rivastigmine (Exelon)
- Galantamine (Razadyne)



ANTIDEMENTIA

- Tacrine (Cognex) – is the first cholinesterase inhibitor but is seldom prescribed since it causes serious hepatic effects.
- Donepezil (Aricept) - is an irreversible inhibitor of cholinesterase that does not cause hepatotoxicity, has a long half life, and can be taken with or without food.



ANTIDEMENTIA

- Rivastigmine (Exelon)- is an irreversible inhibitor of cholinesterase (until life cycle of enzyme is complete). Half life of 2 hours but inhibition time of 10 hours.
- Galantamine (Razadyne)- has cholinergic effects



ANTIDEMENTIA

2. NDMA (Non -Methyl D Aspartate Receptor) Antagonist

- Memantine (Mamenda)



ANTIDEMENTIA

- Memantine (Mamenda) - It has a long half life, only interacts with a few drugs, and has few side effects. It is co-prescribed with Donepezil.
- Blocks NDMA which is an excitatory receptor of the excitatory neurotransmitter glutamate.



ANTIDEMENTIA

- Memantine (Mamenda) - Neurons die through excitatory (too rapid firing), hence block NDMA, implication of preventing neuronal death.
- However, too much NDMA stimulation = Neuronal Death, while too little = psychotic behavior.



ANTIDEMENTIA

PREVENTION OF ALZHEIMER'S DISEASE

- NSAIDs
- STATINS
- ESTROGEN
- B VITAMINS