

Psychiatric Medications: An Overview and Update

For the National Alliance on Mental Illness

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Medication Classes

- Antipsychotics
- Mood Stabilizers
- Antidepressants



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Antipsychotic Uses

- Schizophrenia
- Auditory and visual hallucinations
- Schizoaffective disorder
- Acute mania/mood stabilization
- Aggression
- Agitation



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Antipsychotics

- First Generation
Antipsychotics – “Typical”
- Second Generation
Antipsychotics – “Atypical”



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Question

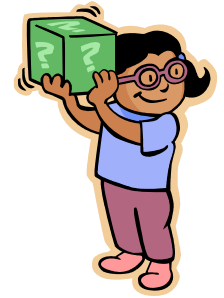


TRUE OR FALSE

› First generation antipsychotics have more side effects than second generation antipsychotics

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Question



TRUE OR FALSE

› First generation antipsychotics have ^{different} ~~more~~ side effects than second generation antipsychotics

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Antipsychotics

□ First Generation Antipsychotics (Typicals)

- Older
- Used less often for ongoing treatment
- Very effective for positive symptoms of schizophrenia
 - Hallucinations, disorganized speech or behavior, delusions, etc.



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Typical Antipsychotics

Generic	Brand	Potency
Chlorpromazine	Thorazine	Low
Thioridazine	Mellaril	Low
Mesoridazine (D/C)	Serentil (D/C)	Low
Perphenazine	Trilafon	Medium
Loxapine	Loxitane	Medium
Trifluoperazine	Stelazine	High
Thiothixene	Navane	High
Fluphenazine	Prolixin	High
Haloperidol	Haldol	High

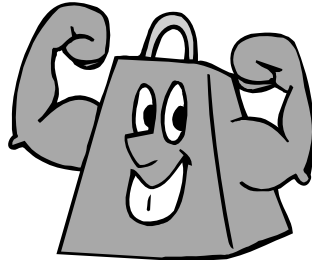
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Typical Antipsychotics

□ High versus Low Potency

□ Amount of medication needed for equal effect

□ Side effects differ according to potency



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Typical Antipsychotics

Class Side Effects

□ High Potency

□ Muscle Side Effects

□ A.K.A. Extrapyramidal Side Effects (EPSE)

→ Tremor

→ Akathisia (restlessness)

→ Muscle spasm

→ “pseudoparkinsonism”

→ Tardive dyskinesia (TD)



□ Low Potency

□ Drowsiness

□ Dizziness

□ Dry mouth

□ Constipation

□ Blurry vision

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Other Medications for Atypical Antipsychotic Side Effects

□ Cogentin®

□ Benadryl®

□ Inderal®

□ Ativan®

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Antipsychotics

□ Second Generation Antipsychotics (Atypicals)

□ Newer

□ More commonly used; first-line therapy

□ Positive and negative symptoms improve

□ Also effective for mood stabilization in bipolar disorder

□ Can be used adjunctively for major depressive disorder (Abilify, Seroquel XR)

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Atypical Antipsychotics

- Clozapine (Clozaril®) - 1989
- Risperidone (Risperdal®) - 1993
- Olanzapine (Zyprexa®) - 1996
- Quetiapine (Seroquel®) - 1997
- Ziprasidone (Geodon®) - 2001
- Aripiprazole (Abilify®) - 2002
- Paliperidone (Invega®) - 2006
- Iloperidone (Fanapt®) – May 2009
- Asenapine (Saphris®) – August 2009
- Lurasidone (Latuda®) – October 2010

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Atypical Antipsychotics

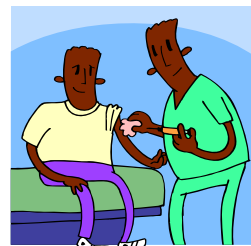
- Less risk of EPSE and TD
 - EPSE can still occur and has been reported with atypicals
- Class Side Effects
 - Weight gain
 - Hyperglycemia (new onset Diabetes Mellitus)
 - Increased cholesterol



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Atypical Antipsychotics Long Acting Injectables

- Risperdal Consta
 - Dose every 2 weeks
- Invega Sustenna
 - Dose every 4 weeks
- Zyprexa Relprevv
 - Dose every 2-4 weeks
 - Post injection delirium sedation syndrome
- Which first generation antipsychotics can be used as long acting injectables?



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The Newest Atypicals!!



Comparing the THREE	Iloperidone (Fanapt®)	Asenapine (Saphris®)	Lurasidone (Latuda®)
Indications	Acute schizophrenia	Acute schizophrenia & bipolar manic or mixed episodes	Acute schizophrenia
Dosing	Twice daily	Twice daily	Once daily with food
Most common Side effects	Dizziness, dry mouth, fatigue, nasal congestion, drop in BP, sleepiness, increased heart rate, weight increase	Schizophrenia: Sleepiness, oral numbness, akathisia BPD: somnolence, dizzy, weight gain, other EPSE	Sleepiness, akathisia, nausea, agitation, parkinsonism
	Least EPSE	Minimal weight gain and increase in sugars	Minimal weight gain and increase in sugars
Comments	Four days titration	Sublingual tablets	Must take with food

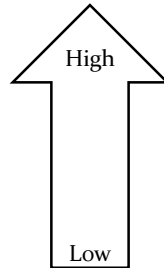
Citrome L. Iloperidone, asenapine and lurasidone: A brief overview of 3 new second-generation antipsychotics. *Postgrad Med.* 2011; 123(2):153-62.

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Side Effect Comparison: Atypical Antipsychotics

Weight Gain-High Cholesterol-Diabetes

Clozaril
Zyprexa
Seroquel
Risperdal
Abilify
Geodon



Drowsiness

Clozaril
Seroquel
Zyprexa
Risperdal
Abilify
Geodon

EXTRAPYRAMIDAL SIDE EFFECTS:

Risperdal > Zyprexa = Geodon = Abilify > Seroquel > Clozaril

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Managing Metabolic Side Effects

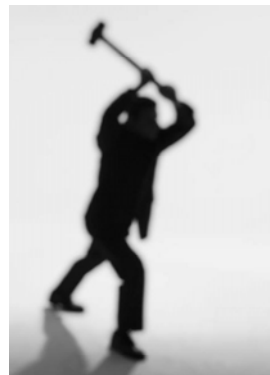
- Get laboratory results at start of treatment and periodically
 - Weight
 - Lipid panel
 - Blood glucose
- Ask your doctor or pharmacist for help
 - Lifestyle modifications (diet & exercise)
- May be able to change the medication
 - Zyprexa → Geodon or Abilify



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Uses for Mood Stabilizers

- Bipolar disorder
- Adjunct in depression
- Adjunct in ADHD
- Impulsivity
- Rage and aggression
- Substance withdrawal



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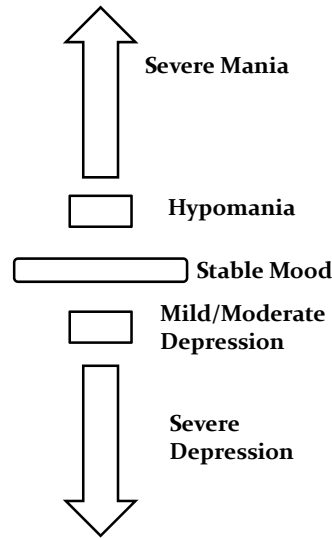
What is a Mood Stabilizer?

- Medication which treats a phase of bipolar disorder (depression and/or mania) without causing either
- Must prevent episodes from occurring (maintenance or prevention)
 - Antidepressants are not mood stabilizers, while they treat depression, they can switch patients into mania
 - Lithium can be used for treatment and maintenance for both depression and mania

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Mood Stabilizers

- Lithium
- Anticonvulsants
 - Valproic acid derivatives (Depakote®)
 - Carbamazepine (Equetrol®, Tegretol®)
 - Lamotrigine (Lamictal®)
- Atypical Antipsychotics



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Lithium

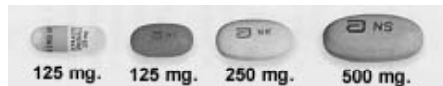


- Eskalith®, Lithobid®, Lithobid SR®
- Indicated for
 - Acute mania
 - Bipolar maintenance
- Effective in bipolar depression and preventing suicidality
- Therapeutic blood levels: 0.6-1.2 mEq/L
- Side effects: diarrhea, increased thirst, increased urination, tremor
- Kidney monitoring required

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Valproic Acid Salt Forms

- Depakote®, Depakene®, Depakote® ER, Depacon®
- Indicated for
 - Acute mania
 - Epilepsy
 - Migraine prevention
- Therapeutic blood levels: 50-120 mcg/mL
- Side effects: weight gain, sedation, nausea, tremor



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Lamictal® (lamotrigine)

- Indicated for
 - Maintenance of Bipolar Type I
 - Seizure Disorders
- NOT for treatment of bipolar mania
- Slow increase in dose to avoid rash
- Advantage: no blood monitoring required!
- Side effects: nausea, rash, insomnia, somnolence



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Atypical Antipsychotics in Bipolar Disorder

- Used to help stabilize acute mania or agitation
- Most often used with lithium or depakote as added treatment
- Patients with mood disorders may be more sensitive to EPSE, possible with atypical antipsychotics

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Antidepressant Classes



- Selective Serotonin Reuptake Inhibitors (SSRIs)
- Novel agents – dual mechanism
- Tricyclic Antidepressants (TCAs)

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Antidepressants Indications/Uses

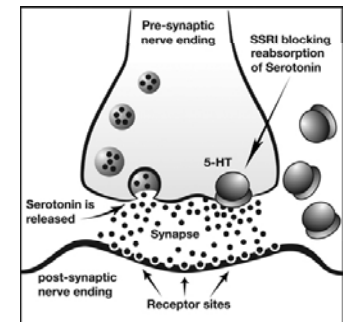


- MDD (Major Depressive Disorder)
- PTSD (Post-traumatic Stress Disorder)
- SAD (Seasonal Affective Disorder/Social Anxiety)
- OCD (Obsessive Compulsive Disorder)
- PMDD (Premenstrual Dysphoric Disorder)
- PD (Panic Disorder)
- GAD (Generalized Anxiety Disorder)
- Eating Disorders (Bulimia Nervosa)
- Diabetic neuropathy, fibromyalgia

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Selective Serotonin Reuptake Inhibitors

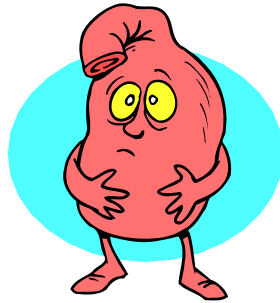
- Fluoxetine (Prozac®)
- Paroxetine (Paxil®)
- Sertraline (Zoloft®)
- Fluvoxamine (Luvox®)
- Citalopram (Celexa®)
- Escitalopram (Lexapro®)



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SSRI Class Side Effects

- Nausea
- Diarrhea
- Insomnia
- Sedation
- Headache
- Change in sexual function



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SSRI – Side Effect Management



- Sedation
 - Change medication
- Nausea
 - Take medication with food
- Headache
 - Over the counter pain killers (Tylenol, Advil)
- Change in Sexual Function
 - Reduced desire, anorgasmia, delayed ejaculation
 - Dose reduction; switch agents; add medication for erectile dysfunction, weekend drug holiday

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SSRI Withdrawal

- Serotonin Discontinuation Syndrome
 - Anxiety, agitation, dizziness, electric-shock like sensation in extremities or head
- Usually occurs 1-3 days after stopping taking SSRI
- Worst with Paxil and least with Prozac
- Reduce dose with all SSRIs slowly to avoid withdrawal

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Novel Antidepressants

- Venlafaxine (Effexor[®])
- Desvenlafaxine (Pristiq[®])
- Duloxetine (Cymbalta[®])
- Vilazodone (Viibryd[®])
- Mirtazapine (Remeron Soltab[®])
- Bupropion (Wellbutrin SR[®], XL[®])
- Trazodone (Oleptro[®], Desyrel[®])

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Novel Antidepressants

- Increase serotonin and norepinephrine

- Side effects similar to SSRIs

 - Venlafaxine (Effexor XR®)

 - Desvenlafaxine (Pristiq®)

 - Duloxetine (Cymbalta®)



- Increase dopamine and norepinephrine

 - Bupropion (Wellbutrin SR®, XL®)

 - No sexual side effects

 - Also used for smoking cessation

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Novel Antidepressants

- Mirtazapine (Remeron Soltab®)

 - Blocks “alpha” receptors

 - Increases appetite

 - No sexual side effects

- Trazodone (Oleptro®, Desyrel®)

 - Inhibits serotonin reuptake, blocks histamine and alpha receptors

 - More commonly used for insomnia at low doses, very sedating

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Vilazodone

- Vilazodone (Viibryd) – January 2011

- Mechanism of Action

 - Inhibits reuptake of serotonin (like SSRIs)

 - Also works like the anti-anxiety medication Buspar®

- Indicated for major depressive disorder

- May be helpful for anxiety

- Side effects similar to SSRIs

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The Newest Antidepressant!!



- Vortioxetine (Brintellix®) – September 2013

- Mechanism of Action

 - Inhibits reuptake of serotonin (like SSRIs)

 - Also works like the anti-anxiety medication Buspar®

- Indicated for major depressive disorder

- May be helpful for anxiety

- Side effects similar to SSRIs

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Tricyclic Antidepressants (TCA)

- Amitriptyline (Elavil®)
- Imipramine (Tofranil®)
- Clomipramine (Anafranil®)
- Doxepin (Sinequan®/Silenor®)
- Desipramine (Norpramin®)
- Nortriptyline (Pamelor®)
- Protriptyline (Vivactyl®)



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TCA: Indications and Uses

- Neuropathic/Chronic pain
 - Smaller dosing versus depression
- Major depression
- Anxiety disorders:
 - Obsessive-compulsive disorder
 - Panic disorder
- Enuresis



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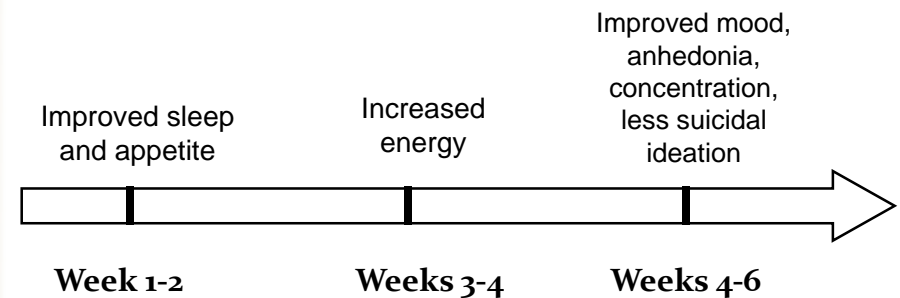
TCA: Side Effects

- Dry mouth, urinary retention, blurred vision, constipation
- Sedation
- Orthostatic hypotension
- Weight gain
- Sexual side effects
- Cardiovascular complications
- Can be fatal in overdose



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Time Course for Antidepressant Response



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Antidepressants and Suicide

- September 16, 2004: FDA required manufacturers to update package inserts to include a warning statement recommending close observation of children, adolescents and young adults treated with antidepressants for worsening depression or the emergence of suicidality

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What about Anxiety?

- Panic Disorder/Panic Attacks
- Generalized Anxiety Disorder
- Post Traumatic Stress Disorder
- Social Anxiety Disorder
- Obsessive Compulsive Disorder

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What About Anxiety?

□ Antidepressants

- Lexapro, Paxil, Celexa, Prozac, etc.
 - Elavil (TCAs)
 - MAOIs, mirtazapine, etc.
 - Effexor, Cymbalta, etc.
- Take several weeks to work
 - Helpful for those with anxiety AND depression
 - Preferred for long term management of anxiety

□ Benzodiazepines

- Diazepam (Valium®)
 - Lorazepam (Ativan®)
 - Alprazolam (Xanax®)
 - Clonazepam (Klonopin®)
- Work faster than antidepressants
 - Potential for abuse, addiction
 - Serious withdrawal with consistent use
 - Not helpful for depression

□ Other

- Buspirone (Buspar®)
- Take several weeks to work
 - Only useful for Generalized Anxiety Disorder

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