The somatic treatment of depression is far from ideal."

- Zavodnick

I. Reminder of "Permissive Hypothesis" of Affective Disorders (Prange et al., 19070s) - low amounts of serotonin and norepinephrine result in unusual moods and supersensitive neurons, respectively - both effects associated with depression

II. Somatic Therapies

A. Tricyclic Antidepressants (TCAs)

1. Examples: nortriptyline, desipramine

2. Used in combination with neuroleptics for severe depression

3. Best response with nonpsychotic, nonbipolar depression; least response (when used alone) with extremes, either bipolar or chronic

4. Dose range: 150-300 mg/d (less for nortriptyline and protriptyline); common procedure: start with 50-75 mg and titrate upwards

5. Affects mainly norepinephrine (NE)

6. Side effects: sedation; induction of psychosis; confusion; tremor; orthostatic hypotension; sexual dysfunction; blurred vision; dry mouth; constipation; urinary difficulties; cardiac hypotension; increased heart rate; cardiac arrhythmia
7. Overdose is quite dangerous and easy to accomplish - as little as 10 times the daily dose is lethal - suicidal intent of patient should be assessed before prescription

B. Monoamine Oxidase Inhibitors (MAOIs)

1. Best with atypical depressions; also used with bipolar patients but not with great success

2. Dose range: 40-90 mg/d with same titration process as with TCAs

3. Lag of 3-6 weeks between reaching effective dose and response

4. Side effects: most frequent are weight gain and orthostatic hypotension; also have autonomic nervous system effects of TCAs (dry mouth, blurred vision, constipation, sexual dysfunction); insomnia; sedation; nervousness; psychotoxicity = "ability of MAOIs to exacerbate the sx of schizophrenia and to induce mania or hypomania in bipolar patients"

5. Inhibit MAO in gastrointestinal tract - requires special diet; before this was known, great risk of hypertension and cerebrovascular hemorrhage
C. Heterocyclic Antidepressants

1. Amoxapine - same structure and side effects as TCAs; affects both NE reuptake and the ability to block dopamine

2. Maprotilene - like amoxapine, resembles TCAs, but also affects postsynaptic receptors

3. Trazodone - blocks reuptake and receptors for serotonin and affects postsynaptic beta adrenergic receptors; fewer side effects; lower danger in overdose

4. Bupropion - risk of seizures, therefore reserved for patients who fail with other antidepressants

D. Lithium

1. Used mainly for bipolar or with other antidepressants to treat other depressions

2. Response in 2-14 days

3. Side effects: lithium intoxication (nausea, vomiting, diarrhea, tremor, uncoordination, dysarthria, drowsiness)

4. Not to be used by patients with these conditions: hypothyroidism, decreased renal function, congestive heart failure, pregnancy
E. Thyroid Potentiation
   1. Used for those who don't respond to TCAs
   2. Less lag period: under two weeks
   3. Side effects: sympathetic nervous system overactivity, cardiac arrhythmia
   4. Potential uses not widely explored

F. Electroconvulsive Therapy (ECT)
   1. Best for severe depressions that include psychosis or serious thoughts of suicide
   2. Less available in public mental hospitals
   3. Maintenance is often needed to prevent relapse - multiple treatments
   4. Modifications have made procedure more "humane" - barbiturate anesthetic, muscle relaxant, unilateral treatment, reduced electricity, physiological monitoring
   5. 6-8 treatments are typically required for response
   6. Main side effect: confusion; delirium may occur after treatment - fades on its own; if treated bilaterally, may experience anterograde amnesia