Psychiatry Cheat Sheet

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Normal TSH: 0.45 – 5.10 mIU/l
Check TSH again 4-6 weeks after each thyroid dose change.
Levothyroxine: starting dose 25 mcg/d

- Take thyroid meds on empty stomach as soon as patient gets up in the morning at least one hour before eating, which helps with absorption; don't ever take thyroid meds with vitamins

<u>Therapeutic blood levels</u>

- **Lithium**: 0.5-1.0 mEq/l, run towards the lower end to minimize side effects
- **Depakote**: 50-125 mcg/ml
- **Lamictal**: 3-14 mcg/ml
- **Anafranil** (TCAs): 220-500 ng/ml

<u>Bipolar 'Ceiling' Drugs</u>

- Lithium: start at 300 mg qhs with food in stomach ("little old lady" dose) or 600-900 mg qhs in younger, healthier patients, & titrate upwards depending on clinical response, side effects, & blood levels, better for euphoric, rather than irritable, patients
- Depakote (valproic acid) – good for rapid cycling (4 or more moodswings per year)**/**mixed state/irritable mood in Bipolar with 500 mg qhs starting dose & Depakote titration upwards depending on clinical response, side effects, & blood levels
  - Must start Depakote titration again at low dose if patient stops medication
- Tegretol (carbamazepine)/Trileptal(oxcarbazepine) - second-line ceiling drugs
- Neuroleptics (preferably second generation)

<u>Bipolar 'Floor' Drugs</u>

- Lithium
- Lamictal (good for concommitant seizures)
- Anti-depressants (generally not used as mono-therapy in Bipolar Disorder)

<u>Lithium Management</u>

- "Little old lady" dose or for children: starting dose of 300 mg qhs (for healthy patients 600-900 mg qhs); Emergency: start at 600-900 mg qhs
- Titrate upward in 300 mg/d increments
- Obtain blood levels 7-10 days after initiating or changing the dosage of lithium (up or down).
  - Instruct patient to get blood work done 12 hours after they have taken their last dose (trough).
- For lithium-induced hypothyroidism, do *not* discontinue lithium, instead supplement with <u>levothyroxine, starting at 25 mcg/d, checking results with repeat TSH in 4-6 weeks</u>
- Also get creatinine clearance (CrCl) & TSH every 6-12 months for anyone on lithium plus other appropriate screening LAB

<u>Lamictal Management</u>

- Start at 25 mg qhs (12.5 mg qhs if on concomitant Depakote with corresponding half-strength increased doses thereafter) for 2 weeks, 50 mg qhs for next 2 weeks, 100 mg qhs for next 2 weeks on Lamictal
- Initial target dose at 200 mg qhs (get blood levels after 7-10 days at this dose, 12 hours after dose)
- Increase by 100 mg/d thereafter as needed, but not sooner than 2 weeks at each dose (only 50 mg/d increase if concurrently on Depakote)

    - To allow the body to get used to the drug and to avoid Stevens-Johnson Syndrome (life-threatening rash)
    - Must restart original titration protocol at 25 mg qhs if they miss Lamictal more than 3 days in a row
- Side effects: tremor, dizziness, word-finding problems, rash

Medications that need Tapering (basically everything except LiCO3)

Medication Groups

Atypical Antipsychotics/Second-generation neuroleptics

- **Abilify** (aripiprazole)
- **Geodon** (ziprasidone)
- **Seroquel** (quetiapine) – start 25 mg po qhs then increase by 25-100 mg/day
- **Zyprexa** (olanzapine) – start 5 mg po qhs, may adjust by 5 mg/day prn
    - if still cannot sleep within 3 hours of first dose, add another 5 mg
    - *Seroquel and Zyprexa have the most anti-histaminic properties, and are therefore weight gainers

OTHERS:

- Risperdal (risperidone)
- Latuda (lurasidone)
- Clozaril (clozapine)

- **Serotonin-Norepinephrine Re-Uptake Inhibitors (SNRIs)** for depression, OCD, panic disorder, anxiety, chronic pain
- **Effexor** (venlafaxine) - cheaper than Pristiq; start at 25 mg bid (take after breakfast & after lunch, may cause upset stomach)
- **Cymbalta** (duloxetine) - still more expensive than Effexor; starting dose 30-60 mg; may cause upset stomach
- **Pristiq** (desvenlafaxine) - first active metabolite of venlafaxine, just more expensive
- **Fetzima** (levomilnacipran) – as expensive as Pristiq

Selective Serotonin Re-Uptake Inhibitor (SSRIs): for depression, OCD, panic disorder, anxiety

- **Prozac** (fluoxetine) – preferred; long half-life (if patient misses dose, won't go into discontinuation syndrome); relatively weight neutral; associated with decreased libido (or other sexual dysfunction, like delayed orgasm)
    - start at 10-20 mg po qam, take with food in stomach; can go up in 10-20 mg/d increments not more than every 2 weeks
- **Zoloft** (sertraline)
- **Luvox** (fluvoxamine)
- **Lexapro** (escitalopram) – not used as much due to potential QTc prolongation
- **Celexa** (citalopram) – not used as much due to potential QTc prolongation
- **Paxil** (paroxetine) – may cause severe discontinuation syndrome, weight gain

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- **Remeron** (Mirtazapine) – helpful for anxious depression with insomnia, starting dose: 30 mg qhs
- **α_2 Antagonist (increases release of NE and serotonin) and potent 5-HT_2 and 5-HT_3 receptor antagonist**
- sedation, weight gain

- **Tri-Cyclic Antidepressants** (potentially dangerous/toxic---monitor with blood levels): tertiary TCA's block reuptake of NE and serotonin like an SNRI; treat major depression, fibromyalgia, anxiety disorders, enuresis, *Check patient's pupil size for mydriasis/miosis to get a sense of their anticholinergic tone (larger pupils with greater anti-cholinergic effect). * Can precipitate manic episodes in Bipolars

  Anafranil (clomipramine) – for OCD; increase by 25 mg/d increments not more than every 2 weeks
  - **Elavil** (amitriptyline) – tertiary TCA
  - **Tofranil (**imipramine) – for enuresis

- **MAO Inhibitors**: increase levels of NE, serotonin, dopamine
  - **Parnate** (tranylcypromine) – has amphetamine-like effects; used if patient has failed on multiple, other anti-depressants
  - **Nardil** (phenelzine) – for anxiety/depression used if patient has failed on multiple, other anti-depressants

    * Hypertensive crisis with tyramine ingestion (in many foods, such as wine and cheese and aged protein products) and decongestants like Sudafed
  - Contraindicated with SSRIs or other antidepressants.
  - * Can precipitate manic episodes in Bipolars

- **Benzodiazepines**
  - **Xanax** (alprazolam)
  - **Klonopin** (clonazepam)
- Others include Ativan, Valium, Dalmane, Librium, Halcion, Serax

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- **CNS Stimulant**
  - **Concerta** (methylphenidate)
  - Others include Ritalin, Dexedrine, Vyvanse

  - **Strattera** (atomoxetine) (NE re-uptake inhibitor, like **Wellbutrin**), both can be used as alternative treatments in ADHD/ADD

- **Beta Blockers**
  - **Inderol (**propranolol) – reduce drug-induced tremor; start at 10 mg bid/tid; titrate up in 10 mg increments, contraindications include asthma & diabetes
- <u>Others include atenolol, metoprolol</u>

- <u>Sleeping Aids</u>
  - Melatonin - mild; good starting point; start with 3 mg one hour before bed; can be an adjunct to Remeron or Seroquel
  - trazadone
  - Antihistamines
  - Sedating neuroleptics: Zyprexa, Seroquel

- Sedating antidepressants: Remeron
- Tertiary tricyclics (potentially dangerous/toxic)

- Weight gain: Seroquel, Depakote, mirtazapine, Paxil
- Weight neutral: Prozac, Lamictal, Tegretol

- **Cogentin** (benztropine) – anticholinergic remedy for extrapyramidal side effects from neuroleptics; H1 antagonist
- start at 1 mg bid, titrating upwards to 2 mg bid

- **Terminology**
- **Mixed state**: feeling depressed yet manic "high" symptoms at the same time
  Reduced by **Depakote/ Atypical Antipsychotics (Second-generation neuroleptics)**
- **Pharmacokinetic drug-drug interaction**: one drug affects the blood level of the second drug
  - Example: Depakote and Lamictal
- **Pharmacodynamic drug-drug interaction**: two drugs accomplish the same action or side effect
  - **Cross-tolerance**: one can be used to withdraw another
- **Recurrence**: new episode of symptoms after having been taken off the medicine for more than 6 months
- **Relapse**: old/original episode coming back less than 6 months after being taken off the medication
- **Response**: 50% improvement in symptoms
- **Remission**: PHQ-9 score of 4 or less (minimal to no depression or anxiety)
- **Serotonin syndrome**: occurs with any drug that increases serotonin (e.g., MAO inhibitors, SSRI's, SNRI's) – hyperthermia, myoclonus, cardiovascular collapse, flushing, diarrhea (serotonin receptors activated in GI tract), seizures.

- Pearls
- Anxiety and panic disorders generally respond to serotonergic drugs not norepinephrine ones.
- Anti-convulsants/SNRI's have anti-pain properties (especially chronic pain).
- Generic drugs may be "porcelain clangers" (go through patient unabsorbed)
- "The dose that got them well, keeps them well." You typically don't reduce the dose if they're doing well.

- Zyprexa and Seroquel: more sedation
- Abilify, Geodon: less weight gain, more likely to cause EPS, less sedation

- Clozaril/clozapine must get CBCs each week; terrible weight gain; seizures; gold standard for refractory psychosis with potentially less Tardive Dyskinesia (TD).

- **Anticholinergic effects in tertiary TCAs**
- Blind as a bat (**blurred vision**)
- Dry as a bone (**dry mouth**)
  - Remedy: tart substances; sugarless candy/gum or water with unsweetened lemon juice
- Red as a beet (**flushing**)
- Mad as a hatter (**confusion**)
- Hot as a hare (**hyperthermia**)

- Can’t see (**vision changes**)
- Can’t pee (**urinary retention**)
- Can’t sh*t (**constipation**)
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- **<u>Toxicities</u>**
- **Typical Antipsychotics/Neuroleptics**
    - Highly lipid soluble and stored in body fat; thus, very slow to be removed from body
    - **Extrapyramidal system** (EPS) side effects
        - 4 *hours*: acute dystonia – muscle spasm, stiffness, oculogyric crisis
        - 4 *days*: akinesia – parkinsonian symptoms
        - 4 *weeks*: akathisia (restlessness)
        - 4 *months*: **tardive dyskinesia** – stereotypic oral-facial movements and twisting/tapping of the lower extremities due to long-term antipsychotic use; often irreversible
    - Endocrine side effects (e.g., dopamine receptor antagonism → hyperprolactinemia → galactorrhea)
    - Side effects arising from blocking receptors
        - Muscarinic – dry mouth, constipation
        - Alpha adrenergic – hypotension
        - Histamine – sedation
- **Atypical antipsychotics**
    - Fewer extrapyramidal/TD side effects than traditional antipsychotics
    - olanzapine/clozapine/quetiapine - significant weight gain (insulin resistance and hyperlipidemia)
    - Clozaril/clozapine – agranulocytosis (requires weekly WBC monitoring)
    - Geodon/ziprasidone – QTc prolongation
    - Seroquel/quetiapine – cataracts
    - Risperidal/risperidone – highest risk of all atypicals for developing EPS and hyperprolactinemia