# INR Psychopharmacology Files
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**Antidepressant Associated Hyponatremia (low salt) (De Picker et al., 2014).**

- Highest incidence with SSRI's and Effexor (venlafaxine)
- Incidence: 0.5 to 32%
    - Depends on cut-off points

De Picker L, Van Den Eede F, Dumont G, Moorkens G, Sabbe BG. (2014). Antidepressants and the risk of hyponatremia: a class-by-class review of literature. *Psychosomatics, 55,* 536-47. doi: 10.1016/j.psym.2014.01.010. Epub 2014 Apr 21. PMID: 25262043.

**Comparative efficacy of benzodiazepines and antidepressants** (Beyer, C. et al., 2024) - USA

- Efficacy of benzodiazepines vs antidepressants of 24 randomized controlled studies
- Benzos = Five studies
- Antidepressants = 18 studies
    - Benzos had less side-effect than antidepressants
- Benzos were significantly more effective than antidepressants in reducing GAD psychological & somatic symptoms ($Chi^2 = 5.81$, $p = 0.02$),
- Conclusion
    - Benzos were more effective than antidepressants in treating GAD
    - Benzos had less side-effect than antidepressants

Beyer, C. et al. (2024). Meta-analysis of the comparative efficacy of benzodiazepines and antidepressants for psychic versus somatic symptoms of generalized anxiety disorder, *Comprehensive Psychiatry, 132,* 152479. doi.org/10.1016/j.comppsych.2024.152479.

**Effectiveness of long-term BZD's for GAD (**Chang et al., 2024)

- BZD's demonstrated significantly greater efficacy in treating GAD vs Placebo and Antidepressants
    - Celexa (citalopram), Tofranil (imipramine), Ludiomil (maprotiline), Viibryd (vilazodone), & Trintellix (vortioxetine)
- Tolerance to the anxiolytic effects of BZD's does not develop over time
- Efficacy of long-term treatment of GAD remains consistent over time

- Individuals with a history of substance abuse should not be prescribed BZD's

Chang, Y. et al. (2024). Exploring clinical applications and long-term effectiveness of benzodiazepines: An integrated perspective on mechanisms, imaging, and personalized medicine. *Biomedicine & Pharmacotherapy, 173,* 116329. doi.org/10.1016/j.biopha.2024.116329

**Lithium Therapeutic Functions**

- Main Therapeutic Functions (Herrera-Revero, M. et al., 2024).
    - Lithium actions on BP I & II results from its effects on the following four genes:
        - RNLS: degrades catecholamines: epinephrine (adrenaline), norepinephrine (noradrenaline) & dopamine

        - GRIN2A: Blocks NMDA glutamate receptors
        - CSMD2: Inhibits neuronal excitability
        - DNAH14: Acts on microtubules (i.e., intra-cellular activity)

Herrera-Revero, M. et al., (2024). Exploring the genetics of lithium response in bipolar disorders. *International Journal of Bipolar Disorders, 12:*20. doi.org/10.1186/s40345-024-00341-y

**Antihistamine medications do not increase the risk of dementia** (Yang et al., 2022)

- However, these meds may increase risk in pts over 65 compared to controls
    - Need Longitudinal Studies
    - Must control for factors such as: sex, age, health status, medication use, etc

- Cumulative Probability Hazard Risk Models
    - *The Fine and Gray's model:* Is a static model, but should not be used for more than two events
    - *The Kaplan–Meier model:* Accounts for time, but should not be used for more than two events
        - 95% Confidence Intervals: Test-retest Reliability

- No antihistamine or ACh antagonist medication has the steady state or receptor affinity properties to cause long-term suppression of these receptor types, therefore causing Dementia is extremely unlikely

Yang et al. (2022). The Usage of Histamine Type 1 Receptor Antagonist and Risk of Dementia in the Elderly: A Nationwide Cohort Study. *Front. Aging Neurosci., 14*, 811494. doi.org/10.3389/fnagi.2022.811494

**ETOH Craving Meds**

- Vivitrol (naltrexone extended IM injection)
    - ETOH or Opioid Addiction
        - ETOH – once/month
            - Reduction of heavy drinking
            - 190mg – up to 17% reduction
            - 380mg – up to 25% reduction

**Opioid Addiction Med**

- **Sublocade (buprenorphine extended-release) injection**
    - Buprenorphine partial mu-opioid agonist & kappa-opioid antagonist

    - After 4 weeks of Sublocade subjective effects of hydromorphone (6 to 18mg, IM) were blocked (effects demonstrated wide variability across subjects)

    - Subcutaneous injection in the abdomen, thigh, buttock, or back of the upper arm

    - Dose: two initial doses of 300mg followed by 100mg monthly maintenance does – 300mg max maintenance dose

    - Prefilled syringe with a 19-gauge 5/8-inch needle (among the thickest hypodermic needles)