



**A BRIEF OVERVIEW OF PSYCHOTROPIC MEDICATION USE FOR PERSONS WITH INTELLECTUAL DISABILITIES**

**INTRODUCTION**

Individuals with intellectual disabilities (IDD) are often prescribed psychotropic medications. Historically, these were prescribed to improve behavioral control without a real understanding for what was causing the problematic behavior. Sometimes individuals with IDD may demonstrate signs of depression, anxiety, or psychosis while others demonstrate changes in their mood or behavior, but is really depression, anxiety and occasionally psychosis. This can occur with environmental change, physical discomfort, cues related to past trauma, overstimulation, boredom, confusion, or other unpleasant states. Addressing what is causing the distress or reinforcing the behavioral response is the most important thing (though not always easy).

Psychotropic medications may be useful for treating more typically presenting psychiatric illnesses as well as being part of more comprehensive plan. An individual with intellectual disabilities who seems sad, withdrawn, low energy, eating or sleeping more or less, or may be more irritable could be suffering from a depression that needs medication treatment. On the other hand one who demonstrates aggression, property destruction, and self-injury may be helped by medication aimed at blunting the anxiety/alarm. In such instances the medications are part of an overall strategy or plan to help the individual avoid the “need” to engage in such behavior.

However, some of the psychotropic medications we use have more risk for individuals with cognitive dysfunction and intellectual disabilities than for others. Below is a brief summary of more commonly prescribed agents and the risks they may pose for individuals with intellectual disabilities.

**COMMONLY USED PSYCHOTROPIC MEDICATIONS**

Below is information regarding psychotropic medications commonly used for individuals with IDD. It does not cover all of the potential side effects, but is focused on those of particular attention with this group of individuals.

**ANTICHOLINERGIC/ANTIHISTAMINIC AGENTS: benztropine (Cogentin), trihexyphenidyl (Artane), diphenhydramine (Benadryl) and hydroxyzine (Vistaril) are the agents used most often. Diphenhydramine and hydroxyzine, primarily antihistaminic agents, are used to treat extrapyramidal side effects from antipsychotics. They are also used to treat agitation, anxiety, and aggression. Benztropine and trihexyphenidyl are used to treat extrapyramidal/parkinsonian side effects from antipsychotic medications. The problem with all of these agents is that they can impede cognitive function and the anticholinergic agents can cause constipation. Decreasing the ability of an individual with an intellectual disability to attend, learn, and remember potentially adds to an already compromised cognitive functioning. The risk of bowel obstruction is more serious for individuals with IDD and adding an agent with constipating effects adds to this risk.**

Anticholinergics	Indication	Possible Side Effects
Benztropine (Cogentin)	anxiety	Sedation, decreased cognition,



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		constipation
Trihexyphenidyl (Artane)	EPS stiffness, tremors	Sedation, decreased cognition , constipation
Diphenhydramine (Benadryl)	anxiety	Sedation, decreased cognition
Hydroxyzine (Vistaril)	insomnia	Decreased cognition

**BENZODIAZEPINES:** Lorazepam (Ativan), clonazepam (Klonopin), diazepam (Valium), alprazolam (Xanax), and others. These agents may compromise cognition either directly or by their sedating effects. In individuals who already have cognitive limits this can render them more limited, decreasing their ability to learn or remember. In addition, such agents can be disinhibiting, more so in individuals with cognitive dysfunction. While often used to try to control behavior, the combination of further cognitive impediment and/or disinhibition can make things worse. Further, they can create an addiction and the added risks related to both habituation and acute withdrawal if the medication is stopped suddenly.

<b>Benzodiazepines</b>	<b>Indication</b>	<b>Possible Side Effects</b>
Lorazepam (Ativan)	Anxiety	sedation, decreased cognition, disinhibition, addiction, risk with sudden withdrawal
Clonazepam (Klonopin)	Insomnia	sedation, decreased cognition, disinhibition, addiction, risk with sudden withdrawal
Diazepam (Valium)	seizures	sedation, decreased cognition, disinhibition, addiction, risk with sudden withdrawal addiction
Alprazolam (Xanax)		sedation, decreased cognition, disinhibition, addiction, risk with sudden withdrawal, shorter acting (so blood levels more rapidly increase then decrease)

**LITHIUM:** Lithium can produce cognitive disturbances, carries the risk of being nephrotoxic, can produce hypothyroidism, and must be regularly monitored for drug levels, thyroid function, and renal function. While it can be effective for affective instability and bipolar disorder, experience has shown that it can be difficult to manage in individuals with IDD.

<b>Lithium</b>	<b>Indication</b>	<b>Possible Side Effects</b>
Lithium	Bipolar disorder recurring depression emotional instability	Confusion, decreased cognition, kidney damage, thyroid dysfunction, <b>regular lab work required;</b> levels can increase with dehydration, slow heart rate (bradycardia), nausea, vomiting, excessive thirst, weight gain, dry skin, rash and folliculitis



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**TRADITIONAL ANTIPSYCHOTIC AGENTS: Haloperidol, fluphenazine, thioridazine, perphenazine, trifluoperazine, chlorpromazine, etc.** The high-potency neuroleptics (haloperidol, fluphenazine, trifluoperazine) have the benefits of causing less weight gain/metabolic syndrome or anticholinergic risks. However, they can produce movement disorders, which often lead to the use of an anticholinergic agent which can compromise already limited cognitive function. The low-potency agents such as chlorpromazine and thioridazine have significant anticholinergic effects and a higher risk of sedation, both of which compromise cognitive functioning. The anticholinergic effects also decrease bowel motility which is a risk for individuals with intellectual disabilities. All of these drugs can be sedating and therefore suppress cognition. Chlorpromazine appears to have more risk of lowering the seizure threshold whereas haloperidol and fluphenazine are less likely to do so.

<b>Traditional Antipsychotic Agents: High Potency</b>	<b>Indication</b>	<b>Possible Side Effects</b>
Haloperidol (Haldol)	Psychosis	Sedation, constipation, stiffness, tremors, tardive dyskinesia
Fluphenazine (Prolixin)	Pervasive dev. d/o	Sedation, constipation, stiffness, tremors, tardive dyskinesia
Trifluoperazine (Stelazine)		Sedation, constipation, stiffness, tremors, tardive dyskinesia
Thiothiense (Navane)		Sedation, constipation, stiffness, tremors, tardive dyskinesia

<b>Traditional Antipsychotic Agents: Mid-Potency</b>	<b>Indication</b>	<b>Possible Side Effects</b>
Perphenazine (Trilafon)	psychosis	Sedation, constipation, stiffness, tremors, tardive dyskinesia

<b>Traditional Antipsychotic Agents: Low Potency</b>	<b>Indication</b>	<b>Possible Side Effects</b>
Thioridazine (Mellaril)	psychosis	More sedating, cognitive decrease, constipation, dysphasia, confusion, tremors, tardive dyskinesia
Chlorpromazine (Thorazine)		More sedating, cognitive decrease, constipation, dysphasia, confusion, tremors, tardive dyskinesia

**“ATYPICAL” ANTIPSYCHOTIC AGENTS: olanzapine, risperidone, clozapine, aripiprazole, quetiapine, etc.** These agents are more gentle with regard to extrapyramidal side effects, but may also decrease cognition in individuals with intellectual disabilities as well as carry risks associated with metabolic syndrome, some more than others. These risks require the regular monitoring of weight, lipids, and glucose as well as HgA1C in some cases. Clozapine has more risk of lowering the seizure threshold whereas risperidone has less.



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Atypical Antipsychotic Agents	Indication	Possible Side Effects
Olanzapine (Zyprexa)	psychosis	Sedation, weight gain, increased cholesterol, increased blood sugar/diabetes
Risperidone (Risperidol)	Bipolar disorder	Sedation, weight gain, increased cholesterol, increased blood sugar/diabetes
Clozapine (Clozapine)		Sedation, weight gain, increased cholesterol, increased blood sugar/diabetes. May decrease white blood cells/weekly labs needed.
Quetiapine (Seraquel)		Sedation, weight gain, increased cholesterol, increased blood sugar/diabetes

**SSRIs: Fluoxetine (Prozac), sertraline (Zoloft), paroxetine (Paxil), fluvoxamine (Luvox), etc., and SNRIs venlafaxine (Effexor), and duloxetine (Cymbalta):** These agents can be useful in helping individuals with an intellectual disability who have symptoms of depression or anxiety, both of which may present in atypical fashion especially in individuals lacking effective verbal capacities. Generally, they can be used without suppressing cognition, although there is a low risk of lowering the seizure threshold. All have risk of precipitating mania or lesser variations. The SSRIs may cause a kind of “wooziness” when going up or down on the doses that settles with time. All may result in some gastrointestinal symptoms for some people.

SSRIs	Indication	Possible Side Effects
Fluoxetine (Prozac)	Depression	Activating for some. May increase anxiety restlessness, irritability
Sertraline (Zoloft)	Anxiety	Irritability
Paroxetine (Paxil)	Panic disorder	May be more calming/sedating
Fluvoxamine (Luvox)	OCD	
SNRIs	PTSD	Nausea, diarrhea, weight gain
Venlafaxine (Effexor)		
Duloxetine (Cymbalta)		

**ANTICONVULSANTS:** A number of individuals with intellectual disabilities have seizure disorders and I will not address all of the anticonvulsants that may be used for his purpose. **Carbamazepine (Tegretol), oxcarbazepine (Trileptal) and divalproex (Depakote, Depakote ER)** are more commonly used for mood instability and affective dysregulation than the others. The risks related to these agents are not distinct for individuals with intellectual disabilities. The risks associated with hyponatremia, decreased WBC counts, and liver function with carbamazepine and oxcarbazepine are the same though their management can be more complicated. Divalproex can affect platelets, liver function, and, occasionally the pancreas as well as cause weight gain. All can cause sedation that impedes cognitive functioning. Valproic acid (except for the oral liquid preparation) should not be used for persons with intellectual disabilities due to the 33% risk in GI bleeding and other GI related complications.



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<b>Anticonvulsants</b>	<b>Indication</b>	<b>Possible Side Effects</b>
Carbamazepine (Tegretol)	Bipolar disorder	Sedation, decreased sodium (delirium/seizures) decrease liver function, decreased white blood cells, regular lab work
Oxcarbazepine (Trileptal)	Emotional instability	Sedation, decreased sodium (delirium/seizures) decrease liver function, decreased white blood cells, regular lab work
Divalproex (Depakote, Depakote ER)	Bipolar disorder	Sedation, emotional instability, weight gain, decreased platelets, pancreatitis

**DOSAGES:** As with all patients dosages have to be individualized to get the best balance of clinical benefit versus unwanted side effects. As with geriatric individuals, individuals with intellectual disabilities may require lower doses to achieve the needed clinical benefit and avoid cognitive or gastrointestinal side effects. It is also important to discontinue medications that have not produced the anticipated benefit. Too often, more medications are added while behaviors continue and side effects increase.

Source: <https://www.nimh.nih.gov/health/topics/mental-health-medications/index.shtml>

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