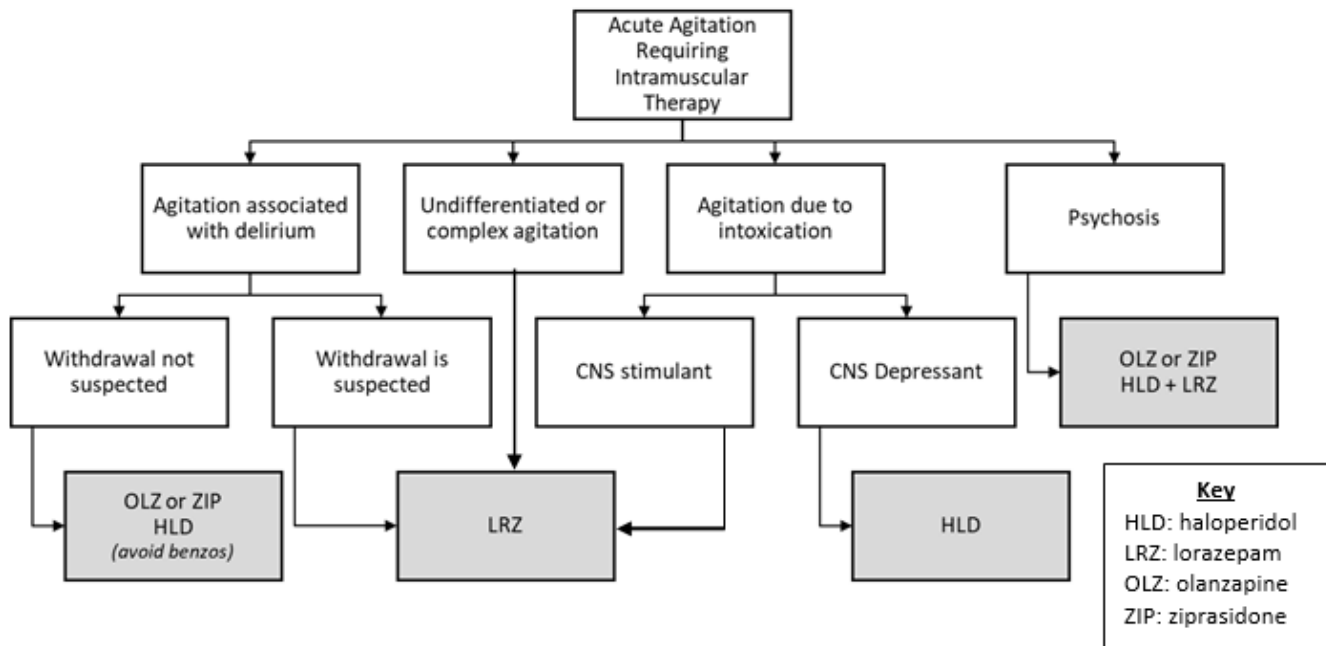


Quick Reference for the Treatment of Acute Agitation

Goals of pharmacologic therapy of acute agitation:

- Produce calming effect quickly without excessive sedation
- Provide early treatment of underlying psychosis
- Minimize treatment-related adverse events
- Assure patient and staff safety

Options for Management of Acute Agitation with Intramuscular Therapy



Clinical Pearls

- For psychotic agitation, if initial antipsychotic is ineffective, addition of a benzodiazepine is preferred over additional doses of antipsychotic. However, do not combine IM olanzapine with IM lorazepam due to the risk of respiratory depression.
- If appropriate, offer oral medication first and incorporate the patient in the medication decision.
- Rule-out possible causes of agitation:
 - Medical complications (ie. hyper- or hypoglycemia, electrolyte disturbance, renal or hepatic failure, thyroid or adrenal disorders, Wernicke's encephalopathy, hypotension, heart failure, neurologic disorders [stroke], infection)
 - Substance intoxication or withdrawal
 - Medication causes (ie. steroids, anticholinergics, barbiturates, amphetamines, antipsychotic-induced akathisia)
- Allow adequate time for clinical response between doses (see table on page 2).
- After treatment with IM agents, monitor vitals and clinical status at regular intervals.
- Second generation antipsychotic agents have a lower risk of EPS than haloperidol but have demonstrated similar and comparable efficacy in treating acute agitation.
- For psychotic agitation, combining a benzodiazepine and a typical antipsychotic is more effective than typical antipsychotic monotherapy and may allow for decreased doses of the antipsychotic medication.
- Concurrent administration of diphenhydramine with haloperidol is not recommended as it requires two separate injections and increases the risk of over sedation and interactions with other medications.
- Use lower starting and maximum doses in the elderly and child and adolescent population.



Comparison of IM Treatment Options

Medication	Typical Dose	Max Single Dose	Repeat Dosing	Max Adult Dose/ 24hrs	Time to Onset	Time to Peak Cp	Half-life (hours)
Lorazepam	1-2mg	4mg	0.5 hour	12mg	20-30 min	1-3 hr	14
Haloperidol lactate	5-10mg	10mg	1 hour	40mg	30-60 min	20 min	20
Chlorpromazine ^{1,2}	25-50mg	100mg	2 hours	400mg	--	1-4 hr	2 -30
Ziprasidone ²	10mg 20mg	20mg	2 hours 4 hours	40mg	15 min	1 hr	2-5
Olanzapine ^{2,3}	10mg	10mg	2 hours ³	30mg	15-45 min	15-45 min	30

¹IM chlorpromazine is not recommended for the management of acute agitation. There are significant risks of QTc prolongation, hypotension, reduction in seizure threshold, a slow onset of effect, and risk of local irritation at the injection site.

² Reconstitution required before administration.

³ Monitor for orthostatic hypotension prior to administration of repeat dosing.

Comparison of Oral Agents for Acute Agitation

Medication	Typical Dose	Repeat Dosing (hours)	Max Adult Dose/ 24hrs	Estimated Time of Onset (minutes)	Time to Peak Cp (hours)	Half-life (hours)
Lorazepam	1-2mg	2	10mg	20-30	2	12
Haloperidol	5-10mg	1	40mg	30	2-6	14-37
Chlorpromazine ¹	25-50mg	x	2000mg	x	2.8	6
Ziprasidone ²	20-40mg	x	240mg	x	6-8	7
Olanzapine ODT	5-10mg	2	30mg	≤ 60	6	30
Risperidone m-tab Risperidone soln. ³	1-2mg 1-2mg	2	8mg	x ≤ 60	~1	20

xNot studied as a treatment for acute agitation and aggression.

¹Chlorpromazine is expressed as having limited, poor, and outdated data as treatment for acute agitation.

²Oral ziprasidone absorption is significantly decreased without administration with a meal (250-500 calories).

³When given in combination with IM lorazepam.

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