

# POISON PEARLS



## Toxicology Topics for the Healthcare Team of a Poisoned Patient

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# Restarting Medications After Overdose

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## Guiding Principles for Restarting Medications

Resuming pharmacotherapy after an overdose requires careful evaluation. For example, with psychoactive drugs starting at lower doses with gradual up-titration minimizes adverse effects. When a medication was involved in the overdose, the therapeutic benefit should be cautiously weighed against possible risks. Patient clinical status, resolution of toxidromes, timing of prior doses, comorbidities, and potential for withdrawal should all be considered. While serum drug concentrations may be helpful, it may be unavailable or unreliable in guiding clinical management. In the absence of reliable serum concentrations, evaluating toxicokinetic parameters such as prolonged half-life and elimination are critical in guiding safe and effective reintroduction. With polydrug overdoses, prioritization is essential. Restarting the most clinically important medication first is recommended to address critical therapeutic needs. Alternately, initiating the medication with the shortest half-life can be advantageous, allowing therapeutic concentrations to be reached sooner and enabling closer monitoring of patient response.

## Considerations for Alternative Pharmacotherapy

In some cases, introducing an alternate therapeutic equivalent medication may be more appropriate than resuming the patient's previous regimen. Key considerations include the potential toxicity of drugs, the absence of contraindications to the new therapy based on past medical history, and baseline organ function. Additionally, pharmacokinetic and pharmacodynamic properties of the alternate medication, along with its potential interactions with other therapies, must be carefully evaluated to ensure safety and efficacy ([Tay et al., 2019](#)).

## Optimizing and Simplifying the Medication Regimen

A comprehensive medication reconciliation of the current regimen is crucial to identifying essential therapies and discontinuing unnecessary or redundant medications. Streamlining the regimen reduces the risk of future overdoses and minimizes the likelihood of adverse effects associated with polypharmacy. The "start low, go slow" strategy with prioritization of critical or short half-life drugs aids stability. Medications that are still required, but lower priority can be added in a stepwise approach. Overall, the primary goal when restarting a medication after overdose should be patient safety.

## Special considerations for certain medications

- **Clozapine:** If held > 48 hours the patient will need to re-titrate their dose
- **Serotonergic drugs:** Watch for symptoms of serotonin syndrome post overdose when restarting drugs that increase serotonin
- **Digoxin or Lithium:** levels are often increased outside of overdoses (ex. recent gastrointestinal illness, renal dysfunction, or drug interaction). Identification and communication of these risk factors with patients can lead to closer monitoring of serum concentrations in these settings



## Key Points:

- Restart most clinically important drug first
- Drugs with shortest half-life may be preferred
- "Start low, go slow"
- Serum drug concentrations are not always clinically useful in restarting medications
- Monitor for withdrawal / discontinuation syndromes

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