



Poison HOTLINE

1-800-222-1222

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Did you know ...

Large doses of benzodiazepines (BDZ) may be needed to treat patients who are severely agitated or seizing from overdoses of medicines, drugs of abuse or chemicals, or are seizing from sedative withdrawal.

The IPCC frequently recommends using BDZs as first-line agent to treat drug- or chemical-induced agitation, aggression, seizures, tachycardia, hypertension, hyperthermia, tremor, clonus and muscle stiffness. From the toxicology standpoint, midazolam (Versed) and diazepam (Valium) are preferred to lorazepam (Ativan) because of the delay to peak effect of lorazepam.

If large doses of BDZs are needed, be prepared to secure the patient's airway and provide mechanical ventilation and oxygenation.

Barbiturates and Toxin Induced Seizures

Toxin-Induced Seizures

Seizures are a common complication of drug intoxication, overdoses and ethanol or benzodiazepine (BDZ) withdrawal. Common causes of drug-induced seizures include antidepressants, stimulants and antihistamines.

Most drug-induced seizures are self-limited. Prolonged or recurrent seizures can lead to serious complications and require vigorous supportive care and medications to stop the seizures. Benzodiazepines are generally accepted as the first line anticonvulsant therapy for drug-induced seizures. If large doses of benzodiazepines fail to halt seizures promptly, second line drugs include barbiturates and propofol. Continuous infusion of one or more medications may be required to treat refractory status epilepticus. There is no role for phenytoin in the treatment of drug-induced seizures. The potential use of ketamine and levetiracetam for drug-induced seizures is promising but not established. Seizures from isoniazid poisoning also need the specific antidote pyridoxine.

Benzodiazepines

Benzodiazepines, working with the inhibitory neurotransmitter GABA, bind to chloride channels and increase the rate at which the chloride channel opens. This hyperpolarizes the neurons making them less responsive and harder to carry nerve impulses.

Barbiturates

Barbiturates also work with GABA on the chloride channel but cause the channel to open for a longer period of time. The two classes of drugs are complementary: barbiturates open the chloride channel for a longer period of time while BDZ open the chloride channel more frequently. Barbiturates are an excellent second choice for seizures or agitation not responding to large doses of BDZs.

Barbiturates have sedative and anticonvulsant effects and are also CNS depressants. They are most commonly used to treat seizures, decrease anxiety, induce sleep, relieve muscle spasms, and are used in surgery as an anesthetic. Barbiturates will also slow the heart rate and respiratory rate, and in larger doses cause hypotension.

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**POISON
Help**
1-800-222-1222

The logo for Poison Help, featuring the word "POISON" in a bold, black, sans-serif font above the word "Help" in a larger, bold, black, sans-serif font. To the right of "Help" is a red pill bottle with a white skull and crossbones symbol on it. Below the logo is the phone number "1-800-222-1222" in a bold, black, sans-serif font.

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