Long-acting Benzodiazepines

Long-acting benzodiazepines are important pharmacologic agents used for a variety of diseases and disorders. Examples include lorazepam, diazepam, clonazepam, and chlordiazepoxide. These drugs are indicated for insomnia, anxiety disorders, seizures including those seen in eclampsia, and alcohol withdrawal syndrome. It is important to note that the abuse potential or dependence is high with these drugs and their half-life is usually greater than 24 hours.



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Drug Names

Lorazepam
Labrador-Pam
Lorazepam is one of the long-acting benzodiazepines but is sometimes classified as “intermediate-acting” given its shorter half-life relative to the other traditionally long-acting BZDs. Lorazepam is also unique in that it does not undergo hepatic metabolism and consequently can be used in patients with liver disease.

Diazepam
Dice-Pam
Diazepam is indicated for several anxiety disorders, procedural anxiety, and seizure disorders. It can also be used in alcohol withdrawal syndrome.

Clonazepam
Clown-Pam
Clonazepam has an onset of action of 20-40 minutes and can be used in patients with panic or seizure disorders.

Chlordiazepoxide
Color-dice
Chlordiazepoxide is another one of the long-acting benzodiazepines and achieves peak serum concentration in 30 minutes to 2 hours.

Indications

Insomnia
Taped-awake-insomniac
Insomnia is a sleep disorder characterized by a decreased ability to initiate, maintain, and/or wake from sleep. Long-acting benzodiazepines can help manage this condition.

Anxiety
Anxiety-bag
These medications can also be used in patients with anxiety disorders or preprocedural anxiety. This includes panic attacks.

Seizures
Caesar
Patients with epilepsy who experience seizures can be prescribed long-acting benzodiazepines for management. These drugs help to reduce excitatory neural pathways that may be epileptogenic. They can also be used for status epilepticus.

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Eclampsia

E-clamp on Pregnant-woman

Eclampsia is the presence of seizures with preeclampsia (hypertension and end-organ damage). Long-acting benzodiazepines like diazepam can be given if the patient fails to respond to magnesium sulfate in treating their seizures.

Alcohol Withdrawal

Alcoholic-martini making a Withdrawal

Alcohol withdrawal syndrome is a constellation of clinical findings associated with alcohol use disorders. Several of these findings (tremor, insomnia, anxiety) are amenable to treatment with long-acting benzodiazepines.

Considerations

Half-life > 24 Hours

Half-life-clock Greater-than (24) Hour-sign

The half-life for long-acting benzodiazepines is generally greater than 24 hours. Short-acting benzodiazepines can have half-lives shorter than 12 hours.

Dependence

Dependence Ball-and-chain

Benzodiazepines have a high potential for dependence and abuse. When prescribing these medications, routine follow-up and detailed history are important to assess for addiction / substance dependence. Patients who demonstrate symptoms that have been controlled for several months might raise suspicion for dependence.

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