



## Clonazepam

Clonazepam is a benzodiazepine anticonvulsant used primarily as adjunctive therapy for status epilepticus, pulsatile therapy for cluster seizures and as an antianxiolytic. Clonazepam is a benzodiazepine anxiolytic with sedative/hypnotic and anticonvulsant properties. The subcortical levels (primarily limbic, thalamic, and hypothalamic) of the CNS are depressed by Clonazepam and other benzodiazepines thus producing the anxiolytic, sedative, skeletal muscle relaxant, and anticonvulsant effects seen. The exact mechanism of action is unknown but postulated mechanisms include antagonism of serotonin, increased release and/or facilitation of gamma aminobutyric acid (GABA) activity and diminished release or turnover of acetylcholine in the central nervous system.

Clonazepam has found use in the canine species as an adjunctive anticonvulsant and in the treatment of behavioral disorders associated with anxiety or phobia-related change. Clonazepam is best utilized for short-term or pulsatile therapy of recurrent seizures in the dog.

Unlike the dog, use of Clonazepam as a long-term chronic anticonvulsant in the cat is considered the first-line choice. The development of tolerance in the canine species within 4 weeks of continued use is not appreciated in cats. Clonazepam is well absorbed from the gastrointestinal tract and crosses into the brain as well as across the placenta and mammary glands rapidly. Clonazepam and its several metabolites all exert anticonvulsant activity.

Clonazepam is contraindicated in patients who are hypersensitive to benzodiazepines or who have significant liver dysfunction or narrow-angle glaucoma. Clonazepam has been reported to exacerbate myasthenia gravis. Long-term safety appears to be good in both the dog and cat species. Safety during pregnancy and lactation is not known, and the use of Clonazepam during these times is discouraged. The most severe side effects associated with the Clonazepam include sedation and ataxia. These are dose-related and rapidly reversible.