Lorazepam - General Effects

Lorazepam (Ativan) is a benzodiazepine and central nervous system (CNS) depressant.

1. Lorazepam is prescribed to manage anxiety and as a sedative.
    a. Lorazepam has a half-life of 9-16 hours.
    b. Lorazepam has a general therapeutic range, but experienced effects can vary based on an individual's prescription history.
        i. Therapeutic range refers to the blood concentration expected to achieve the desired therapeutic effects. Due to many factors such as prescription history, dosage, tolerance, drug-drug interactions and use, an individual may exhibit signs of impairment even though blood concentrations fall within the therapeutic range.
    c. The effects of Lorazepam last between 6-8 hours. This can vary based on an individual and their drug usage.
2. General effects of benzodiazepines include but are not limited to drowsiness, sedation, confusion, memory impairment, blurred vision, depressed heart rate, incoordination, difficulty maintaining balance, and respiratory depression.
    a. General impairing effects of benzodiazepines on driving include, but are not limited to impaired divided attention, inability to maintain lane position, poor coordination, delayed reaction time, difficulty following directions, falling asleep at the wheel, reduced vigilance, cognitive impairment, poor perception, slow driving, confusion, disorientation, and inattentiveness.
3. The longer an individual uses a drug, the more they can build up a tolerance to its effects. Tolerance occurs when an individual no longer responds to the drug in the way that they initially responded. When an individual gains tolerance to a drug, a higher dose of the drug is necessary to achieve the same level or response initially achieved. As tolerance is gained, it may reduce some of the possible negative effects of a drug.
4. Drug metabolism (alcohol excluded) exhibits first order kinetics, or the elimination of a constant fraction of drug quantity per unit of time, which means that the amount eliminated is proportional to the drug concentration.
5. The use of more than one drug at a time may enhance the effects the drugs would otherwise have on their own, leading to greater impairment.

References

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** The interpretive information provided is not exhaustive nor meant to encompass all scenarios where toxicological results are reported. Interpretive information is meant to serve as a general guide for the reader and that for any given case, consultation with a forensic toxicologist is recommended. **