



Fentanyl - General Effects

Fentanyl (Sublimaze) is a narcotic analgesic and a central nervous system (CNS) depressant.

1. Fentanyl is used for the relief of moderate to severe pain while the primary manifestation of drug usage is sedation.
 - a. Fentanyl is approximately 75-100 times stronger than morphine.
 - b. Fentanyl has a half-life of 3-30 hours.
 - c. Fentanyl 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.
 - d. Norfentanyl is a primary inactive metabolite of fentanyl.
 - i. Norfentanyl produces no psychoactive effects on the body.
2. Effects of fentanyl include but are not limited to: respiratory depression, coma, muscle rigidity, seizures, and hypotension.
 - a. General impairing effects of fentanyl on driving include but are not limited to: delayed reaction time and information processing, falling asleep at the wheel, and inability to maintain lane position.
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. **

— Fentanyl Monograph				
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