



### **K28 Two Fatalities, Survival Driver, and Topiramate**

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After attending this presentation, attendees will have greater awareness of how the misuse of prescription drugs can result in cognitive impairment and judgment which could lead to serious motor vehicle accidents and possible death due to overdosing.

This presentation will impact the forensic science community by informing attendees of a potential problem with prescription drug abuse such as topiramate without any street drug or alcohol.

Topiramate (Topamax<sup>®</sup>) is FDA approved for initial monotherapy or adjunct treatment for partial, generalized tonic-clonic seizures, Lennox-Gastaut syndrome, and as a migraine prophylaxis. The common side effects seen with topiramate include ataxia, reduced concentration, confusion, dizziness, fatigue, impaired psychomotor performance, memory impairment, somnolence, and speech difficulty. Topiramate is categorized in the sugar sulfamate family and is available in a capsule, sprinkle, and tablet forms in varying dosage strengths.

A 28-year-old man was reported driving on the freeway at a high rate of speed and weaving in and out of traffic when he struck another vehicle on the back quarter of the vehicle. The rear ended vehicle lost control and rolled over several times and landing in a grassy area along the right side of the freeway. The passenger of the rolled over vehicle was ejected out of passenger front window. He was rushed to a nearby hospital where he was pronounced dead by major head trauma, collapsed lungs, and open fractures on both lower legs. The driver was properly restrained but died at the scene because the roof of his vehicle collapsed on top of him.

The man that caused the accident was not injured. The suspect was given a field sobriety test at the scene but failed. The suspect was then transported to a local hospital where he voluntarily gave a blood sample for DUI toxicology testing the shows topiramate was the sole drug identified and confirmed in the blood at a concentration of 13mg/L. A reported blood toxic concentration range is 8 to 17mg/L. The therapeutic concentration levels are recognized at a mean of 5 mg/L.

Prescription drug abuse for the purpose of "getting high" is emerging today because of the ease of access to this prescription drugs. The side effects of topiramate further highlight the dangers of potential drug abuse; however, this case of topiramate toxicity that lead to two motor vehicle related deaths was unusual in that no other drugs or alcohol were detected and that topiramate was contributory to impaired human performance in operating a motor vehicle.

#### **Topiramate, DUI, Prescription Drug**