When do Blackouts tend to Occur?

- Memory problems and blackouts are most likely to occur as BAC is in ascending limb and during its peak. (Rose, 2010)
- Remember that BAC is rising approximately one hour after the last drink.
- Quick gulps of that "*last-call*" drink can create an alcohol rush if there is already a considerable amount of alcohol in the person's system.
- Unconsciousness is most likely later in the evening (descending limb). (Davis, 2009)
- "*Acute Tolerance*" – the brain is trying to get back online. The longer a person is intoxicated, the more the brain is trying to get back in control.

Research Abstracts on When Blackouts Tend to Occur

Memory encoding and retrieval on the ascending and descending limbs of the blood alcohol concentration curve.

Söderlund, Hedvig. Et al.

Psychopharmacology, Vol 182(2), Oct, 2005. pp. 305-317.

Abstract:

Rationale: Little is known about acute effects of alcohol on memory encoding and retrieval on different limbs (ascending and descending) of the blood alcohol concentration (BAC) curve.

Objectives: This extensive experiment was designed to examine alcohol's effects on memory encoding and retrieval throughout a protracted drinking episode.

Methods: In a 9-h session, male participants consumed either alcohol (1 ml/kg) or placebo (n=32/32) over a period of 90 min and learned various materials in different memory tasks before, during, and after consuming the drinks, while their BAC levels were monitored. A week later, in a similar session, they were tested on learned materials before, during, and after drinking. Mood was assessed throughout both sessions.

Results: Alcohol impaired recall of words more than recognition, and cued recall most severely. Perceptual priming and picture recognition were not affected by alcohol. Alcohol impaired encoding in cued recall, recognition of completed word fragments, and free recall regardless of limb, but impaired retrieval in word recognition only during the ascending BAC. Alcohol increased negative mood on the descending limb during the first session, and on the ascending limb during the second session.

Conclusions: Under naturalistic drinking conditions, alcohol's effects on memory depend on task, memory process, and limb of the BAC curve. The differential effects of alcohol on retrieval during the ascending and descending limbs demonstrate the importance of examining the differential effects on the two limbs.