



INDIANA UNIVERSITY

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COURSE

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The Pharmacology of Alcohol

by

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Abstract

Alcohol impairs both the judgment and skilled performance of drinkers. This fact has been recognized for centuries. The drinker himself and those observing him often under-estimate this impairment. The extent of impairment is dependent upon several factors including: the circumstances, the dose, the duration of time spent drinking, the time when an evaluation is made, the type of evaluation made, and the tolerance of the drinker to alcohol. A survey of the pharmacology of alcohol will be given and the relationship between the amount of alcohol consumed, the BAC that results, and the impairment with which it is correlated will be discussed.

OUTLINE:

BACKGROUND:

1. The magnitude of problems related to alcohol including impaired driving
2. The basic characteristics of alcohol, which are fundamental to understanding its effects

PHARMACOKINETICS of Alcohol: The movement of alcohol in the body including consideration of its absorption, distribution, biotransformation and elimination

3. The relationship between the amount of alcohol consumed and the BAC produced.
 - a. How can a BAC be predicted from knowledge of how much a person has consumed and the time of consumption?
 - b. What individual variables affect the prediction of a BAC?
 - c. How is alcohol distributed differently in males and females?
 - d. How long does it take for alcohol to be eliminated from a drinkers system?
 - e. What are the advantages and disadvantages of measuring alcohol in different types of specimens, including whole blood, breath, plasma or serum, urine, vitreous, saliva and *post mortem* blood.

PHARMACODYNAMICS of Alcohol: The action of alcohol on the body, esp. CNS impairment

4. The relationship between BAC and the effect of alcohol on the drinker.
 - a. How does alcohol effect the body?
 - b. How does alcohol affect the brain?
 - i. Euphoria: The pleasure produced by alcohol
 - ii. Low dose (BAC < 0.05%) Impairment
 - iii. Moderate dose (BAC = 0.05 - 0.08%) Impairment
 - iv. Higher doses (BAC > 0.12 %) = problem intoxication
 - c. Alcoholism and tolerance
 - d. Observable signs of intoxication