CHAPTER 1

UNDER THE INFLUENCE OF ALCOHOL

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1. GENERAL. Alcohol and drugs affect human behavior when they reach the brain and central nervous system. The extent of alcohol influence depends upon the concentration present in the blood. Blood alcohol concentration (BAC) is determined by such factors as the amount of alcohol consumed relative to the amount of water in the body, the duration of drinking, and the competing rates of absorption and elimination.

2. DEFINITION OF UNDER THE INFLUENCE.

a. A person is under the influence if, as a result of drinking or consuming an alcoholic beverage and/or taking a drug, their mental or physical abilities are so impaired that they are no longer able to drive a vehicle with the caution of a sober person, using ordinary care, under similar circumstances.

b. The manner in which a person drives is not enough by itself to establish whether the person is, or is not, under the influence of an alcoholic beverage and/or a drug, or under the combined influence of an alcoholic beverage and a drug. However, it is a factor to be considered, in light of all the surrounding circumstances, in deciding whether the person was under the influence.[1]

3. ALCOHOL INFLUENCE.

a. Alcohol is a drug that acts on the central nervous system as a depressant. As the BAC rises, a person's impairment increases. Fine motor reflexes, information processing, behavioral judgments and inhibitions, visual perception, and a person's ability to assess their own performance are often the first to be affected. This impairment progresses to "classic" observable symptoms of impairment such as slowed physical responses, a decreased ability to coordinate muscle control, and speech impairment. Higher BACs can lead to dramatic shifts in behavioral attitude and a marked reduction in physical movement (stupor); progressing to a deep sleep (coma) as more of the central nervous system is disabled, and ending in death when the brain can no longer direct respiratory function.

b. As opposed to other drugs, the relationship between BAC and impairment is known, predictable, and always progressive (additive). While the effect of alcohol on fine motor reflexes is critical for pilots and race car drivers, it is the processing of sensory information by the brain that is important to the routine task of driving. As the BAC increases, information processing slows down and some information is actually lost, producing a reduced awareness of the surrounding driving

[1] California Criminal Jury Instructions [CALCRIM] 2110, 2015 Revision.

environment resulting in occasional driving errors. In 1967, the CALJIC 971 jury instruction added mental impairment to the determination of being under the influence. It was this recognition of the importance of "mental" capability for safe driving that led to the adoption of 0.08 percent BAC per se legislation.

4. ALCOHOL ABSORPTION.

a. Once the alcohol enters the stomach, it begins to enter the blood through a process known as absorption. One very important fact that pertains to alcohol absorption is that it does not have to be digested in order to move from the stomach to the blood.

b. Another very important fact is that alcohol can pass directly through the walls of the stomach. These two facts taken together mean that, under the right circumstances, absorption of alcohol can be accomplished fairly quickly. The ideal circumstance for rapid absorption is to drink on an empty stomach.

c. When the alcohol enters an empty stomach, about 20 percent will make its way directly through the stomach walls. The remaining 80 percent will pass through the stomach and enter the small intestine, from where it is readily absorbed into the blood. Because the body does not need to digest the alcohol before it passes into the bloodstream, the small intestine will be open to the alcohol as soon as it enters the stomach[2].

d. Food in the stomach will affect the absorption of alcohol. Food has to be at least partially digested in the stomach before it can pass into the small intestine. When the brain senses that food is in the stomach, it commands a muscle at the base of the stomach to constrict and cut off the passage to the small intestine. The muscle is called the pylorus, or pyloric valve. As long as it remains constricted, little or nothing will move out of the stomach and into the small intestine. If alcohol is in the stomach along with the food, the alcohol will also remain trapped behind the pylorus. Some of the alcohol trapped in the stomach will begin to break down chemically before it ever gets into the blood. In time, as the digestive process continues, the pylorus will begin to relax, and some of the alcohol and food will begin pass to through. But the overall effect of having food in the stomach and small intestine will be to slow the absorption of alcohol significantly. Because the alcohol slowly absorbs into the blood, and because the body will continue to process and eliminate the alcohol that does manage to get in the blood, the drinker's BAC will not climb as high as it would have if the alcohol was consumed on an empty stomach.

[2] National Highway Traffic Safety Administration, (*DWI Detection and Standardized Field Sobriety Testing*) – Revision 10/2015.

5. ALCOHOL DISTRIBUTION.

a. Once the alcohol moves from the stomach into the blood, it will be distributed throughout the body. Alcohol has an affinity for water. The blood will carry the alcohol to the various tissues and organs of the body, and will deposit the alcohol throughout the body proportional to the water content.

b. Brain tissue has a high water content, so the brain receives a substantial share of the distributed alcohol. Muscle tissue also has a high water content; however, fat tissue contains very little water. Thus, very little alcohol will be deposited in body fat. This is one factor that differentiates alcohol from certain other drugs, notably phencyclidine (also known as PCP) and cannabis, which are very soluble in fat.

c. The affinity of alcohol for water, and its lack of affinity for fat, helps explain an important difference in the way alcohol affects women and men. Pound for pound, the typical female body contains less water than the typical male.

6. ALCOHOL ELIMINATION.

a. As soon as the alcohol enters the bloodstream, the body starts the elimination process. Some alcohol will be directly expelled from the body chemically unchanged. For example, some alcohol will leave the body in the breath, in the urine, in sweat, in tears, etc. However, only a small portion (about 2-10 percent) of the ingested alcohol will be directly eliminated.

b. Most of the alcohol a person drinks is eliminated by metabolism. Metabolism is a process of chemical change. In this case, alcohol reacts with oxygen in the body and changes, through a series of intermediate steps, into carbon dioxide and water, both of which are directly expelled from the body.

c. Most of the metabolism of alcohol in the body takes place in the liver. An enzyme known as alcohol dehydrogenase acts to speed up the reaction of alcohol with oxygen. The speed of the reaction varies somewhat from person to person, and even from time to time for any given person. On the average, however, a person's blood alcohol concentration, after reaching peak value, will drop by approximately 0.015 per hour. For example, if the person reaches a maximum BAC of 0.15, it will take approximately ten hours for the person to eliminate all of the alcohol.

7. BEHAVIOR AND INHIBITIONS.

a. At specified blood alcohol levels (0.04 percent for commercial and passenger for-hire drivers, and 0.08 percent for other drivers), the effects of alcohol on

behavior are significantly influenced by the environment where the alcoholic beverage is consumed. At BACs of 0.01 to 0.08 percent, we expect a more extroverted behavior in a rowdy environment (e.g., at a bar, party, or ballpark). In a more subdued environment (e.g., a quiet arts gathering, play, or opera performance), the effect from a few drinks may not produce the same extroverted behavior. However, controlling behavior becomes more difficult above 0.10 percent BAC, when symptoms may become out-of-place for the environment (e.g., quiet and introverted at a bar or giddy and laughing during the opera). Alcohol is consumed socially for a variety of reasons, usually producing a behavior acceptable to the environment in which it is consumed.

b. The contrasting effects of alcohol are well known. The depressant effect acts to calm, slow and relax (sedation), while the uninhibited effect (release of inhibitions) leads to increased risk-taking because fear is decreased and assertiveness is increased. While the sedation effect causes inattention and has been demonstrated to slow information processing in the brain and decrease driving performance, the uninhibited effect (increased risk-taking) is often characterized as the "courage-building" effect from drinking. These effects can and will occasionally manifest in poor driving performance between 0.04 percent and 0.08 percent BAC.

8. DETERMINING “UNDER THE INFLUENCE”.

a. Observation of poor driving performance (e.g., incorrect driving procedure, an abnormal response to road conditions or traffic situations) may be evident at BAC levels below 0.08 percent. At lower BACs, poor driving performance may be the result of temporary inattention to the task of driving caused by the depressant effects of alcohol. Subsequently, at lower BACs, a driver may be able to refocus their attention to the task of driving at which time poor driving performance may no longer be evident. This apparent “sobering up” effect is less likely at higher BACs where alcohol has a more adverse impact on visual perception, divided attention, motor reflexes, coordination, and wakefulness.

b. Alcohol is always a depressant and some of its sedative effects (slowing, calming, or relaxing) may be noted as out-of-place for an ordinary traffic enforcement stop (e.g., divided instead of focused attention; the lack of anxiety; nervousness or trembling hands). There may be a calm, deliberate, and relaxed demeanor and speech presentation that would be out-of-place for a person who knows they did something wrong and/or is expecting a citation. In this situation, the use of alcohol actually adds a measure of behavioral control that would otherwise not be present. Unfortunately, this generalization will not hold true in all cases because the depressant effects of alcohol may be difficult to observe in persons who are otherwise belligerent or generally challenging of authority by their nature. As officers gain experience in conducting traffic stops, they will develop the ability

to recognize the expected and unusual mental and physical performance characteristics of violators.

c. External Evaluation. To determine if a person is under the influence, an officer must consider the totality of the circumstances. This includes, but is not limited to, observations of poor driving, signs and symptoms of intoxication, and the person's performance on field sobriety tests. If these indicators lead the officer to believe, based on their training and experience, that the person is under the influence, they shall take appropriate enforcement action. Any observations that indicate a person may be under the influence must be documented on the CHP 202, Driving Under the Influence Arrest – Investigation Report.

d. Chemical Test. A chemical test is the process used to determine a person's BAC. This test is conducted after arrest and generally consists of a chemical breath test, blood test, or, in some cases, a urine test.

9. CALIFORNIA PRESUMPTIVE-LIMIT LAW.

a. California Vehicle Code Section 23610 states, "(a) Upon the trial of any criminal action, or preliminary proceeding in a criminal action, arising out of acts alleged to have been committed by any person while driving a vehicle while under the influence of an alcoholic beverage in violation of subdivision (a) of Section 23152 or subdivision (a) of Section 23153, the amount of alcohol in the person's blood at the time of the test as shown by chemical analysis of that person's blood, breath, or urine shall give rise to the following presumptions affecting the burden of proof: (1) If there was at that time less than 0.05 percent, by weight, of alcohol in the person's blood, it shall be presumed that the person was not under the influence of an alcoholic beverage at the time of the alleged offence. (2) If there was at that time 0.05 percent or more but less than 0.08 percent, by weight, of alcohol in the person's blood, that fact shall not give rise to any presumption that the person was or was not under the influence of an alcoholic beverage, but the fact may be considered with other competent evidence in determining whether the person was under the influence of an alcoholic beverage at the time of the alleged offense. (3) If there was at that time 0.08 percent or more, by weight, of alcohol in the person's blood, it shall be presumed that the person was under the influence of an alcoholic beverage at the time of the alleged offence. (b) Percent, by weight, of alcohol in the person's blood shall be based upon grams of alcohol per 100 milliliters of blood or grams of alcohol per 210 liters of breath. (c) This section shall not be construed as limiting the introduction of any other competent evidence bearing upon the question of whether the person ingested any alcoholic beverage or was under the influence of an alcoholic beverage at the time of the alleged offense".

b. This is a rebuttable presumption law (which means that it is a presumption that can be overturned upon showing sufficient proof[3]). Therefore, officers should feel secure in the knowledge that no injustice is involved when arresting a person with a BAC of 0.08 percent or greater despite the absence of physical manifestations or the opportunity for observing them. Likewise, an officer is justified in arresting a subject with a BAC below 0.08 percent if they meet the definition of under the influence.

10. UNDER THE INFLUENCE OF DRUGS.

Refer to Chapter 3, Under the Influence of Drugs, of this manual for additional information.

[3] Black's Law Dictionary.