

The Drug Recognition Expert and Impaired Driving Enforcement

by
Sgt. Jamie Boothe

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It is a sad but persistent truth that impaired driving impacts the lives of thousands of Americans each and every year. Whether it is the loss of a loved one, a debilitating, life-altering injury, or financial crises brought on by skyrocketing medical costs, there is no escape from the fact that impaired driving changes lives. The only solution to the problem is targeted enforcement aimed at reducing the number of impaired drivers on the highways, and insuring that those who engage in this type of conduct are held accountable for their actions.

The Drug Recognition Expert, hereafter referred to simply as the DRE, is an important resource in our efforts to reduce impaired driving, and ultimately save lives. As a DRE, I take great pride and satisfaction in knowing that I am doing everything possible to help in this enormous task. The majority of the information contained within the body of this paper is taken from my own knowledge base and first hand experience in dealing with drug-impaired drivers. To understand how the DRE fulfills their role in impaired driving enforcement, I will examine the prevalence of drug use in society and its impact on traffic safety, the origin and development of the Drug Evaluation and Classification program, how drugs cause impairment, categories of drugs, and the standardized drug evaluation process used by all DREs to determine impairment in drivers.

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Drug Use in Society

In late 2008, 14.2 percent of the population of the United States admitted to using some type of illicit drug within the preceeding twelve months. Of that 14.2 percent, approximately 10 percent had used marijuana, 2.3 percent had used cocaine, and 1.5 percent had used some type of hallucinogenic drug. 10 million people age 12 or older admitted to having driven while under the influence of some kind of illicit drug within the last year (*SAMSA, 2009*). If you examine the data, that corresponds to approximately 4 percent on the population of the United States, age 12 and older. A roadside study conducted in 2007 by the National Highway and Traffic Safety

Administration, or NHTSA, found that 16.3 percent of those drivers surveyed tested positive for at least one type of drug that had a potential to cause impairment (*Compton 2008*). Although not every person who tests positive for a drug is impaired, the likelihood of a person driving while impaired by drugs is staggering. The popularity of certain drugs has held constant for the last decade, with marijuana being the most commonly used illicit drug in America. The following chart was prepared by the Substance Abuse and Mental Health Administration, following their 2008 National Survey on Drug Use and Mental Health. The chart shows us a graphic representation of the drug chosen by “new” users who had begun to use illicit drugs within the calendar year. The number listed with each drug category represents the percentage of new users who chose to use that particular drug. Remember, one of these individuals may be the driver of the red sedan that is approaching you, and they may well be under the influence of their drug of choice.

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How Drug Use Affects Traffic Safety

The National Highway Traffic Safety Administration reported that in 2008, the number of Americans killed in motor vehicle crashes was 37,261. Of those 37,261, the number of persons killed in alcohol or drug-related motor vehicle crashes was 11,773 (*NHTSA, 2009*). I want you to consider that statistic for a few moments; 32 percent of lives lost in motor vehicle crashes were attributed to impaired drivers. In 2007, there

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were 276 drug/alcohol related traffic fatalities in Arkansas alone, representing 42 percent of the total traffic fatalities in the state for that year (*ASP, 2008*). Now the reason for strong, directed enforcement of impaired driving becomes clear: The goal is to save lives by detecting impaired drivers and removing them from our nation's highways. The DRE is trained in the detection of drivers impaired by drugs other than, or in addition to, alcohol and can be highly effective in accomplishing this goal.

Origin and Development of the Drug Evaluation and Classification Program

The Drug Evaluation and Classification Program had its beginnings in the early 1970's in Los Angeles, California. The following excerpt, taken

from the International Drug Evaluation and Classification Program section of the International Association of Chiefs of Police, explains:

“Back then, LAPD officers noticed that many of the individuals arrested for driving under the influence (DUI) had very low or zero alcohol concentrations. The officers reasonable suspected that the arrestees were under the influence of drugs, but lacked the knowledge and skills necessary to support their suspicions. In response, two LAPD sergeants collaborated with various medical doctors, research psychologists, and other medical professionals to develop a simple, standardized procedure for recognizing drug influence and impairment. Their efforts culminated in the development of a multi-step protocol and the first DRE program. The LAPD formally recognized the program in 1979.

The LAPD DRE program attracted NHTSA's attention in the early 1980's. The two agencies collaborated to develop a standardized DRE protocol, which led to the development of the DEC Program. During the ensuing years, NHTSA and various other agencies and research groups examined the DEC program. Their studies demonstrated that a properly trained DRE can successfully identify impairment and accurately determine the category of drugs causing such impairment.”(IACP, 2000-2009).

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In the years since its inception, the Drug Evaluation and Classification program has been subjected to several studies in order to gauge its accuracy and effectiveness in determining subject impairment, and identifying which category or categories of drugs was responsible for the impairment. A study conducted by the Canadian Centre of Substance Abuse found that “In general, officers trained in the DEC program are able to identify persons under the influence of drugs and to specify the drug class responsible with a degree of accuracy that not only exceeds chance, but in some cases reaches a very high level” (*Beirness, 2007*). Yet another study found that “overall accuracy in recognizing drug intoxication was 95 percent” when DRE's were given face sheets only, with no toxicology results available (*Smith, 2002*).

Understanding How Drugs Affect the Body

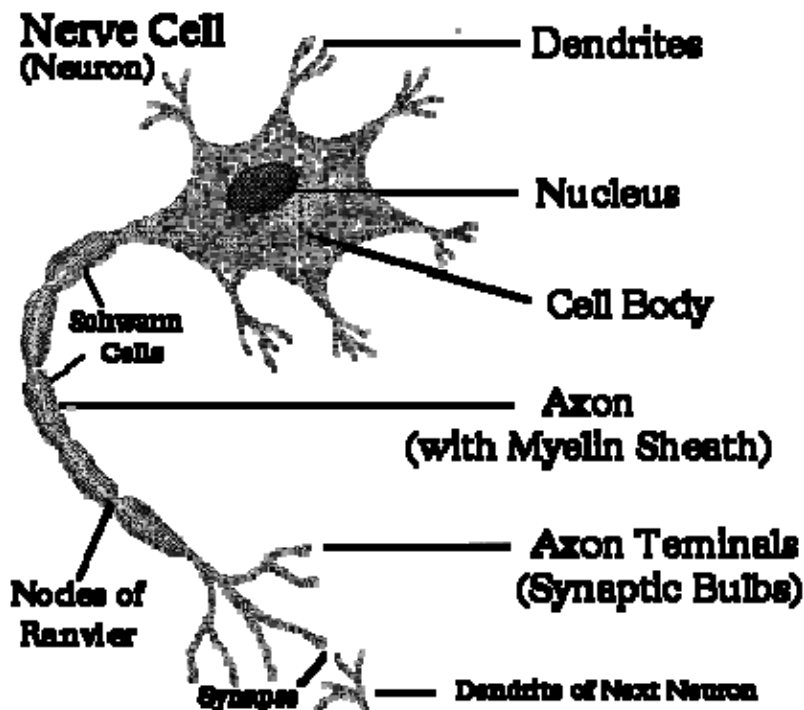
The most critical area in which DRE's have the advantage over the regular patrol officer is the knowledge of how particular drugs actually affect the user and lead to impairment. The DRE also has the privilege, as an expert, to render an opinion on degree of impairment and which drug or drugs are suspected of causing the impairment. It is important to remember that the DEC

program was not designed to be able to name a specific drug or drugs, but the category or categories likely to have caused the subject to be impaired.

Drugs affect the body by directly affecting the Central Nervous System, the body's method of sending and receiving messages. Drugs do this by either interfering with or

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mimicking the signals that are naturally transmitted through the central nervous system by the nerves themselves. The central nervous system is divided into two subsystems; the *voluntary system* and the involuntary, or *autonomic system*. The voluntary nerves are responsible for muscular movement and gross motor movements, while the autonomic system controls involuntary processes such as breathing, heartbeat, blood pressure, and the like. Nerves themselves are fairly complicated structures that “carry” messages back and forth between the brain and the body. The illustration below (1) is of a nerve cell.



The three structures that we are most concerned with are the dendrite, the axon, and the synapse, also called the synaptic gap. Let's assume that you wished to blink your left eye. The brain sends a signal to the muscles controlling your left eye, and your eye

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blinks. The signal is carried from the axon of one nerve, across the synaptic gap, to the dendrite of the next nerve, and the process repeats as many times as necessary. The synaptic gap is bridged by special chemical messengers known as *neurotransmitters*. Drugs exact their effects by altering or mimicking certain neurotransmitters within the body.

The autonomic nerves are further subdivided into the *sympathetic* and *parasympathetic nerves*. The sympathetic nerves are basically the body's afterburner and considered the most primal. The term “fight or flight” is typically given to the effects that the sympathetic nerves cause in the body. The pupils dilate, oxygen uptake is increased, and noradrenaline is released into the body, which can lead to augmented strength and focus. You can liken this to survival mode. The parasympathetic nerves cause quite the opposite effect. The muscles relax, digestion slows, and the body is in a state of relative sedation. Parasympathetic nerves basically give the “all clear” signal that the body can return to normal functions. Stimulants such as cocaine and methamphetamine mimic the signals carried by the sympathetic nerves and are referred to as *sympathomimetic* drugs. Depressants such as barbiturates and tranquilizers mimic the effects of the parasympathetic nerves and are called *parasympathomimetic* drugs.

These drugs cause impairment because they trick the body into one state or the other. Obviously, a person who is behind the wheel of a motor vehicle should be alert and attentive with their reflexes at least at normal capacity. But drugs cause the body to be either slowed down or sped up, which can have disastrous consequences when trying

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to perform the complicated task of operating a vehicle safely. Safely operating a vehicle requires vigilance, fine and gross motor skills, and hand-eye coordination. Drug intoxication can severely alter these abilities .

Categories of Drugs

As mentioned earlier, the DRE is not trained to offer an opinion on a particular drug which may be present, but rather the category of drug or drugs. Although use of a specific drug may be supported by evidence in the vehicle or suspect statements, the DRE need only concern himself with a category. For purposes of the DEC program, there are seven recognized categories of drugs:

► *Central Nervous System Depressants*: CNS Depressants include ethyl alcohol, anti-

psychotic tranquilizers, anti-anxiety tranquilizers, barbiturates, and non-barbiturates. These drugs slow down body systems resulting in loss of coordination and sedation. Examples include Valium and thorazine.

▶ *Central Nervous System Stimulants*: CNS Stimulants include cocaine, amphetamine, and methamphetamine. They speed up the body and can result in nervousness, agitation, increased body temperature, and increased heart rate. Prescription pharmaceuticals such as Adderall are also included.

▶ *Hallucinogens*: Hallucinogens include peyote, ecstasy, and LSD. Hallucinogens are so dangerous because they cause the user to have altered perceptions of reality. These drugs, obviously, cause hallucinations. Some, such as ecstasy, also have stimulant

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properties.

▶ *Dissociative Anesthetics*: These include PCP and its analogs, and ketamine. Users of these drugs basically feel no pain, since they block the nerve receptors that feel pain and transmit the signal to the brain. The body is almost effectively separated from the brain, hence the term dissociative. Users typically suffer from cyclic behavior, elevated body temperatures, and can be extremely dangerous.

▶ *Narcotic Analgesics*: These are the painkillers, including those derived from opium and also synthetics. Painkillers, believe it or not, dull the brain's perception of pain, but also slow respiration and heart rate and usually cause drowsiness. Methadone and heroin are examples.

▶ *Inhalants*: Inhalant does not actually refer to the substances that cause impairment, but to the manner in which the drug is used. Inhalants come in many forms, and can be found in food products, spray paint, and cleaners. The impairment is caused by the volatile substances found in the propellants, usually toluene or benzene. These substances can cause extreme euphoria, hallucinations, and sudden death from coronary or respiratory failure.

▶ *Cannabis*: Cannabis is the scientific name for marijuana, which is likely the most widely used drug in the world next to alcohol. The ingredient in cannabis which causes its effects is delta-9-tetrahydrocannabinol, or THC. Hashish and hash oil are also included in this category. Effects include body tremors, poor perception of time and distance, and sometimes pupil dilation.

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This may seem like a lot of unnecessary information, but I would be remiss to try and write about the role of the DRE without making you aware of the scope of the knowledge that the DRE has, and is expected to maintain. This

will become even more evident in the following discussion on how the DRE goes about investigating whether or not drug intoxication is present in a subject.

The Drug Recognition Evaluation Process

The drug recognition evaluation is where the true value of the DRE's role in enforcement is seen. Typically, the DRE is not the officer who initially arrests a subject for driving while impaired. The street officer, like the DRE, is trained to recognize signs of impairment through the administration of Standardized Field Sobriety Testing. If the arresting officer determines that the arrestee's level of impairment is not consistent with their breath-alcohol concentration, the DRE conducts an evaluation. The evaluation is a standardized, systematic approach used by all DRE's regardless of agency, state, or country. It is a 12-step process that requires good observation skills, considerable technical skills, and patience.

▶ *BAC or Breath-Alcohol Test* – the arresting officer will administer a breath test to determine if the subject's impairment is due to alcohol. If not, or if the level of impairment is above what an experienced officer would expect, the DRE is notified.

▶ *Interview of the Arresting Officer* – the DRE asks the arresting officer routine questions about their first contact with the subject, any statements the subject may have made, or if

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any evidence of drug use was found inside the vehicle. The answers to these questions can give the DRE a good indication of what the impairment may be attributed to.

▶ *Preliminary Examination, First Pulse* – preliminary examination can also give clues as the cause of impairment. The DRE observes the subject's coordination, speech, facial expressions, and asks questions concerning their medical history or any recent injuries. A preliminary examination of the eyes also takes place, including whether or not the suspect's pupils are of equal size, and if their eyes track equally. The first pulse is taken at this time. The DRE may decide that the suspect is suffering from a medical condition or possibly serious injury, and will see to it that the suspect receives medical attention.

▶ *Eye Examination* – the DRE will perform a horizontal gaze nystagmus (2) test on the suspect and look for the presence or absence of certain indicators. The DRE also looks for lack of convergence (inability to cross the eyes), and for vertical gaze nystagmus (3).

▶ *Psychophysical Tests* – in this part of the evaluation, the DRE performs some of the same tests used in Standardized Field Sobriety Testing, but does them a

little differently. For example, One-Leg Stand test performed at roadside only requires the subject to stand on whichever leg they choose. The DRE, in his evaluation, has the subject perform the test while standing on first the left leg, then the right. The Walk and Turn test is performed as usual. The DRE will also administer a finger to nose test and the Romberg balance test. All of these tests are designed to see if the subject can divide their attention properly and to see if their motor skills are impaired.

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► *Vital Signs Examination* – in this portion of the evaluation, the DRE will check the subject's blood pressure and body temperature, which the DRE has been trained to do. Vital signs are often a good indicator of which categories of drugs may be causing impairment, as drug use will normally either speed up or slow down heart rate, or increase or decrease blood pressure. Variances from the normal body temperature may also be observed. The subject's pulse is checked for the second time. It should be noted that the DRE relies on “normal” ranges of blood pressure, temperature, and heart rate that are established in accordance with what your medical doctor would consider normal.

► *Dark Room Examinations* – here the DRE examines the eyes under three different lighting conditions; room light, near total darkness, and direct light. Specifically, the DRE is concerned with the dilation of the pupils in these conditions, and the pupillary reaction to light. The pupils are very good indicators of drug impairment and also of what category(ies) may be responsible, since drugs may dilate or constrict the pupils, and may affect how quickly the pupil reacts to light. Again, the DRE looks for variances from ranges that would be considered normal by a specialist or medical practitioner. The subject's oral and nasal cavities are also examined in darkness, to see if any signs of ingestion of a drug may be present.

► *Muscle Tone Examination* – in my experience, subjects may think this portion of the evaluation is extremely funny or they become extremely uncomfortable. Muscle tone is examined by gently probing the muscles of the shoulders, upper back, and arms. It can be likened to an impromptu massage. The reason is that some drugs cause the muscles to

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become rigid, while others may cause them to become flaccid. Other drugs may not affect muscle tone, so this is yet another clue as to the category of drug in question.

► *Injection Sites Examination* – Most DRE's check for injection sites while examining muscle tone, since they are already focusing on the subjects arms and hands. The area inside the bend of the elbow, areas between fingers, and the upper arm are examined closely for injection sites. The key is to know that legal injections are made into muscle tissue, while illegal injections use a vein. After the injection site examination, the subject's pulse is checked for the third time.

► *Subject's Statements and Observations* – in every drug evaluation, the subject is given their Miranda warnings, so any statements made are admissible as evidence. I ask direct questions, such as when was the drug used, what type of drug was used, and so on. The subject's refusal to answer is not uncommon, but by this point a trained DRE will already have a good opinion of which drug category or categories have been used by the subject.

► *Opinions of the Evaluator* – as mentioned earlier, since they DRE is an expert, he or she can render their opinion as to whether or not the subject is impaired, and if so, which categories of drugs are responsible. The DRE's opinion is always rendered in the same format in a detailed narrative. For example, if I thought that a subject was impaired by cocaine, my opinion would read “In my opinion as a DRE, John Doe is under the influence of a Stimulant and is unable to operate a vehicle safely”.

► *Toxicological Examination* – DRE protocol dictates that every person evaluated submits to toxicological testing. This is typically done by collecting a urine sample,

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although blood analysis is also common. If the person refuses to provide a sample, they are charged with Refusal to Submit to Chemical Testing under Arkansas law. At the conclusion of the evaluation, the DRE prepares a detailed narrative listing all of the observable signs of impairment, and the clinical signs of impairment. This narrative is added to the agency's incident report. I say “the” agency, because it is not uncommon for DRE's to assist officers from other police departments or agencies. I have conducted drug evaluations for officers from at least three different agencies.

The usefulness of the DRE does not end after the evaluation has been completed. Since many people arrested for driving while intoxicated exercise their right to a trial, the DRE can offer expert testimony in court to support their belief that the defendant was in fact under the influence of drugs while driving. It is this ability to apply scientifically accepted evidence, based on the drug evaluation, that greatly increases the chance for conviction. The DRE's primary role in enforcement of impaired driving laws is based not on his ability to pull over every intoxicated driver in the county, but to assist other officers

and other agencies in successfully prosecuting those who drive while impaired. I am proud to be a Drug Recognition Expert because I help keep our streets and highways safe for the general public, and because I am able to help my brother and sister law enforcement officers in their enforcement efforts. I am confident that our combined efforts will help increase highway safety for our families and yours.

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Notes

1. Illustration obtained from

<http://www.naturalhealthschool.com/img/nervecell.gif>

2. Horizontal Gaze Nystagmus – also called HGN, it refers to an involuntary jerking

1. of the eyes as they move laterally from side to side, and when held at their maximum deviation from center.

3. Vertical Gaze Nystagmus – also called VGN, except that the movement of the eye

is observed while gazing upward.

