LOS ANGELES POLICE DEPARTMENT
Drug Influence - 11550 H&S
1850-22220

Instructional Goal: To have Officers certify in 11550 H&S investigations. Portions of the course material were provided by the U. S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA) and are certified by the International Association of Chiefs of Police (IACP)

Performance Objectives: Using Instructor-Led Presentations, Participant-Led Presentations Knowledge Examination, Reading Assignments students will:

- Acquire the knowledge and skills needed to distinguish individuals under the influence of: Alcohol, Drugs, Combinations of alcohol and other drugs, or who are suffering from an injury or illness
- Identify the broad categories of drugs introducing the observable signs of impairment manifested by an individual
- Learn what Drugs are common in Society
- Eye Examinations (a major component of the DEC Program procedures)
- Vital Signs Examinations (a major component of the DEC Program procedures)
- The Seven Categories of Drugs
- Drug reference sources
- By the conclusion of the training, students will understand how the application of this training can be used to make 11550 H&S investigations

References: Instructors, facilitators and training supervisors shall ensure that the most current references are utilized

I. 11550 H&S Introduction and Overview (0.5 Hour)

A. Welcoming Remarks and Objectives387114
   1. Welcome to the Advanced Under the Influence Course
   2. Instructor Introductions
      a. Write the names of the principal instructors and their relevant background on the dry-erase board
      b. Write the names of the Instructor aides and other relevant individuals on the dry-erase board

B. Student Introductions – A Network Resource

C. Administrative Details
   1. Discuss Course Schedule
   2. Participating Agencies
      a. Law Enforcement Agencies
      b. Criminal Justice Agency
      c. Institution providing law enforcement training
   3. Target Audience
      a. Police Officers
      b. Supervisors
   4. Facilities
      a. Point out restrooms
      b. Point out lunch rooms
      c. Identify local locations to eat
   5. Logistics (If applicable)
      a. Discuss Travel arrangements
      b. Discuss transportation
   6. Reading Assignments in Student Manual

7. Advise students to read ahead to prepare for each class

D. Program Objectives/Goal
   1. Ultimate Goal
      a. Decrease Incidence of Part 1 Crimes
      b. Understanding of Part 1 Crime
   2. What are Part 1 Crimes?
      a. Homicide
      b. Rape
      c. Burglary
      d. Aggravated Assault
      e. Burglary/Theft From Vehicle
      f. Personal/Other Theft
      g. Auto Theft
   3. Enforcement's role in general part 1 crime reduction
      a. 11550 H&S detection, clues and observations
      b. Two clues to detain, 3 clues to arrest
         1) Fast gait, dry lips, fidgety fingers, dilated/constricted pupils, unable to stand still, droopy eyelids
         2) Requirements for organizing and presenting evidence in 11550 H&S cases
         3) Compile all evidence and document in the arrest report for proper filing
   4. Booking Charges vs. Importance of Arrest
      a. Misdemeanor Arrest of Felony Suspects
         1) Question, ask class, "Why are narcotics users committing Part I crimes?"
         2) Answer, to support their drug addiction
      b. Remember Related Crimes
      c. Part I Crimes
         1) Homicide
         2) Rape
         3) Burglary
         4) Aggravated Assault
         5) Burglary/Theft From Vehicle
         6) Personal/Other Theft
         7) Auto Theft
   5. Enforcement of Under The Influence laws can enhance your job performance
      a. Consider repeated calls to same location
         1) Disturbances
         2) Domestic Violence
         3) Loud Music
         4) Prowler (paranoia)
         5) Citizen Complaint Locations/Activities
      b. Arresting dealers, prowlers, etc., for 11550 can solve crime problems and prevent police from returning to the same call multiple times

E. Concept of General Deterrence[1]
   1. General deterrence is largely based on public's fear of being arrested

[1] Standardized Field Sobriety Testing, Session 2, Segment B, 2013, National Highway Traffic

a. If enough users come to believe that there is a good chance that they will get caught, some of them (at least) will stop using at least some of the time
b. Unless there is a real risk of being arrested, there will not be much fear of arrest

2. Law enforcement must arrest enough users to convince the public that they will get caught, if they continue to be under the influence of the specified controlled substances

F. Drug Abuse, Addiction, And Dependence
1. Drug Abuse
a. Wide variety of abusers and of abused drugs
b. All levels of society involved
c. Particular areas of City will abuse particular drugs
d. Abuse can either be open or covert
e. Sales can either be open or covert
f. Sophistication of network can vary widely
2. Define Drug Abuse
a. The recurrent use of an illegal drug
b. The misuse of prescription or over-the-counter drugs with negative consequences
1) Problems at work, school, home or in interpersonal relationships
2) Problems with the law

G. Drug Addiction
1. Marked by craving, drive, compulsion to abuse drug(s)
2. Individual finds it difficult or impossible not to use/abuse drug(s)
3. Individuals desperately strive to acquire drug(s) despite the harm it causes
4. Continued use/abuse despite adverse consequences
5. May resort to crimes to acquire drug(s)
a. Prostitution
b. Property crimes
c. Sell drug(s)
d. May progress to crimes of violence
6. A loss of controlled use/abuse
7. Individuals' life becomes unmanageable; focus on drug use

H. Chemical Dependency
1. Define Dependency
a. After chronic administration for a period of time
b. Stopping use/abuse causes physical/physiological reaction – withdrawals
2. Must continue to administer the drug, or like drug, to avoid or suppress withdrawals and stay well

II. Law Review / Update (0.5 Hour)

A. Overview of the Elements of 11550 H&S
1. No Person shall be under the influence of
2. Any controlled substance (certain specified controlled substances)
3. Not restricted to public places
4. Impairment of individual not an element

a. The Standardized Field Sobriety Tests are not required to be conducted as part of the 11550 H & S investigation
b. General indicators, observed signs and/or symptoms are required for an arrest

5. Exception is when administered by or under the direction of a person licensed by the state to dispense, prescribe, or administer controlled substances

B. Application of 11550 H&S
1. Arrest individuals inside residences
2. No victim or witness needed

C. Law Review
1. Reasonable Suspicion and Probable Cause
a. Reasonable Suspicion[2]
1) For an investigative stop or detention to be valid, you must have "reasonable suspicion" that:
a) Criminal activity may be afoot and
b) The person you are about to detain is connected with that possible criminal (Wardlow (2000) 528 U.S. 119; Ornelas (1996) 517 U.S. 690, 695-696; Sokolow (1989) 490 U.S. 1, 7-8; Bennett (1998) 17 Cal.4th 373, 386.)
2) "Reasonable suspicion" both the quality and quantity of the information you need is considerable less than the "probable cause" you need to arrest or search (White (1990) 496 U.S. 325, 330; Bennett (1998) 17 Cal.4th 373, 387; Johnson (1991) 231 Cal.App.3d 1, 11.)
3) "Reasonable suspicion' is a less demanding standard than probable cause and requires a showing considerable less than preponderance of the evidence…." (Wardlow (2000) 528 U.S. 119, 123; Arvizu (2002) 534 U.S. 266, 274.)
4) The suspicion must be supported by specific articulable facts not just a hunch or instinct
5) These facts can be drawn from your observations, personal training and experience, or information from eyewitnesses, victims, or other officers
b. Contributing Factors to Reasonable Suspicion
1) Condition or appearance of a person
a) Under the influence
b) Resemblance of a wanted person
2) Actions
a) Furtive movements
b) Running from a crime scene
3) Driving behaviors
a) Wide turns, speeding
b) Weaving within the lane
4) Knowledge of the persons "history"
a) Criminal record of conduct
b) Prior arrest of person

[2] California Peace Officers Legal Sourcebook , Chapter 3, section B, Search and Seizure-Premises, Electronic Edition Revision #176, 2014

5) Demeanor
    a) Nervous, non-responsive, aggressive
6) Time of day
    a) Unusualness of what person is wearing
    b) Activities for the time
7) Location of the stop
    a) Near a crime scene
    b) Known criminal activity in the area
8) Officer training and experience
    a) Narcotics
    b) Gangs, vice

2. Probable cause
    a. Means reasonably reliable information to suspect there is a "fair probability" that a person has committed a crime, or
    b. That a search will reveal contraband or evidence

D. Drug Law Update
1. Proposition 47 – Reduction in criminal penalties[3]
    a. Proposition 47 reduced specified felony offenses to misdemeanors, created a new “shoplifting” crime, and allows resentencing of certain convicted felons as misdemeanants.
    b. Except as to “Prop 47 Ineligible” individuals, the following are now misdemeanors:
        1) PC § 459.5—the new misdemeanor crime of “shoplifting” is entering a commercial establishment, during business hours, with the intent to steal, where value does not exceed $950. “Shoplifting” as defined may not be charged as theft or burglary.
        2) PC § 459.5—the new misdemeanor crime of “shoplifting” is entering a commercial establishment, during business hours, with the intent to steal, where value does not exceed $950. “Shoplifting” as defined may not be charged as theft or burglary.
        3) PC § 473(b)—forgery of checks and related instruments of not more than $950.
        4) PC § 476a—NSF checks totaling not more than $950 (unless 3 or more specified priors).
        5) PC § 490.2—grand theft (any form) not more than $950.
        6) PC § 496(a)—receiving/concealing stolen property not more than $950.
        7) PC § 666—“wobbler” “petty theft with a prior” applies only to “Prop 47 Ineligible” defendants with specified priors, and certain elder abusers. For all other defendants, petty thefts are misdemeanors, regardless of the number of priors.
        8) H&S § 11350—simple possession of heroin, cocaine, listed controlled substances.
        9) H&S § 11357(a)—simple possession of concentrated cannabis.

[3] Devallis Rutledge, One Minute Brief, Los Angeles County District Attorney’s Office, November 14, 2014

10) H&S § 11377—simple possession of methamphetamine, ecstasy, GHB, listed substances.

2. 647 (f) PC Drug (Drugs or Alcohol) in Public
    a. Overview of elements
        1) Public place
        2) Any substantially impairing substance
        3) Unable to care of self, property or others
    b. Application issues
        1) Covers non 11550 H&S drugs
        2) Covers non-controlled substances
        3) Keeps problem situation from worsening
3. 4140 B&P (Repealed)
    a. Misdemeanor crime of unlawfully possessing or controlling a hypodermic needle or syringe
    b. Replace by 11364.1 H&S
4. 11350(e) H&S (New)
    a. The possession of the controlled substance is at the direction or with the express authorization of the prescription holder
    b. The sole intent of the possessor is to deliver the prescription to the prescription holder for its prescribed use or to discard the substance in a lawful manner
5. 11364 H&S (Repealed)
    a. It is unlawful to possess an opium pipe or any device, contrivance, instrument, or paraphernalia used for unlawfully injecting or smoking
        1) A controlled substance specified in the subdivision
        2) As few as one syringe
    b. This section shall be inoperative until January 1, 2015
6. 11364.1 H&S (New)
    a. It is unlawful to possess an opium pipe or any device, contrivance, instrument, or paraphernalia used for unlawfully injecting or smoking
        1) A controlled substance specified in the subdivision
        2) This section shall not apply to the possession solely for personal use of 30 or fewer hypodermic needles or syringes
        3) Acquired from a physician, pharmacist, needle/syringe exchange program or any other source authorized by law to provide sterile syringes without prescription
    b. This section shall be operative until January 1, 2015
7. 11357.5 H&S (New)
    a. Furnishing Synthetic Cannabinoid or Derivative
        1) A person, who sells, distributes, furnishes, or gives, or offers to sell, distribute, furnish, or give, or possess for sale, any synthetic cannabinoid compound or
        2) Any synthetic cannabinoid derivative, to any person, is guilty of a misdemeanor
    b. Misdemeanor: Six months in jail and/or a fine of $1,000
    c. Synthetic cannabinoid compound refers to five specified substances
        1) pentyl-3-(1-naphthoyl) indole (JWH-018)
        2) l-butyl-3-(1-naphthoyl) indole (JWH-073)
        3) 1-[2-(4-morpholinyl) ethyl]-3-(1-naphthoyl) indole (JWH-200)

    4) 5-(l, l-dimethylheptyl)-2-[(lR,3S)-3-hydroxycyclohexyl]-phenol (CP- 47,497)
    5) 5-(l, l-dimethyloctyl)-2-[(lR,3S)-3-hydroxycyclohexyl]-phenol (cannabicyclohexanol; CP-47, 497 C8 homologue)
8. 11376.5 HS (New)
    a. No crime (possession or under the influence) for 911 caller during overdose
    b. Provided the person does not obstruct medical or law enforcement personnel
    c. No crime (possession or under the influence) for user during overdose
    d. This section shall not affect laws prohibiting the selling, providing, giving or exchanging drugs, or the laws of forcible administration
9. 11377(d) HS (New)
    a. The possession of the controlled substance is at the direction or with the express authorization of the prescription holder
    b. The sole intent of the possessor is to deliver the prescription to the prescription holder for its prescribed use or to discard the substance in a lawful manner
10. 46.20 LAMC (New)
    a. Applies only within Los Angeles City Limits
    b. Possession of Bath Salts
    c. Under the influence of Bath Salts

11. 23152 VC – Driving Under the Influence (New)
    a. (e) Unlawful for a person who is under the influence of any drug to drive a vehicle
    b. (f) Unlawful for a person who is under the combined influence of any alcoholic beverage and drug to drive a vehicle
    c. (c) Unlawful for a person who is addicted to the use of any drug to drive a vehicle
    d. Does not apply if the person is participating in an approved narcotic treatment program identified by the court
12. 21200.5 VC Riding Bicycle Under the Influence
    a. Overview elements
        1) Upon a highway
        2) Any impairing substance
        3) Impairment of individual must be proven
    b. Application issues
        1) Many drug abusing individuals ride bicycles
        2) Many violations of the law commonly committed
            a) Riding wrong way in the street
            b) No light during darkness

13. 381 PC- Under the Influence of Toluene or Similar Substance/ 381b PC Under the Influence of Nitrous Oxide
    a. Overview elements
        1) Not restricted to public place
        2) Impairment need not be proven
        3) Also covers possession with intent

b. Application issues
    1) Many juveniles offenders
    2) Substance odor and visible paint or glue evidence easily identifies paint and glue sniffers

14. 381 (c) PC Sales of Nitrous Oxide to Minor
    a. Only Nitrous Oxide Covered
    b. Sales or Furnishing to a Minor

III. The Eye Examinations [4] (1.0 Hour)

A. Learning Objectives
    1. Administer Horizontal Gaze Nystagmus (HGN), Vertical Gaze Nystagmus (VGN), and Lack of Convergence test (LOC)
    2. Describe the administrative procedures for the eye examinations
    3. Describe the clues for each eye examination
    4. Estimate pupil size
    5. Prepare complete, clear and accurate records of the eye examinations
    6. Relate the expected results of the eye examination to the various drug categories

B. Purposes of the Eye Examinations, HGN, VGN and LOC
    1. The principal purpose of all of the eye examinations is to obtain articulable facts indicating the presence or absence of specific categories of drugs
        a. Certain drug categories usually cause the eyes to react in specific ways
        b. Other drug categories usually do not cause those reactions
    2. The tests of Horizontal Gaze Nystagmus (HGN) and Vertical Gaze Nystagmus (VGN) provide important indicators of the drug categories that may or may not be present
        a. If HGN is observed, it is likely that the subject may have taken a Central Nervous System (CNS) Depressant, Dissociative Anesthetics, an Inhalant, or a combination of those
        b. If VGN is observed, the implication may be that the subject took Dissociative Anesthetics or fairly large doses of depressants or inhalants (for that individual)
        c. By comparing the subject's Blood Alcohol Concentration (BAC) with the angle of onset of HGN, it may be possible to determine that alcohol is or is not the sole cause of the observed nystagmus
        d. The consistency of onset angle and BAC can be compared using the following formula
            1) BAC = 50 – A
            2) Keep in mind that this formula is only a statistical approximation. It is not an exact relationship for all subjects at all times
        e. The only purpose of comparing BAC and the angle of onset is to obtain a gross indication of the possible presence of another Depressant, Inhalants, or Dissociative Anesthetics

[4] Drug Recognition Expert Pre-School, 2013, Session 4

f. A DRE is expected to be able to estimate the angle of onset of nystagmus to the nearest 5 degree increment, over the range from 30 to 45 degrees
    1) If the subject's eyes begin to jerk before they have moved to the 30 degree mark, you will not attempt to estimate the angle precisely, but will record that they exhibit "immediate onset"
    2) From 30 degrees on out, you will record a numeric estimate of onset

3. The check for Lack of Convergence (LOC) can provide another clue as to the possible presence of Depressants, Inhalants, or Dissociative Anesthetics
    a. The LOC is also an indicator of the possible presence of Cannabis
    b. The checks of pupil size and reaction to light provide useful indicators of the possible presence of many drug categories
    c. Depressants, CNS Stimulants, Inhalants and Narcotic Analgesics will usually cause the pupils to react very slowly or not at all to light
    d. CNS Stimulants and Hallucinogens usually will cause the pupils to dilate
    e. Narcotic Analgesics will usually cause the pupils to constrict

C. Nystagmus
1. Definition of Nystagmus
    a. A rapid, involuntary, oscillatory motion of the eyeball
    b. New Latin, from Greek Nystagmus, drowsiness
2. For our purposes, it is defined as
    a. A distinct and sustained involuntary jerking of the eye at maximum deviation
    b. This is caused by the inability of the eyes to maintain visual fixation as they turn to the side

D. Types of Nystagmus
1. Rotational
    a. A slight movement of the eye around the visual axis
    b. This can be caused by spinning in a circle and the eyes trying to fixate on a fixed object
    c. This may occur after being involved in a traffic collision where the vehicle spun
2. Post-rotational
    a. Occurs after an imbalance is created
    b. This created by stimulation of the vestibular system by rapid shaking or rotation of the head
3. Caloric
    a. Occurs when you stimulate your acoustic nerve by delivering cold or warm water or air into your ear canal
    b. When cold water or air enters your ear and the inner ear changes temperature, it should cause fast, side-to-side eye movements
4. Optokinetic
    a. Nystagmus induced by looking at objects moving across the visual field
    b. When an individual follows a moving object with their eyes, which then moves out of the field of vision at which point their eye moves back to the position it was in when it first saw the object

5. Positional Alcohol Nystagmus (PAN)
    a. Occurs when a foreign fluid, such as alcohol, is in unequal concentrations in the blood and the fluid contained in semi-circular canals in the vestibular (inner ear) system
    b. The vestibular system controls a person's balance, coordination and orientation. The eyes depend on the vestibular system to stabilize them against any head movements. Disruptions in the vestibular system will have an adverse effect on the messages sent to the eyes when the head moves
    c. Positional nystagmus manifests itself as jerk nystagmus in which the direction of the saccadic movement depends on head movement
6. Alcohol Gaze Nystagmus (AGN)
    a. Gaze nystagmus is a type of jerk nystagmus where the eye gazing upon or following an object begins to lag and has to correct itself with a saccadic movement toward the direction in which the eye is moving or gazing. Gaze nystagmus is due to disruptions within the nervous system. Alcohol gaze nystagmus (AGN) is gaze nystagmus caused by alcohol. AGN occurs as the eye moves from looking straight ahead to the side (called Horizontal Gaze Nystagmus), or up (called Vertical Gaze Nystagmus or VGN)
        1) The part of the nervous system that fine-tunes and controls hand movements and body posture also controls eye movements. When intoxicated, a person's nervous system will display a breakdown in the smooth and accurate control of eye movements
        2) This breakdown in the smooth control of eye movement may result in the inability to hold the eyes steady, resulting in a number of observable changes of impaired oculomotor functioning
    b. Horizontal
        1) A type of jerk nystagmus with the saccadic movement toward the direction of the gaze
        2) In the case of Horizontal Gaze Nystagmus (HGN) it is from looking straight ahead then moving the eyes to the side
    c. Vertical
        1) A type of jerk nystagmus with saccadic movement towards the direction of the gaze
        2) In the case of Vertical Gaze Nystagmus (VGN) it is from looking straight ahead then moving the eyes up vertically
7. AGN v. PAN
    a. In comparing AGN and PAN it is evident that both are caused by alcohol, yet their origins and manifestations are very different. AGN is a neurological nystagmus while PAN is a vestibular system nystagmus
    b. Unlike AGN, PAN manifests itself only when the subject is lying down, with the head turned to the side and the eyes closed. At low intensities, PAN stops when the eyes are open
    c. Furthermore, PAN changes direction depending on the position of the head while the direction of AGN depends on the direction of the gaze.

Because of these differences, officers conducting the HGN test are not likely to confuse AGN and PAN indicators

E. Eye Exams - Procedures and Clues[5]
   1. Prior to the administration of the HGN, VGN or LOC test, the eyes are checked for equal pupil size, equal tracking and resting nystagmus
   2. The HGN test consists of three separate checks, administered independently to each eye
      a. The first check is for "lack of smooth pursuit"
         1) Position the stimulus approximately 12 to 15 inches in front of subject's nose
         2) Hold the tip of the stimulus slightly above the subject's eye level
         3) Instruct the subject to hold the head still and follow the stimulus with the eyes only
         4) Move the stimulus smoothly, all the way to the subject's left, then all the way to the right, then back again all the way to the left, then once again all the way back to the right
            a) While the eye is moving, examine it for evidence of a lack of smooth pursuit
            b) Move the stimulus at a speed of approximately 2 seconds for each side of the head (from nose to max deviation)
               (1) One entire pass is approximately 4 seconds
               (2) Make at least two complete passes
               (3) Students' practice the check of lack of smooth pursuit
      b. The second check is for "distinct and sustained nystagmus at maximum deviation"
         1) Again position the stimulus as before
         2) Move the stimulus all the way to the subject's left side and hold it there so that the subject's eye is turned as far to the side as possible
         3) Hold the eye at that position for a minimum of 4 seconds, to check carefully for any jerking that may be present
         4) Then, move the stimulus all the way to the subject's right side, and hold it there for a minimum of 4 seconds
         5) Repeat the check in the left eye and right eye again
            a) With this cue, the examiner looks for distinct and sustained jerking at maximum deviation
            b) A slight or barely visible tremor is not sufficient to consider this cue present
            c) A definite, strong/sustained jerking must be seen
            d) Students' initial practice of the check for distinct and sustained nystagmus at maximum deviation
      c. The final check (third check) is for the "angle of onset"
         1) Position the stimulus as before

[5] Drug Recognition Expert Preschool, 2013, Session 4

2) Slowly move the stimulus to the subject's left side, carefully watching the eye for the first sign of jerking
3) When you think that you see the eye jerk, stop moving the stimulus and hold it perfectly still
4) Verify that the eye is, in fact, jerking
5) Once you have established that you have located the point of on set, estimate the angle
6) Then, repeat this procedure on the subject's right eye
7) Students' initial practice of angle of onset estimation
8) The formula to estimate what the individuals BAC will be is to take 50 and subtract the Angel of Onset (BAC=50-Angel of Onset)

d. Drug categories which usually cause HGN include
   1) CNS Depressants
   2) Inhalants
   3) Dissociative Anesthetics

3. The test for VGN determines drug intoxication and/or high alcohol intoxication
   a. Position the stimulus horizontally, approximately 12 to 15 inches in front of the subject's nose
   b. Instruct the subject to hold the head still and follow a specific point on the stimulus with the eyes only
   c. Raise the stimulus until the subject's eyes are elevated as far as possible, and hold it there for a minimum of 4 seconds
   d. Watch closely for evidence of jerking
   e. Students' initial practice of the VGN test
   f. Drug categories which usually cause HGN include
      1) CNS Depressants
      2) Inhalants
      3) Dissociative Anesthetics
4. The test for LOC determines whether the subject is able to cross his or her eyes
   a. Position the stimulus approximately 12 to 15 inches in front of the subject’s nose in the same position we use for the HGN test
   b. Inform the subject that you are going to move the stimulus around in a circle in front of his/her face and to follow the stimulus with his/her eyes only
   c. Inform the subject that you will move the tip of the stimulus in toward the bridge of his or her nose
   d. Point out to the subject that he or she will have to keep their head steady and try to cross the eyes in order to keep the eyes focused on the stimulus as it moves in toward the nose
   e. Start to move the object slowly in a circle
   f. Verify the subject is tracking the stimulus
   g. Move the stimulus to within approximately two inches of the bridge of the nose. Carefully observe the subject's eyes to determine whether both eyes converge on the stimulus
   h. Verify the subject is tracking the stimulus
   i. If the eyes do not converge or remain converged on the stimulus for one second, then Lack of Convergence is present

   j. Drug categories which usually cause lack of convergence include
      1) CNS Depressants
      2) Inhalants
      3) Dissociative Anesthetics
      4) Cannabis
5. Estimation of Pupil Size
   a. Instruct the subject to look past you at a fixed object
   b. The fixed object should be 8-10' away
   c. Hold the pupilometer alongside the subjects eye, move it up and down until the circle or semi-circle closest in size to the pupil is located
   d. Record the size in millimeters (MM)
   e. This initial estimation of the pupil size can be done in the field
6. Accommodation Reflex
   a. This is an adjustment of the eyes for viewing at various distances. Meaning the pupils will automatically constrict as objects move closer and dilate as objects move further away
   b. This demonstrates the importance of instructing the subject to stay focused on a stationary object
7. Estimation of Pupil Size in Room Light
   a. Instruct the subject to look past you at a fixed object
      1) The fixed object should be 8-10' away
   b. Hold the pupilometer alongside the subjects eye, move it up and down until the circle or semi-circle closest in size to the pupil is located
   c. Record the size in millimeters (MM) under the "room light" heading
   d. The room light evaluation shall be done in a controlled environment
8. Estimation of Pupil Size in Dark Room
   a. Prior to conducting this evaluation think about officer safety
      1) Handcuff subject prior to doing the evaluation
      2) Give clear instructions prior to turning off the lights
      3) If subject is of the opposite sex, either have same sex officer or supervisor present
   b. Instruct the subject to look past you at a fixed object
   c. The fixed object should be 8-10" away
   d. Instruct/demonstrate how you will hold pen light
      1) Hold penlight with thumb covering the light (so that your thumb glows red)
      2) Hold penlight along the subject's lower eye orbit and move all around eye to find the best lighting to observe the pupil size
   e. Shut off all lights and wait 90 seconds for eyes to adjust to the dark light
   f. After 90 seconds has past, hold the penlight with your thumb glowing red under the subject's eye (left eye first). Move this around the eye till you can clearly see the pupil size
   g. Compare the subject's pupil size to the pupilometer and document the size in MM
   h. Do the same on the right eye and repeat as necessary
   i. Practice
9. Estimation of Pupil Size in Direct Light

a. This test comes directly after dark room and while all the lights are still out
    1) If you turn on lights prior to this test
    2) You must turn all lights off and wait for the eyes to adjust again (90 seconds)
b. Instruct the subject to look past you at a fixed object
    1) Direct the subject to the fixed position
    2) The fixed object should be 8-10” away
c. Instruct the subject to NOT look directly into the pen light and to try not to blink
    1) These actions may cause the pupils to constrict or dilate and give the appearance of pupillary unrest
    2) Observe the pupils
d. Inform the subject of the instructions prior to conducting the evaluation
    1) Hold penlight with thumb covering the light (so that your thumb glows red)
    2) Place the light in front of the subjects eye (left eye first)
    3) Remove your thumb so that the white light floods the eye orbit of the subject
    4) You do not want the white light to cover the entire head, just the eye orbit of the eye you are evaluating
    5) Inform the subject that you will be holding the penlight there allowing the light to stay in their eye for 15 seconds
e. Hold pupilometer along the subjects head for obtaining a measurement
f. Preform the evaluation
g. When holding the penlight in the subjects eye and holding it for 15 seconds, immediately evaluate the pupil for the following
    1) The pupil should react to that light (meaning constrict) within 1 second
    2) If the pupil takes longer than 1 second, it is classified as “slow”
    3) If there is little reaction to the light, it is classified as “Little”
    4) If there is no reaction, it is classified as “None”
    5) If it reacts to the light within 1 second, it is classified as “Normal”
h. Once the pupil is fully constricted, estimate what the pupil size is under direct lighting (using the pupilometer)
    1) Check both eyes
    2) Repeat as needed, allowing sufficient time for the subjects eyes to rest in-between
i. During the 15 seconds evaluation, check for two pupil responses
    1) Pupillary Unrest
        a) The continuous, irregular change in the size of the pupils that may be observed under room or direct light conditions
        b) The unique indicators of pupillary unrest are the unevenness and fluctuations in the rate and size of the pupils under direct light conditions and its disappearance in darkness

(1) Formerly called “Hippus”
(2) Hippus is now used to identify irregular change in the size of pupils during total darkness

2) Rebound Dilation
   a) A period of pupillary constriction followed by a period of pupillary dilation where the pupil steadily increases in size and does not return to its original constricted size
   b) Point out that the DRE will record this, if observed, under the “Direct Light” heading. The DRE will document the smallest constricted size and the largest dilated size (IE 2.0 – 3.5)
   c) Give the following example
      (1) The pupil is estimated at 8.5mm in near total darkness. Once the penlight is shined into the pupil, it constricts to 4.0mm and then steadily dilates to 6.0 mm and remains that diameter while the direct light is shined into the eye
      (2) Rebound dilation is most common with Cannabis

j. Practice

10. Pupil Ranges and Technical Terms
    a. For most people, even under bright light the pupils will not constrict much below a diameter of 2.0 millimeters (mm) or dilate to a diameter of not more than 8.5 mm in near total dark conditions
    b. Pupil Size Technical Terms
       1) Miosis – Abnormally constricted pupils (small)
       2) Mydriasis – Abnormally dilated pupils (large)
    c. Pupil Ranges
       1) Room light
          a) The range is from 2.5 to 5.0 mm
          b) The average is 4.0mm
       2) Near total darkness
          a) The range is from 5. 0 to 8.5 mm
          b) The average is 6.5mm
       3) Direct light
          a) The range is from 2.0 to 4.5 mm
          b) The average is 3.0
11. Documentation procedures
    a. Ensure all students know where to document the eye exam results
    b. Show sample eye examination and go over each box to fill out
12. Students’ Initial Practice of Pupil Size Estimation
    a. Select a student from the class and demonstrate how the pupil size is estimated
    b. Upon completion, excuse the student-volunteer and thank him or her for participating
    c. Instruct students to work in pairs, taking turns estimating each other’s pupils
    d. Monitor, coach and critique the students’ practice
    e. Allow this practice to continue for only about 2 minutes

f. Tell the students to record on paper the pupil sizes of their partners
g. Ask the students how many found partners with different sized pupils (i.e., one pupil larger or smaller than the right)
h. Point out that it is not too uncommon to find people whose pupils differ by as much as one-half millimeter, but the larger differences are more unusual Tabulate the pupil size estimates made by the students on the flip-chart using the following sizes
    1) 8.5 or larger_____
    2) 8.0_____
    3) 7.5_____
    4) 7.0_____
    5) 6.5_____
    6) 6.0_____
    7) 5.5_____
    8) 5.0_____
    9) 4.5_____
    10) 4.0_____
    11) 3.5_____
    12) 3.0_____
    13) 2.5 or smaller_____

13. Point out that the "normal" range of pupil size in room light is 2.5 to 5.0 mm
14. Basic Concepts Relative to Interpreting Pupil Sizes
    a. It is important to understand a few basic concepts relative to interpreting pupil sizes
    b. Mean values and average ranges: scientifically validated studies were conducted to determine normative values for pupil size in non-impaired persons
        1) Point out that when all of the study subjects were tested, the majority (approximately 88%) of the "normal" non-impaired people fell within the "average ranges"
        2) As a DRE, you will be making your decision of impairment based on clinical, psychophysical, and behavioral indicators. This includes using pupil sizes as one of the factors in determining that impairment
        3) With many people, even under very bright light, the pupils won't constrict much below a diameter of 2.0 mm, and even under near total dark conditions, the pupils usually only dilate to a diameter of not more than 8.5 mm
    c. Update Values
        1) A study[6] was conducted to determine if there were significant differences between the average pupil size in different conditions The purposes of this study were:
            a) to determine normative values and ranges for pupillary responses using the specific DEC program protocols for pupil testing in nonimpaired persons, and

[6]Richman, McAndrew, Decker & Mullaney, "An Evaluation of Pupil Size Standards Used By Police Officers for Detecting Drug Impairment", JAOA, March 2004,

b) to appraise the suitability of the 3.0- mm to 6.5-mm pupil range as a potential sign of impairment under three conditions

2) Consequently, the use of three distinct pupil sizes range for each of the different testing conditions may be more useful to determine impairment versus non-impairment

d. Point out that although there are several studies that indicate these pupil sizes are "for the majority of normal, non-impaired people," there is one study in particular that specifies the average size and ranges
   1) "An Evaluation of Pupil Size Standards Used By Police Officers for Detecting Drug Impairment" [7]
   2) Pupil Sizes were estimated in three Lighting Conditions used during a Drug Influence Evaluation
      a) Room Light
      b) Near Total Darkness
      c) Direct Light
e. Display Slide IV-15:
   1) Room Light
   2) Room Light is approximately 4.0 mm with an average range of normal sizes ranging from 2.5 to 5.0 mm
f. Display Slide IV-16:
   1) Near Total Darkness
   2) Near Total Darkness is approximately 6.5 mm with an average range of normal pupil sizes ranging from 5.0 to 8.5 mm
g. Display Slide IV-17:
   1) Direct Light
   2) Direct Light is approximately 3.0 mm with an average range of normal pupil sizes ranging from 2.0 to 4.5 mm
   3) Many drugs, however, will affect the dilation or constriction of the pupils and many cause the pupil size to go outside these normal ranges
   4) Point out that specific drug categories and their relationship to pupil sizes will be covered later
   5) The check of the pupil's reaction to light takes place at the same time as the test of pupil size under direct light
   6) Observe the subject's pupil size as the penlight is aimed at the side of the subject's face
   7) Demonstrate this using a participant-volunteer
   8) As you bring the beam of light directly into the subject's eye, not how the pupil reacts
   9) Demonstrate this
      a) Under ordinary conditions, the pupil should react very quickly, and constrict noticeably when the light beam strikes the eye
      b) Point out that pupillary reaction to light should occur within one second

[7] Richman, McAndrew, Decker & Mullaney, , "An Evaluation of Pupil Size Standards Used By Police Officers for Detecting Drug Impairment", JAOA, March 2004

c) Under the influence of certain categories of drugs, the pupil's reaction may be very sluggish, or there may be no constriction at all

10) Excuse the student-volunteer and thank him or her for participating

15. Student Practice
    a. Students' initial practice in measuring the pupil's reaction to light
        1) Instruct the students to work in pairs, taking turns shining the light into each other's eye and observing the pupil's reaction
        2) Remind students to position the penlight so that the beam exactly "fits" the eye socket when the beam is brought directly into the eye
        3) Monitor, coach and critique the students' practice
        4) Allow the practice to continue for only about 2 minutes
    b. Solicit students' comments and questions concerning the eye examinations

F. Demonstrations
    1. Demonstration of Pupil Size Estimation and Test for Reaction to Light
    2. Select two other students to come before the class and instruct one student to estimate the other's pupils under room light
        a. Pupil size estimation under room light
        b. Coach and critique the student-administrator's performance.
        c. Darkroom estimations of pupil size
        d. Instruct the second student to demonstrate how to perform the dark room estimations of pupil size
        e. Coach and critique the student-administrator's performance
        f. Point out that assessment of the pupil's reaction to light takes place in conjunction with the direct-light estimation
    3. Excuse the two students and thank them for participating

G. Normal Pupil Size Ranges Recap
    1. Normal Pupil Size Ranges Recap
    2. Review, the normal ranges for non-impaired people
        a. Room Light: 4.0 mm with an average range of 2.5 – 5.0 mm
        b. Near Total Darkness: 6.5 mm with an average range of 5.0 – 8.5 mm
        c. Direct Light: 3.0 mm with an average range of 2.0 – 4.5 mm
    3. Solicit students' comments and questions concerning the demonstrations of the eye examinations and the pupil size ranges

H. Relationship of Drug Categories to the Eye Examinations
    1. CNS Stimulants and Hallucinogens usually cause the pupils to become larger or "dilated"
        a. Write "DILATED" along the PUPIL SIZE line under the columns for CNS Stimulants and Hallucinogens
        b. Cannabis may cause the pupils to dilate
        c. Write "DILATED" under the CANNABIS column; however, explain they may also be "NORMAL" as per Exception #6
        d. Narcotic Analgesics usually cause the pupils to become smaller or "constricted"
        e. Write "CONSTRICTED" under the NARCOTICS column

   f. Dissociative Anesthetics and most Inhalants tend to leave pupil size in the normal ranges
   g. Write “NORMAL” under the columns for Dissociative Anesthetics and Inhalants
   h. Exception #4 states that INHALANTS MAY CAUSE PUPIL DILATION
2. CNS Depressants also usually leave the pupils near normal
   a. Write “NORMAL” under the DEPRESSANT column
   b. However, there are some exceptions, i.e., depressant drugs that usually dilate the pupils
   c. Put a (1) next to the “NORMAL” in the DEPRESSANT column and explain Exception #1: Soma, Quaaludes and some anti-depressants usually dilate pupils
3. Solicit students’ questions and comments
4. Generally, the pupillary reaction to light is either slowed by the effect of the drug or the pupil reacts normally
5. The most significant exception is the effect caused by Narcotic Analgesics
6. Though there is always some reaction to light, in live subjects, the constricted pupil caused by narcotics makes it difficult to perceive a change in the pupil size
7. CNS Depressants and CNS Stimulants usually cause a slowed reaction to light
   a. Write “SLOW” under the columns for CNS Stimulants and Depressants
   b. With Hallucinogens, Dissociative Anesthetics and Cannabis the pupillary reaction to light is usually normal
   c. Write “NORMAL” under the columns for Hallucinogens, Dissociative Anesthetics and Cannabis
   d. Exception #3 states certain psychedelic amphetamines cause slowing of the pupils
   e. Due to the constricted nature of the pupils when under the influence of Narcotic Analgesics, it is difficult to perceive a reaction to light. As a result, we list reaction to light for Narcotic Analgesics as “little or none visible”
   f. Write “LITTLE OR NONE VISIBLE” under Narcotic Analgesics
8. Inhalants will usually slow pupillary reaction
   a. Write “SLOW” in the column for inhalants and explain that this is only a general rule
   b. Display Slide IV-19: Questions
   c. Solicit students’ questions and comments
9. Review the following questions with the students
   a. Name the three clues of impairment associated with Horizontal Gaze Nystagmus
      1) Lack of smooth pursuit
      2) Distinct and sustained nystagmus at maximum deviation
      3) Onset of nystagmus prior to 45 degrees
   b. Complete this formula
      1) BAC=50-<u>????</u>
      2) Angle of Onset
   c. Which categories of drugs will not cause Vertical Gaze Nystagmus?

1) CNS Stimulants, Hallucinogens, Narcotic Analgesics, Cannabis
2) Name the three lighting conditions under which a DRE makes pupil size estimations
    a) Room light
    b) Near total darkness
    c) Direct Light

d. What is the normal range of pupil size for room light (2.5 – 5.0 mm)
e. Which categories of drugs will usually slow down the reaction of the pupils to light?
    1) CNS Depressants
    2) CNS Stimulants, Inhalants

IV. Drug Categories (3.0 Hrs)

A. CNS Depressants [8]

1. Overview of the Category
    a. Central Nervous System Depressants slow down the operations of the brain
    b. Depressants first affect those areas of the brain that control a person's conscious, voluntary actions
    c. As the dose is increased, depressants begin to affect the parts of the brain that control the body's automatic processes
        1) heartbeat
        2) respiration
        3) et cetera
    d. The CNS depressant category includes the single most commonly abused drug in America
        1) Alcohol has been used and abused since prehistoric times
        2) Alcohol and its effects are familiar to most people
        3) Alcohol is a model for the CNS depressant category with some exceptions, all depressants produce effects that are quite similar to the effects of alcohol
    e. Non-Alcohol CNS depressants have been around for more than 150 years
        1) The first non-alcohol CNS depressant was Chloral Hydrate
        2) It was developed in 1832
        3) It is commonly referred to as "Mickey Finn" or "Knockout drops" because of its fast acting effects
        4) Chloral Hydrate is still produced and prescribed today
    f. The six major subcategories of CNS depressants other than alcohol
        1) Barbiturates
        2) Non-Barbiturates
        3) Anti-Anxiety Tranquilizers
        4) Anti-Depressants
        5) Anti-Psychotic Tranquilizers
        6) Combinations of the other five subcategories
    g. Methods of ingestion of CNS Depressants

[8] Drug Recognition Expert 7-Day School, Session 9, 2013,

1) Orally
2) Intravenous injection for Barbiturates
3) Some abusers experience a "flash" or "rush" from intravenous injection of Barbiturates, that they do not experience from oral ingestion
4) The injection paraphernalia used for Barbiturates are very similar to those used for Heroin
5) However, the Barbiturate abuser will use a larger hypodermic needle, because the barbiturate solution is thicker than the heroin solution
6) The injection sites on the skin of a Barbiturate abuser appear quite different from those of a Heroin addict
7) A large swelling, about the size of a quarter or fifty cent piece frequently will appear at the Barbiturate injection site
8) Necrosis may occur: i.e., a decaying of the body's tissue at the injection site
9) The dead tissue may begin to separate from the living tissue, producing ulcerations
10) The Barbiturate user who injects the drug usually will not display the same type of track marks as the Heroin addict who uses repeated injections along the same vein
11) Barbiturate abusers often will inject in parts of the body other than the forearm, and will commonly exhibit the characteristic swellings at random locations on the extremities

B. Possible Effects
   1. CNS Depressants produce impairments of the human mind and body that essentially mirror alcohol impairment
      a. reduced social inhibitions
      b. divided attention impairment
      c. slowed reflexes
      d. impaired judgment and concentration
      e. impaired vision
      f. lack of coordination
      g. slurred, mumbled, or incoherent speech
      h. produce a variety of emotional effects, such as euphoria, depression, suicidal tendencies, laughing or crying without provocation
   2. Generally speaking, a person under the influence of CNS Depressants will look and act drunk

C. Onset and Duration of Effects
   1. Depressant drugs can be grouped loosely into four classes, based on how quickly they take effect and how long their effects last
      a. Ultrashort
      b. Short
      c. Intermediate
      d. Long
   2. Alcohol as a specific example
   3. Other examples of short to intermediate Depressants
      a. Barbiturates

b. Non-barbiturates
c. Anti-anxiety tranquilizers

D. Overdose Signs and Symptoms
1. Overdoses of CNS Depressants produce symptoms essentially identical to those of alcohol overdoses
a. Subject will become extremely drowsy and may pass out
b. The heartbeat (pulse) will slow
c. Respiration will become shallow
2. One major danger with CNS Depressant overdoses is death from respiratory failure
a. A sufficiently high dose of CNS Depressant will suppress the portions of the brain that control respiration
b. This situation only rarely occurs from alcohol intoxication: usually, a drinker will pass out before he or she consumes enough alcohol to suppress respiration completely
c. With other Depressants, it is relatively easy to take a fatal overdose
3. Another major danger with CNS Depressants occurs when they are combined with alcohol
a. There is at least an additive effect when alcohol and another Depressant are taken together
b. With many CNS Depressants, there may be a more than additive effect
c. Coroners have reported a number of cases in which neither the Alcohol level nor the Depressant level independently, would have been close to a fatal dose
d. It is not possible to predict how great an effect will occur when Alcohol is mixed with another Depressant. However, it is clear that the combination is always risky

E. Expected Results of the Evaluation
1. Observable evidence of impairment
a. HGN Present
b. VGN may be present
c. Performance on Romberg, Walk and Turn, One Leg Stand, and Finger to Nose tests will be similar to that of suspects impaired by alcohol
d. blood pressure will be down
e. pulse will be down
f. body temperature generally will be normal
g. pupil size generally will be normal
h. pupillary reaction to light will be slowed
2. General indicators
a. disoriented
b. droopy eyes (ptosis)
c. drowsiness
d. drunk-like behavior
e. flaccid muscle tone
f. gait ataxia
g. slow, sluggish reactions

h. thick, slurred speech
i. uncoordinated

3. Demonstrations
   a. Video
   b. Drug Evaluation and Classification Exemplar Demonstrations
4. Review Topics for Study with Students
   a. Name the six major subcategories of CNS Depressants
      1) Barbiturates, Non-Barbiturates, Anti-Anxiety Tranquilizers, Anti-Depressants
      2) Anti-Psychotic Tranquilizers, Combinations
   b. Name the four groups of Depressants based on onset and duration time factors
      1) Ultra short, Short
      2) Intermediate, Long
   c. To which subcategory of Depressants does Thorazine belong?
   d. To which subcategory does Chloral Hydrate belong?
   e. To which subcategory does Xanax belong?
      1) Anti-Psychotic Tranquilizers
      2) Non-Barbiturates, Anti-Anxiety Tranquilizers
   f. Name a CNS Depressant that usually causes the pupils to dilate
      1) Soma
      2) Methaqualone
   g. What is the generic name for the drug that has the trade name "Prozac"?
      1) Fluoxetine
      2) Questions

F. Inhalants[9]
   1. Overview of the Drug Category
      a. Inhalants are breathable chemicals that produce mind altering results
      b. Inhalants vary widely in terms of the chemicals involved and the specific effects produced
      c. Depending on the nature of the particular Inhalant, the effects produced may be similar to those of CNS Stimulants, Depressants or Hallucinogens
      d. There are three major subcategories of Inhalants
         1) Volatile Solvents
         2) Aerosols
         3) Anesthetic gases
      e. The Volatile Solvents include a large number of readily avail-able substances, none of which are intended by their manufacturers to be used as drugs
      f. One widely abused Volatile Solvent is plastic cement, or "model airplane glue"
      g. Plastic cement includes the following volatile chemicals
         1) Toluene
         2) Acetone

[9] Drug Recognition Expert 7-Day School, Session 19, 2013

3) Naphtha
4) Aliphatic Acetates (straight-chained hydrocarbons)
5) Hexane
6) Cyclohexane
7) Benzene

h. Other frequently abused Volatile Solvents
1) Gasoline
2) Kerosene
3) lighter fluid
4) household cements and glues
5) fingernail polish remover
6) paint thinners
7) engine degreasers
8) typewriter correction fluid (liquid paper)
9) paints (particularly oil or solvent based)
10) dry cleaning fluids
11) spray paints

i. Aerosols are chemicals discharged from a pressurized container by the propellant force of a compressed gas
j. Commonly abused Aerosols include hair sprays, deodorants, insecticides, glass chillers and vegetable frying pan lubricants
k. All of these abused Aerosols contain various hydrocarbon gases that produce drug effects
l. The overwhelming majority of abusers of Volatile Solvents and Aerosols are pre-teens and teenagers
m. Male Inhalant abusers outnumber females
n. The third subcategory, Anesthetic gases
1) Anesthetic gases are drugs that abolish pain
2) They are used medically during surgical procedures such as childbirth, dental surgery
3) Anesthetic gases that sometimes are abused as Inhalants
a) Ether
b) Nitrous Oxide

o. Other common Inhalants in this subcategory that do not relieve pain
1) Amyl Nitrite
2) Butyl Nitrite
3) Isobutyl nitrite and Butyl nitrite have essentially identical effects to Amyl nitrite

p. Inhalants obviously are ingested by breathing, or inhaling, their fumes
1) Some are ingested directly from the source
2) Some are soaked into rags, handkerchiefs or tissue papers for repeated inhalation
3) Some are placed in paper or plastic bags which the user places over the face or head
4) These may be placed in twist lock beverage containers
5) Some are used by breathing the fumes or vapors from balloons
6) Some common street names
a) huffing

b) hacking
c) ballooning
d) gliding

2. Possible Effects
    a. The effects of Inhalants vary somewhat from one substance to another
    b. Common effects of Inhalants
        1) Altered shapes and colors
        2) Antagonistic behavior
        3) Bizarre thoughts
        4) Distorted perceptions of time and distance
        5) Dizziness and numbness
        6) Drowsiness and weakness
        7) Euphoria and grandiosity
        8) Floating sensations
        9) Inebriation similar to alcohol intoxication
        10) Intense headaches
        11) Light headedness
        12) Nausea and excessive salivation
        13) Possible hallucinations
    c. Persons under the influence of Inhalants generally will appear confused and disoriented, and their speech will be slurred
3. On-Set and Duration of Effects
    a. Inhalants' effects are felt virtually immediately
    b. Duration very much depends on the particular substance
        1) The effects of nitrous oxide last 5 minutes or less
        2) Amyl Nitrite, Isobutyl Nitrite, and Butyl Nitrite produce effects that last a few seconds up to 20 minutes
        3) Glue, paint, gasoline, and other commonly abused Inhalants produce effects that last several or more hours. (Generally 6-8 hours for most volatile solvents depending on exposure)
4. Overdose Signs and Symptoms
    a. There is a risk of death due to overdose of Inhalants
        1) Some Inhalants will depress the Central Nervous System to the point where respiration ceases
        2) Others can produce instant death from heart failure
        3) Overdoses of Inhalants frequently induce severe nausea and vomiting: If the user vomits while he or she is unconscious, death can result from aspiration of the vomitus
    b. Death can also result indirectly, if a person places a plastic bag over the head, loses consciousness and suffocates
    c. Long term abuse of Inhalants can cause permanent damage to the Central Nervous System, and greatly reduced mental and physical abilities
    d. Evidence also exists of liver, kidney, bone and bone marrow damage resulting from long term Inhalant abuse
    e. There are no well-defined withdrawal symptoms for these substances. Physical dependence has not been documented, although habituation is common

5. Expected Results of the Evaluation
    a. Observable evidence of impairment
        1) Horizontal Gaze Nystagmus will generally be present
        2) Vertical Gaze Nystagmus may be present
        3) Lack of Convergence will be present
        4) Performance on the Romberg, Walk and Turn, One Leg Stand, and Finger to Nose tests will be impaired
        5) Pulse will be up
        6) Blood pressure will be up or down
        7) Effect on body temperature may be up, down or normal
        8) Pupil size will be normal but may be dilated
        9) Reaction to light will be slowed
    b. General indicators
        1) Bloodshot, watery eyes
        2) Confusion
        3) Disoriented
        4) Flushed face
        5) Intense headaches
        6) Lack of muscle control
        7) Non-communicative
        8) Normal or Flaccid muscle tone
        9) Odor of the inhaled substance
        10) Possible nausea
        11) Residue of the substance around the face and nose and on the hands or clothing
        12) Slow, thick, slurred speech

G. Dissociative Anesthetics[10]
1. Overview of the Drug category
    a. Dissociative Anesthetics include drugs that inhibit pain by cutting off or disassociating the brain's perception of pain. The drugs within this category normally will induce a state of sedation, immobility, amnesia and marked analgesia
    b. Phencyclidine or PCP, is a drug that, along with its analogs, are examples of this distinct drug category
        1) PCP shares some characteristics with each of the three categories of drugs previously covered in this training
            a) It produces some effects that are similar to the effects of CNS Depressants
            b) It produces some effects that are similar to those of CNS Stimulants
            c) In some respects it acts like a Hallucinogen
        2) Phencyclidine was first developed in the late 1950s
            a) The developers were searching for a drug that would serve as an efficient intravenous anesthetic
            b) PCP proved to be a very effective anesthetic
            c) It was patented and marketed in 1963 under the trade name Sernyl

[10] Drug Recognition Expert 7-Day School, Session 16, 2013

d) It was used in the treatment of mental and psychological disorders, including schizophrenia and alcoholism
e) Many adverse side effects were experienced by persons who had been treated with PCP
f) In 1967, use of Phencyclidine as an anesthetic for humans was discontinued
g) In 1968, Parke-Davis patented PCP under the trade name Sernylan, which was restricted to use as a veterinary anesthetic
h) However, Sernylan was often illicitly diverted to "street" use, so most legitimate manufacturing of PCP was stopped in 1978

3) PCP is relatively easy to manufacture
   a) The chemicals required to produce it are readily available commercially
   b) The formula for producing PCP has been widely publicized.
      (1) The hardware needed to combine the chemicals is very basic
      (2) Street Names
         (a) angel dust
         (b) crystal
         (c) sherms
         (d) elephant
         (e) tranquilizer
         (f) water
4) Methods of ingestion
   a) Many users ingest PCP by smoking
      (1) PCP can be applied in either powder or liquid form to a variety of vegetable or leafy substances, which can then be smoked in a pipe or home-made cigarette
      (2) Popular substances include mint leaves, parsley, oregano, tobacco or Marijuana
      (3) Commercially prepared cigarettes can also be dipped in liquid PCP, allowed to dry and then smoked
      (4) Some users prefer to dip a string in liquid PCP, and then insert the string into a tobacco cigarette. PCP can also be insufflated or "snorted"
   b) It can also be taken orally, in capsule or tablet form
   c) Some users inject liquid PCP, either directly into a vein, under the skin or into a muscle
   d) Some users have administered PCP to themselves by dropping liquid PCP onto their eyes, using an eyedropper

e) Transdermal absorption of PCP has also been reported (i.e. when applied to the skin, especially as a liquid, PCP can penetrate directly into the body and bloodstream)

c. Ketamine
   1) Ketamine is used as a rapid surgical anesthetic, both for animals and humans, especially children
   2) Ketamine is also used for burn victims
   3) Street names
      a) K
      b) Special K
      c) Vitamin K
      d) Jet
      e) Super acid
   4) Methods of ingestion
      a) Smoking
         (1) Ketamine can be applied in either powder or liquid form to a variety of vegetable or leafy substances, which can then be smoked in a pipe or home-made cigarette
         (2) Popular substances include mint leaves, parsley, oregano, tobacco or marijuana
         (3) Commercially prepared cigarettes can also be dipped in liquid Ketamine, allowed to dry and then smoked
      b) Some users prefer to dip a string in liquid Ketamine, and then insert the string into a tobacco cigarette

d. Dextromethorphan
   1) DXM is a synthetically produced substance that is chemically related to Codeine, although it is not an opiate
   2) When ingested in recommended dosage levels, DXM generally is a safe and highly effective cough suppressant; however, when ingested in large amounts, it produces negative physiological effects
   3) Street names for Dextromethorphan
      a) DXM
      b) robo tripping
      c) Skittles
      d) Triple C
      e) Robo dosing
      f) DM
      g) robo
   4) DXM abusers normally ingest the drug orally, although some snort the pure powdered form of the drug
   5) Some abusers ingest 250 to 1,500 milligrams in a single dosage

2. Possible Effects

a. Continuing research demonstrated that PCP consistently produced adverse side effects
    1) delirium
    2) agitation, anxiety
    3) rigid muscle tone
    4) elevated blood pressure
    5) convulsions
    6) difficulty in speech
    7) hallucinations
    8) violent reactions
b. Lingering and long term effects were also noted
    1) Dizziness for several hours after their attention and consciousness appeared to be cleared of PCP's effects
    2) Some patients reported memory disorders and other psychological disorders resembling schizophrenia for several months and even years afterwards
c. PCP is classified as a Dissociative Anesthetic, because it cuts off the brain's perceptions of the senses
    1) PCP users often feel that their heads are physically separated from their bodies
    2) They sometimes report feeling they are dead, and that their heads are floating away
d. Cases of terribly bizarre, self-destructive behavior have been reported with persons under the influence of PCP
    1) One young man methodically pulled his own teeth out, using a pair of pliers
    2) Another individual suffered hallucinations of unbelievably grotesque monsters, and gouged out his own eyes to avoid seeing the monsters
    3) Another young man drank rat poison, attempting to kill rats that he imagined were inhabiting his body
    4) A nude woman plunged a butcher knife into her own eye, chest, groin and abdomen. She then threatened a police officer with the knife and was shot to death
e. Abusers will also ingest various amounts of DXM depending on their body weight and the effect or “plateau” that they are attempting to achieve. Plateau’s include
    1) 1st Plateau: Mild inebriation
    2) 2nd Plateau: An effect similar to alcohol intoxication with mild hallucinations
    3) 3rd Plateau: An altered state of consciousness where the abuser’s senses, particularly vision, can become impaired
    4) 4th Plateau: Mind and body dissociation or an “out of body” experience
    5) Other effects include: blurred vision, body itching, rash, sweating, fever, hypertension, shallow respiration, diarrhea, toxic psychosis, and an increased heart rate and blood pressure

3. On-set and Duration of Effects
    a. PCP
        1) When PCP is smoked or injected, onset occurs within 1-5 minutes
        2) When inhaled ("snorted") onset occurs in 2-3 minutes
        3) Onset is considerably slower when PCP is taken orally: 30-60 minutes
        4) The effects reach their peak in about 15-30 minutes, assuming the PCP was smoked, injected or snorted
        5) The effects generally last 4-6 hours, but they can go somewhat longer
        6) The user usually, but not always returns to normal within 24-48 hours
    b. Ketamine
        1) Within seconds if smoked; duration varies
        2) 1-5 minutes if injected; lasting 30-45 minutes
        3) 5-10 minutes if snorted; lasting 45-60 minutes
        4) 15-20 minutes if orally; lasting 1-2 hours
    c. Dextromethorphan (DXM)
        1) Rapidly absorbed from the gastrointestinal tract and peak plasma concentrations are reached in approximately 2.5 hours
        2) DXM is widely distributed, and is rapidly and extensively metabolized by the liver
        3) DXM exerts its antitussive effects within 15-30 minutes of oral administration. The duration of action is approximately 3-6 hours with conventional dosage forms
4. Signs and Symptoms of Dissociative Anesthetic Overdose
    a. In addition to the bizarre, violent and self-destructive behavior discussed previously, persons severely intoxicated by Dissociative Anesthetics may exhibit definite and extreme symptoms signifying a medically dangerous condition
        1) A deep coma, lasting up to 12 hours
        2) Seizures and convulsions
        3) A danger associated with severe PCP intoxication is that the person may die due to respiratory depression
        4) There is also some evidence that PCP may trigger a heart attack, if the user had some pre-existing condition disposing him or her to possible cardiac problems
        5) Eyes generally open with a blank stare
    b. There is also some evidence that prolonged use of PCP can lead to psychosis, which can be permanent
5. Expected Results of the Evaluation
    a. Horizontal Gaze Nystagmus generally will be present with a very early angle of onset
    b. Vertical Gaze Nystagmus usually will be present
    c. Lack of convergence will generally be present
    d. Performance on Romberg will be impaired: Internal clock may be slowed

e. Performance on Walk and Turn, One Leg Stand, and Finger to Nose will be impaired: muscle tone will usually be rigid
f. Blood pressure will generally be elevated
g. Pulse rate will generally be elevated
h. Body temperature will generally be up
i. Pupil size will be normal
j. Reaction to light will be normal
k. General indicators
    1) Blank stare
    2) Confused
    3) Chemical odor (PCP)
    4) Cyclic behavior (PCP)
    5) Difficulty with speech
    6) Disoriented
    7) Early HGN angle of onset
    8) Hallucinations
    9) Increased pain threshold (PCP)
    10) Incomplete verbal responses
    11) Loss of memory
    12) Moonwalking (PCP)
    13) Non-communicative
    14) Rigid muscle tone (PCP)
    15) Perspiring (PCP)
    16) Possibly violent (PCP)
    17) Sensory distortions

H. Cannabis[11]

1. Overview of the Drug Category
    a. If available, display slides of Cannabis plants, leaves, flower
    b. Cannabis" is a category of drugs derived primarily from various species of Cannabis plants, such as Cannabis Sativa and Cannabis Indica
        1) Cannabis grows readily throughout the temperate zones of the world
        2) It has been cultivated for centuries
        3) Example: At the first permanent English settlement in America, Jamestown, VA, where it was grown to produce hemp
        4) The primary psychoactive ingredient in Cannabis is Delta-9 Tetrahydrocannabinol (THC)
        5) Print "Delta - 9 THC" on dry erase board or flip-chart
        6) THC is found principally in the leaves and flowers of the plant rather than in the stem or branches
        7) Different varieties of the Cannabis have different concentrations of THC (Source: Drug ID Bible, 2004/05)
        8) One variety that has a relatively high concentration of THC is Sinsemilla, which is the unfertilized female Cannabis Sativa plant

[11] Drug Recognition Expert 7-Day School, Session 21, 2013

9) Note: "Sinsemilla" is a Spanish expression meaning "without seeds"

2. Forms of Cannabis
    a. There are four principal forms of Cannabis
        1) Marijuana – the dried leaves of the plant
        2) Hashish – a form of Cannabis made from the dried and pressed resin of a marijuana plant
        3) Hash Oil – sometimes referred to as "marijuana oil," it is a highly concentrated syrup-like oil extracted from marijuana. It is normally produced by soaking marijuana in a container of solvent, such as acetone or alcohol for several hours after the solvent has evaporated. A thick syrup-like oil is produced with a THC content generally of 8 – 20% (Source: Drug Identification Bible, 2004/05 Edition)
        4) Marinol (or Dronabinol) – a synthetic form of THC. This is a prescription drug used to treat nausea and vomiting. It is prescribed for certain cancer patients undergoing chemotherapy
            a) Dronabinol" is the generic, or chemical name for the synthetic THC
            b) "Marinol" is a trade name for Dronabinol
            c) Nabilone – an analog of Dronabinol used as an anti-vomiting agent
            d) Medical Applications Drugs within the category
            e) Cannabis has some limited medical applications
                (1) It lowers intraocular pressure, which can be helpful for glaucoma patients
                (2) Intraocular" – within the eyeball
                (3) Cannabis lowers the intraocular pressure by dilating in size the blood vessels of the eyes (more size – less pressure)
                (4) This causes reddening of the conjunctiva
                (5) Point out that conjunctiva is the clear membrane of the sclera (white portion of the eye) and lines the inside of the eyelids and is made of lymphoid tissue
                (6) Conjunctivae refers to both eyes. Conjunctiva is singular
            f) It suppresses nausea, and sometimes is recommended for cancer patients to relieve the nausea accompanying chemotherapy
        5) Cannabidiol, a non-psychoactive ingredient found in cannabis, is used in treating Epilepsy; it helps to inhibit seizures
        6) Cannabis has also had some limited medical application as
            a) An appetite enhancer for victims of Anorexia Nervosa
            b) A muscle relaxant
            c) A tumor growth retardant
        7) Point out that Marijuana has been legalized for medical treatment in many states

8) Potency, Purity and Dose Clinical signs
    a) Average THC Concentration
        (1) Marijuana 1 – 5%
        (2) Hashish 5 – 15%
        (3) Hashish Oil 10 – 12%
        (4) Sinsemilla 15% +
    b) Recreational doses are highly variable
    c) The lower the THC the more hits required to achieve desired effects

b. Marijuana usually is smoked
    1) Marijuana, Hashish and Hash Oil also can be ingested orally, for example, baked in cookies or brownies and eaten
    2) In controlled studies, passive inhalation of marijuana smoke has resulted in behavioral effects as well as a measurable amount in toxicology samples. Study does not address quantitative amount of physical impairment
    3) Solicit students' comments and questions concerning this overview of cannabis

3. Possible Effects of Cannabis Symptoms
    a. One major effect of marijuana is that it appears to interfere with a person's ability to divide attention
    b. People under the influence of Marijuana simply seem not to pay attention, or to have very brief attention spans
    c. In particular, they do not divide their attention very successfully
    d. Clarification: They have a difficult time dealing with more than one or two tasks at once
    e. This can make them very unsafe drivers, since driving requires the ability to divide attention among many simultaneous tasks
    f. Ask students: "What are some of the things that drivers have to do simultaneously?"
        1) Steering
        2) Operating the accelerator
        3) Signaling
        4) Observing other traffic
        5) Recognizing traffic control devices
        6) Shifting
    g. Loss of depth perception would be demonstrated by stopping improperly. Short attention span would be indicated by erratic speeds, failing to maintain a single lane and stopping for a red light then continuing on
    h. People under the influence of Marijuana may attend to one or a few of these driving tasks, but simply ignore the other tasks
    i. Because Marijuana impairs attention, Standardized Field Sobriety Tests like Walk and Turn and One Leg Stand are excellent tools for recognizing people under the influence of Marijuana
    j. Remind students that Walk and Turn (WAT) and One Leg Stand (OLS are divided attention Standardized Field Sobriety Tests
4. Pharmacological Effects of Marijuana

a. Effects will vary with dose, route of administration, experience of user, and other factors
    1) Relaxation
    2) Euphoria
    3) Relaxed inhibitions
    4) Disorientation
    5) Altered time and distance perception
    6) Sedation
b. Other characteristic indicators
    1) Odor of Marijuana
    2) Marijuana debris in the mouth
    3) Possible green coating on the tongue
    4) Point out that there are no known studies that confirm Marijuana causing a green coating on the tongue
    5) Reddening of the conjunctivae
    6) Body tremors
    7) Point out that this may become evident when the subject attempts to estimate the passage of 30 seconds when performing the Romberg Test
    8) Eyelid tremors
c. Solicit students' comments or questions concerning possible effects of Marijuana

5. Onset and duration of Effects
    a. Persons begin to feel and exhibit the effects within 8 – 9 seconds after smoking Marijuana
    b. The effects reach their peak within 10 – 30 minutes
    c. A 1985 Stanford University [12]
    d. Depending on the amount smoked and on the concentration of THC in the Marijuana, the person will continue to feel and exhibit the effects for 2 – 3 hours
    e. In 1990, a second Stanford University [13]
    f. Generally, the person will feel "normal" within 3 – 6 hours after smoking Marijuana
    g. The user may be impaired long after the euphoric feelings have ceased
    h. Solicit students' comments and questions concerning onset and duration factors
    i. Note that blood and urine tests will continue to disclose evidence of the use of Marijuana long after the effects of Marijuana have disappeared
        1) Source: Marijuana Alert, Peggy Mann (Bibliography)
        2) Blood tests may disclose Marijuana use for at least 3 days after smoking. NIDA Study, "Blood Brain Barrier"

[12] The study showed that pilots had difficulty in holding patterns and in lining up with runways for up to 24 hours after using Marijuana

[13]The study showed: Marijuana impaired performance at .25, 4, 8, and 24 hours after smoking. While 7 of the 9 pilots showed some degree of impairment at 24 hours after smoking Cannabis, only one reported any awareness of the drug's effects

j. Urine tests may indicate the presence of metabolites of THC for a month or more
k. Point out that it can take as long as 4 hours for THC to appear in the urine at concentrations sufficient to trigger a positive drug screen (50 ng/ml) following smoking
l. There are two important metabolites, or chemical byproducts of THC
    1) Write “Hydroxy THC: Causes Impairment and Euphoria” on the dry erase board or flip-chart
    2) Hydroxy THC, which causes the user to feel euphoric
    3) Carboxy THC, there is no evidence at this time that it is psychoactive
    4) Hydroxy THC usually is eliminated from the blood plasma within six hours
    5) Carboxy THC may be found in the blood plasma for several days following marijuana use
m. Cannabis is a fat soluble (i.e. it dissolves easily into fatty tissue); therefore, it can remain for long periods in the brain tissue, which is about one-third fat
n. Cannabis principally is eliminated from the body in feces and urine

6. Overdose Signs and Symptoms
    a. Excessive or long term use of Marijuana can have very undesirable consequences
    b. Ask students
        1) “Is there danger of death from Cannabis overdose?”
        2) Answer: It is not likely that there is a direct risk of death from overdose; however, persons impaired by Cannabis may behave in foolishly dangerous ways and become injured or killed as a result
    c. Marijuana has been observed to produce sharp personality changes, especially in adolescent users
    d. It can create paranoia and possible psychosis
    e. Long term effects include
        1) Lung damage
        2) Chronic Bronchitis
        3) Lowering of Testosterone (male sex hormone)
        4) Possible birth defects, still births and infant deaths
        5) Acute anxiety attacks
        6) Chronic reduction of attention span
        7) Research indicates that life threatening overdoses rarely if ever occur
        8) Withdrawal – is similar to alcohol dependence withdrawal
        9) Physical dependence can occur with chronic use
    f. Solicit students’ questions concerning signs and symptoms of Cannabis overdose
    g. Expected Results of the Evaluation
        1) Observable Evidence of Impairment
            a) No HGN or VGN
            b) Lack of Convergence Present
            c) Impaired performance will be evident on the following

(1) Romberg
(2) Walk and Turn
(3) One Leg Stand
(4) Finger to nose

2) Clinical Indicators
   a) Neither Horizontal Gaze nor Vertical Gaze Nystagmus will be present
   b) Lack of Convergence generally will be present
      (1) Remind students that Marijuana users often drink alcohol in conjunction with their smoking, and that others often lace their Marijuana with PCP
      (2) Either combination would cause Nystagmus
   c) Performance on the Romberg, Walk and Turn, One Leg Stand, and Finger to Nose tests will be impaired
      (1) Remind students to be especially alert for evidence of the subject's distorted perception of time when performing the Romberg Balance test
      (2) Point out that, with subjects under the influence of Marijuana, poor performance on these tests usually will result principally from their inability to divide attention, and less so from impaired coordination or balance
      (3) Pulse generally will be up
      (4) Blood pressure generally will be up
      (5) Body temperature will be normal
      (6) Muscle tone will be normal
3) Pupil size generally will be dilated or possibly normal
   a) The content and potency could affect pupil size. The higher THC content will increase the likelihood of pupil dilation. However, Cannabis does not cause pupil constriction
   b) Government grown Cannabis has low THC levels. Studies using it tends to show a normal range for pupil size
4) Pupil reaction to light will be normal
5) DREs report a phenomenon termed "Rebound Dilation" in subjects under the influence of Marijuana
   a) Clarification: "Rebound Dilation" is a period of pupillary constriction followed by a period of pupillary dilation where the pupil steadily increases in size and does not return to its original constricted size[14]
   b) However, this phenomenon has not been scientifically investigated in a controlled research study
6) Draw an eye on the balloon and squeeze it to demonstrate Rebound Dilation

[14] The revised definition was approved by the IACP Technical Advisory Panel (TAP), November, 2008

7) Remind the students that the final size determination being estimated is at the end of the 15 second time period when the light from the pen-light is directed into the eye
8) Caution should be used by the DRE so as not to move the light beam or allow the bulb to change in light intensity

h. General Indicators
1) Body tremors
2) Disoriented
3) Debris in the mouth
a) Occasionally some users of Marijuana have displayed a green coating on their tongue after recent use
b) However, this does not occur with all users
4) Eyelid tremors
5) Impaired perception of time and distance
6) Increased appetite
7) Marked reddening of the conjunctivae
a) Point out that this is properly called Conjunctiva Injection. Conjunctiva is the mucous membrane that lines the inner surface of the eyelids and is continued over the forepart of the eyeball
b) Point out that this should not be confused with conjunctivitis which is a disease of the eye. The vasodilation is the primary cause of the reddening of the eyes not the Cannabis smoke
c) Visine causes vasoconstriction in the eyes and is often used to reduce reddening
d) Odor of Marijuana
e) Possible paranoia
f) Relaxed inhibitions

I. CNS Stimulants[15]
1. Overview of the Drug Category
a. CNS Stimulants speed up the operation of the Central Nervous System
1) "Speed Up" does not mean "improve"
2) The "speeding up" results in increased heartbeat, pulse, respiration, blood pressure and temperature
3) The "speeding up" results in increased heartbeat, pulse, respiration, blood pressure and temperature
4) The "speeding up" also produces nervousness, irritability and an inability to concentrate or think clearly
b. There are three major subcategories of Central Nervous System Stimulants
1) Cocaine
2) The Amphetamines
a) Methamphetamine
b) Amphetamine Sulfate

[15] Drug Recognition Expert 7-Day School, Session 10, 2013

c) Desoxyn
3) Others
a) Ritalin
b) (methylphenidate
c) hydrochloride)
d) Preludin
e) (phenmetrazine
f) hydrochloride)
g) Cylert (pemoline)
h) Ephedrine
i) Caffeine

c. Cocaine derives from the coca plant
1) The plant is native to South America
2) Cocaine is made from the leaves of the coca plant
3) Archaeological evidence indicates that natives of Peru chewed coca leaves 5,000 years ago
4) Sigmund Freud personally experimented with Cocaine for approximately 3 years
5) Small quantities of cocaine originally were included in the formula for Coca Cola

d. Amphetamines were first synthesized near the end of the 19th Century
1) The first use of Amphetamines for medical purposes began in the 1920's
2) Initial medical application was to treat colds
a) Amphetamines cause the nasal membranes to shrink
b) This gives temporary relief from stuffy nasal passages
3) Present day medical purposes for amphetamines include
a) control symptoms of narcolepsy
b) control certain hyperactive behavioral disorders
c) relieve or prevent fatigue to allow persons to perform essential tasks of long duration
d) treat mild depression
e) control appetite
f) antagonize the effects of Depressant drugs
g) prevent and treat surgical shock
h) maintain blood pressure during surgery
i) treat Parkinson's Disease
j) Enhance the action of certain analgesic (pain killer) drugs
4) Numerous pharmaceutical companies manufacture Amphetamines for these purposes
5) Examples of common pharmaceutical Amphetamines
a) Dexedrine (dextroamphetamine sulfate) used to treat narcolepsy and hyperkinetic behavior, and for weight control. (Street names "Dexies", "Hearts")
b) Benzedrine (Amphetamine sulfate) used to treat narcolepsy, hyperkinetic behavior and weight

problems. (Street names "Bennies", "Whites", "Cartwheels")

c) Desoxyn (Methamphetamine hydrochloride, also known as desoxyephedrine) used in weight reduction
d) Adderall (Combination of dextroamphetamine and amphetamine)
e) Large quantities of Amphetamines are also illegally manufactured in this country
    (1) The most commonly abused illicit Amphetamine is Methamphetamine
    (2) Methamphetamine hydrochloride is a white to light brown crystalline powder, or clear chunky crystals resembling ice. Methamphetamine base is a liquid
    (3) The majority of street Methamphetamine is produced in clandestine laboratories
    (4) Medicinally, methamphetamine is used in the treatment of narcolepsy, ADD and ADHD
    (5) Methamphetamine is also known as Methedrine or methamphetamine hydrochloride
    (6) Its more common "street names" are "speed"; "crank"; "ice"; "crystal"; "meth"; and, "water"
f) There are some other CNS Stimulants, apart from Cocaine or the Amphetamines
    (1) Preludin is a licitly manufactured CNS Stimulant that is not an Amphetamine
        (a) generic name phenmetrazine hydrochloride
        (b) used in weight control
        (c) has all of the basic effects of amphetamine
    (2) Ritalin is another licitly manufactured, non-Amphetamine CNS Stimulant
        (a) generic name methylphenidate hydrochloride
        (b) used to treat mild depression, hyperkinetic behavior, narcolepsy and drug induced lethargy produced by CNS Depressants
        (c) has many of the basic clinical effects of Amphetamine
    (3) Cylert is a third licitly manufactured, non-Cocaine and non-Amphetamine CNS Stimulant
        (a) generic name Pemoline
        (b) used to treat Attention Deficit Disorder (ADD), also known as "hyperactivity"
        (c) has many of the basic clinical effects of Amphetamine

(4) Ephedrine is a licitly manufactured stimulant used in diet aides, body building supplements. It can also be found in herbal teas and preparations
(5) Cathine and Cathinone are the two psychoactive chemicals derived from the Khat plant. It originates from the sub-Sahara regions of Africa
(6) Methcathinone is illicitly manufactured from common household chemicals. Effects are very similar to methamphetamine

2. Methods of ingestion of CNS Stimulants
    a. There are a variety of ways in which the different CNS Stimulants may be ingested
    b. Cocaine is commonly insufflated (snorted), smoked, injected and taken orally
    c. In order to be smoked, a pure form of Cocaine is required
        1) Much of the Cocaine sold in this country is mixed with other materials, or chemically bonded to other elements
        2) Various chemical processes can be used to "free" the Cocaine from other elements and impurities
        3) One such process produces pure Cocaine in the form of small chunks
        4) These chunks are known as "Crack" or "Rock Cocaine"
        5) Licitly manufactured Amphetamines are taken orally, in the form of tablets, capsules and liquid elixirs
        6) Illicitly manufactured Methamphetamine most commonly is injected or smoked, but sometimes may be snorted or taken orally
        7) The smokeable forms of Methamphetamine are known as “Crystal Meth” or “Ice”. They contain the same active chemical compound as powdered Methamphetamine, but undergo a recrystallization process in which some impurities are removed
        8) Illicitly manufactured Amphetamine sulfate usually is produced in tablet form (called "Mini bennies") and is taken orally
3. Possible effects
    a. Both Cocaine and the Amphetamines produce euphoria, a feeling that there are no problems
        1) A feeling of super strength and absolute self-confidence may also be present
        2) With Cocaine, but not with Amphetamines, there is an anesthetic effect, and the dulling of pain may contribute to the euphoria
    b. Stimulant users tend to become hyperactive, indicated by a nervousness, extreme talkativeness, and an inability to sit still
    c. CNS Stimulants tend to release inhibitions, allowing users to commit acts that they normally would avoid
    d. Stimulant users misperceive time and distance

e. Persons under the influence of CNS Stimulants become easily confused, and lose the ability to concentrate or to think clearly for any length of time
f. Onset and duration of Effects
g. The onset and duration of effects are quite different for Cocaine as compared to the Amphetamines
    1) Generally speaking, Cocaine's effects are much briefer than are Amphetamine's
    2) The time parameters of Cocaine vary with the method of ingestion
h. When Cocaine is smoked, or "freebased", the drug goes immediately to the lungs, and is absorbed into the blood stream very rapidly
    1) The smoker begins to feel the effects of the Cocaine virtually immediately
    2) The "rush", or euphoria, is reported to be very intense
    3) However, the euphoric effects only last 5-10 minutes after the Cocaine is smoked
i. When Cocaine is injected, the drug is passed directly to the blood stream, where it is carried swiftly to the brain
    1) The effects are felt within seconds
    2) The onset of effects is very intense
    3) The effects usually continue to be felt for 45-90 minutes
j. When Cocaine is snorted (insufflated), the onset of effects is not quite as rapid as with smoking or injecting
    1) The user typically feels the onset of effects within 30 seconds after snorting the drug
    2) Although the "rush" occurs, it is not quite as intense as it is when the Cocaine is smoked or injected
    3) The effects from snorting usually last from 30-90 minutes
k. Oral ingestion of Cocaine usually is the least preferred method
    1) The user generally does not begin to feel the effects for 3-5 minutes
    2) The effects are not as intense as they are with other methods of ingestion
    3) However, the effects may last 15-30 minutes longer than with other methods Different drugs within the category
l. With all methods of ingestion, the duration of Cocaine's effects tend to be briefer than the effects of most other drugs
    1) As the effects wear off, it becomes very difficult to observe evidence of impairment
    2) If the suspect is not evaluated by a DRE fairly soon after the suspect has been apprehended, the DRE may not uncover evidence of the CNS Stimulant
m. When Methamphetamine is injected, the initial effects are very similar to the injection of Cocaine
    1) The user begins to feel the effects within a few seconds
    2) The "rush" is very intense, and lasts at a high level of intensity for 5-30 seconds

3) Unlike Cocaine, Methamphetamine's effects are longer and may last up to 12 hours after injection

n. When Methamphetamine is smoked, the rush is very intense, and the effects are long lasting. The user stays “high” for 4-8 hours with residual effects lasting up to 12 hours
o. When Methamphetamine is snorted or taken orally, the onset takes longer, the rush is much less intense, and the effects are much briefer

4. Overdose Signs and Symptoms
    a. Overdoses of Cocaine or Amphetamines can cause the pleasurable effects to turn into panic and often violent behavior. If the overdose is caused by Cocaine, it is commonly referred to as Cocaine Psychosis or Cocaine Delirium
        1) Subject may become very confused and aggressive
        2) Subject may suffer convulsions and faint or pass into a coma
        3) Heartbeat (pulse) will increase, possibly dramatically
        4) Hallucinations may occur
    b. Death can occur from sudden respiratory failure, or from heart arrhythmia, leading to cardiac arrest
    c. Another danger is that subjects may attempt to treat CNS Stimulant overdose with Barbiturates, possibly leading to overdose of CNS Depressants
    d. Expected Results of the Evaluation
    e. Observable evidence of impairment
        1) Horizontal Gaze Nystagmus will not be present with suspects under the influence of CNS Stimulants
        2) Vertical Gaze Nystagmus will not be present
        3) Lack of Convergence will not be evident
        4) Performance on Romberg will be impaired
        5) Performance on Walk and Turn may be impaired due to the suspect's hyperactivity and inability to concentrate
        6) Performance on One Leg Stand may be impaired due to the suspect’s hyperactivity.
        7) Performance on Finger to Nose tests will be impaired
        8) blood pressure generally will be elevated pulse generally will be increased
        9) body temperature generally will be elevated
        10) pupils generally will be dilated
        11) pupil reaction to light generally will be slow
5. General indicators
    a. anxiety
    b. body tremors
    c. dry mouth
    d. euphoria
    e. excited
    f. exaggerated reflexes
    g. eyelid tremors
    h. grinding teeth (bruxism)
    i. increased alertness
    j. insomnia

k. irritability
l. redness to nasal area
m. restlessness
n. rigid muscle tone
o. runny nose
p. talkative

J. Hallucinogens[16]
1. Overview of the Drug Category
a. Hallucinogens are drugs that affect a person's perceptions, sensations, thinking, self-awareness and emotions
b. The word "Hallucinogen" means something that causes hallucinations
c. A hallucination is a sensory experience of something that does not exist outside the mind
d. Seeing, hearing, smelling, tasting or feeling something that isn't really there
e. Having distorted sensory perceptions, so that things look, sound, smell, etc. differently than they really are
1) Hallucinogenic drugs usually produce what are called pseudo-hallucinations: i.e. the user typically is aware that what he or she is seeing, hearing, smelling, etc. isn't real, but is a product of the drug
2) One common type of hallucination produced by these drugs is called synesthesia, which means a transposing of sensory modes
a) Sounds for example, may be transposed into sights
b) Sights may be transposed into odors
3) The illusions and distorted perceptions produced by hallucinogenic drugs may be very alarming, even terrifying
a) They may produce panic and uncontrolled excitement
b) The user may be unable to cope with the terror, and may attempt to flee wildly
c) A user who is emotionally or mentally unstable may become psychotic in response to this frightening experience
4) A terrifying "bad trip" sometimes may be re- experienced as a flashback
a) In simple terms, a flashback is a vivid recollection of a portion of a hallucinogenic experience
b) A flashback does not occur because of a residual quantity of drug in the user's body
c) Instead, a flashback essentially is a very intense daydream
5) There are three types of flashback
a) Emotional: Feelings of panic, fear, etc.; the sensations of a "bad trip"

[16] Drug Recognition Expert 7-Day School, Session 14, 2013

b) Somatic: Altered body sensations, tremors, weakness, dizziness, crawling, tingly feelings on the skin
c) Perceptual: Distortions of vision, hearing, smell and/or other senses
d) These distortions are "re-runs" of the original "trip"

6) Remember that hallucinogens produce illusions, delusions or both
   a) An illusion is a false perception, i.e. a mis-representation of what the senses are receiving
   b) A delusion is a false belief
7) Because they often make the user appear to be insane, Hallucinogens sometimes are called psychotomimetic drugs

f. Some Hallucinogens come from natural sources, while others are synthetically manufactured
   1) Peyote and Psilocybin are examples of naturally occurring Hallucinogens
   2) LSD, MDA, MDMA, DMT, STP, TMA and 2CB are examples of synthetically manufactured Hallucinogens
   3) MDMA is an abbreviation for 3, 4-Methylenedioxy-methamphetamine and is commonly referred to as “Ecstasy”. It is a hallucinogen that also acts as a stimulant. It produces and energizing effect, as well as distortions in time and perception and enhanced enjoyment from tactile experiences
   4) MDA is an abbreviation for 3, 4-Methylenedioxy-amphetamine. It is normally produced as a clear liquid, or as a white powder in capsule or tablet form
g. Peyote is a small, spineless cactus
   1) The active, hallucinogenic ingredient in peyote is mescaline
   2) Peyote use by certain Indian tribes for religious rituals pre-dates Columbus' discovery of America by many centuries
   3) Peyote is used legally in religious ceremonies of the Native American Church
   4) Psilocybin is a drug found in a number of different species of mushrooms of the genus Psilocybe
      a) These mushrooms also have been used in Indian religious ceremonies for thousands of years
      b) An unstable derivative of Psilocybin, called Psilocin, is also found in these mushrooms and also has hallucinogenic properties
h. LSD is perhaps the most famous of the synthetically manufactured Hallucinogens
   1) "LSD" is an abbreviation of Lysergic Acid Diethylamide
   2) It was first produced in 1938, although its hallucinogenic properties were not discovered until 1943
   3) LSD was used in psychotherapy during the 1940's and early '50's.
   4) Although LSD is a synthetic drug, it was first derived from Ergot, a fungus that grows on rye and other grains

5) In the Middle Ages, when people accidentally ate this fungus, their resulting bizarre behavior was thought to stem from possession by the Devil
6) The trials and subsequent burning of "witches" in Salem, Massachusetts in 1692 probably was due to accidental Ergot consumption by those women
7) Ergot is still used medically to treat migraine headaches

i. 2CB (4-Bromo-2, 5-dimethoxyphenethylamine) is a popular drug first synthesized in 1974
   1) 2CB is considered both a psychedelic and an entactogen
   2) 2CB is a white powder usually found in pressed tablets or gel caps
   3) 2CB is sometimes referred to as “Venus”, “Nexus”, and “bromo-mescaline”

j. MDA, STP and TMA are synthetically manufactured Hallucinogens that sometimes are called "Psychedelic Amphetamines"
   1) They are chemically related to Amphetamines and produce many effects similar to those of CNS Stimulants
   2) They are also chemically related to Mescaline
   3) MDA is an abbreviation for 3, 4-Methylenedioxy- amphetamine
   4) Among users, MDA sometimes is referred to as the "Mellow Drug of America"
   5) STP is also called DOM, an abbreviation of 2 Methyl-2, 5 Dimethoxylamphetamine
   6) Users have popularized the abbreviation STP, representing "Serenity, Tranquility and Peace"
   7) TMA is an abbreviation for 3, 4, 5-Trimethoxyamphetamine

k. An important fact about Hallucinogens is that they are not addictive, in the sense that cessation of use does not produce withdrawal signs or symptoms; however, regular users do develop tolerance to these drugs

l. Methods of ingestion of Hallucinogens
   1) The most common method of ingesting Hallucinogens is orally
      a) LSD is placed on bits of paper, gelatin squares, or sugar cubes and eaten
      b) The small "buttons" or crowns of the Peyote Cactus are dried and eaten, or may be brewed into a beverage for drinking
      c) Similarly, the Psilocybin Mushrooms are dried and eaten, or may be brewed into a beverage for drinking
   2) Some Hallucinogens can also be smoked (example: LSD impregnated on marijuana or tobacco cigarettes)
   3) Some users inject LSD
   4) MDA can also be insufflated ("snorted")

2. Possible Effects
   a. The effects of Hallucinogens vary widely, and are affected by the user's personality, mood and expectations, and by the surroundings in which the drug is taken

1) Generally, Hallucinogens intensify whatever mood the user is in at the time the drug is taken
    a) If the user is depressed, the drug will deepen the depression
    b) If the user is feeling pleasant, the drug will heighten that feeling
2) If the user expects that the drug will help him or her achieve new insights or an expanded consciousness, the "trip" will seem to have that effect

b. However, Hallucinogens also often uncover mental or emotional flaws that the user was unaware of possessing
c. Therefore, many users who expect a positive experience with the drug will encounter instead the panic of a "bad trip"
d. The most common effect of the Hallucinogen is hallucination: the distorted perception of reality, often with a mixing of senses that makes it virtually impossible for the drug influenced user to function in the real world

3. Onset and Duration of Effects
    a. The time parameters associated with Hallucinogens vary from drug to drug
    b. The effects of Peyote (Mescaline) begin to be felt within approximately one-half hour after eating the cactus "buttons"
        1) 30 minutes: nausea, possibly leading to vomiting; mild rise in blood pressure, pulse, temperature and heart rate; pupils dilate
        2) One hour: sensory changes begin; visual distortions accompanied by rich colors; objects take on new forms and begin to move; shapes "come alive"
        3) 3-4 hours: sensory changes reach their peak; synesthesia (mixing of senses) commonly occurs
        4) 10 hours: gradual decline in effects
        5) 12 hours: nearly total recovery from effects
        6) 24 hours: approximately 87% of the Mescaline has been excreted from the body
    c. Psilocybin also begins to exert its effects within one-half hour
        1) 1-30 minutes: dizziness, light headed feeling, giddiness; the extremities (hands, feet, etc.) may feel very light or very heavy
        2) 30-60 minutes: vision blurs; colors become brighter, leave longer lasting after images; objects take on sharp visual definition; hearing becomes more acute
        3) 60-90 minutes: color patterns and shapes start to develop; the surfaces of objects appear to develop waves and wave-like patterns; distance perception becomes impaired; feelings of euphoria develop
        4) 90-100 minutes: body sensations increase, along with mental perceptions; user commonly becomes introspective
        5) 120-180 minutes: effects start to diminish
    d. LSD's effects begin to be felt within 30-45 minutes

1) 30-45 minutes: blood pressure, pulse and temperature rise; pupils dilate; hair starts to stand on end (Piloerection); nausea, dizziness and headache develop
2) 4-6 hours: effects reach their peak
3) 7-9 hours: effects diminish
4) 10-12 hours: user feels normal

e. MDMA's effects usually begin within several minutes to a half hour if taken orally
   1) Psychological effects include confusion, depression, anxiety and paranoia
   2) The duration effects can last from 1-12 hours depending on dosage
f. 2CB's effects are dose related
   1) Lower doses (5-15 mg) produce enhanced sensual sensations and feelings of being "in one's body"
   2) At higher doses (15-30 mg) it produces intense visual effects that include moving objects with "trails" behind them and colors appearing from nowhere
g. Onset and duration of effects of other Hallucinogens vary widely from about two hours to about 24 hours

4. Overdose Signs and Symptoms
   a. Death from overdose of LSD or Mescaline is not common
      1) It is unlikely that other Hallucinogens would directly result in death from overdoses
      2) However, an overdose can be extremely dangerous and indirectly result in death
         a) The extreme panic and agitation of a "bad trip" have been known to result in a suicide, or in accidental death as the user attempts to flee the hallucinations
         b) Sometimes Hallucinogens induce a perception of invulnerability in the user, leading to bizarre and very dangerous behavior, and death
   b. The most common danger of an overdose of Hallucinogen is an intense "bad trip", which can result in severe and sometimes permanent psychosis
   c. Some evidence also suggests that prolonged use of LSD may produce organic brain damage, leading to impaired memory, reduced attention span, mental confusion and impaired ability to deal with abstract concepts
5. Expected Results of the Evaluation
   a. Observable evidence of impairment
      1) Neither Horizontal nor Vertical Gaze Nystagmus will be present
      2) Lack of Convergence will not be evident
      3) Performance on the Romberg balance test will be impaired, particularly in the subject's estimation of the passage of 30 seconds
      4) Performance on the Walk and Turn, One Leg Stand and Finger to Nose tests will be markedly impaired due to the

subject's severe visual distortion, impaired perception of distance and decreased muscle coordination

5) Vital Signs
    a) pulse generally will be up
    b) blood pressure generally will be elevated
    c) body temperature generally will be up
    d) pupils generally will be dilated
    e) Reaction to light will usually be normal. Certain Psychedelic Amphetamines usually will slow the pupils' reaction to light
6) General indicators
    a) body tremors
    b) dazed appearance
    c) difficulty with speech
    d) disoriented
    e) flashbacks
    f) hallucinations
    g) memory loss
    h) nausea
    i) paranoia
    j) perspiring
    k) poor perception of time and distance
    l) rigid muscle tone
    m) synesthesia
    n) uncoordinated

b. Show video of subject(s)[17] under the influence of Hallucinogens. Relate behavior and observations to the Symptomology Chart
c. Drug Evaluations and Classification exemplar demonstrations
    1) Refer students to the exemplars found at the end of Section XIV of their student manuals
    2) Relate the items noted on the exemplars to the Symptomatology Chart
    3) Solicit students' questions or comments concerning expected results of the evaluation of subjects under the influence of Hallucinogens

K. Narcotic Analgesics[18]
1. Overview of the Drug Category
    a. Narcotic Analgesic defined
    b. A medical term, not a legal or police term
    c. An "Analgesic" is a drug that relieves pain. It differs from an anesthetic, in that it lowers one's perception of pain, rather than stopping nerve transmission
    d. Non-Narcotic Analgesics, such as Aspirin, Tylenol, and Motrin, relieve pain, but do NOT produce narcosis, which means numbness or sedation

[17] Black and white video of two girls on MDMA at a rave
[18] Drug Recognition Expert 7-Day School, Session 17, 2013

e. A Narcotic is a drug derived from Opium, or produced synthetically that relieves pain, but also induces euphoria, alters mood, and produces sedation
f. There are two subcategories of Narcotic Analgesics
g. Opiates: drugs that either contain or are derived from Opium
h. Natural alkaloids of Opium
    1) Point out that a "natural alkaloid" is a substance that is found in another substance, and that can be isolated from it. Morphine, for example, is a natural alkaloid of Opium
    2) Codeine is another example of a natural alkaloid
i. Opium derivatives
    1) The natural alkaloids and the Opium Derivatives all come from Opium, which is sap from the seed pods of a particular type of poppy
    2) Synthetics, which do not derive from Opium at all, but have similar or identical effects as Opium alkaloids and derivatives
j. Narcotic Analgesics all share three characteristics
    1) They will relieve pain
    2) They will produce withdrawal signs and symptoms when the user is physically dependent, and drug use is stopped
    3) They will suppress the withdrawal signs and symptoms of chronic morphine administration
k. Some commonly abused Opiates
    1) Powdered Opium (also known as smoking Opium)
    2) Hydrocodone is derived from Codeine but is more closely related to Morphine in its pharmacological profile
    3) Morphine, the principal natural alkaloid of Opium
    4) Codeine is another natural alkaloid of Opium
    5) Heroin is the most commonly abused illicit Narcotic Analgesic
    6) Dilaudid is another derivative of Morphine
    7) Numorphan
    8) Oxycodone is a semisynthetic narcotic produced by chemically treating Thebaine. It is somewhat less addictive than Morphine, but more than Codeine
l. Some common Synthetic Opiates
    1) Demerol is a synthetic first produced in 1939
    2) Methadone is a synthetic developed in Germany during World War II and first marketed in America in 1947
    3) The Fentanyls include several hundred "designer drug" analogs of Morphine
    4) MPPP is an illegally manufactured analog of Demerol
    5) Darvon is a synthetic Narcotic of relatively low analgesic potency and relatively low addiction liability
m. Methods of administration of Narcotic Analgesics vary from one drug to another.
    1) Some are commonly taken orally
    2) Some are smoked
    3) Some are snorted. (taken intranasally)
    4) Some are often administered in suppositories

5) Medically, some Narcotic Analgesics may be administered transdermally or through the skin
6) Heroin, and some others, usually are taken by injection

2. Possible Effects
   a. The effects produced by heroin or other Narcotic Analgesics depend on the tolerance that the user has developed for the drug
      1) People develop tolerance for Narcotic Analgesics fairly rapidly
      2) "Tolerance" means that the same dose of the drug will produce diminishing effects, or conversely that a steadily larger dose is needed to produce the same effects
      3) A Narcotic Analgesic user who has developed tolerance and who is using his or her "normal" dose of the drug may exhibit little or no evidence of intellectual or physical impairment
      4) Impairment is more evident with new users, and with tolerant users who exceed their "normal" doses
   b. Observable effects of Heroin and other Narcotic Analgesics
      a) Sedation - "On the Nod"
         (1) the condition known as "on the nod" is a semiconscious state of deep relaxation
         (2) the user's eyelids become very droopy
         (3) their head will slump forward until the chin rests on the chest
         (4) in this condition, the user usually can be aroused easily and will be sufficiently alert to respond to questions
      b) Other effects
         (1) slowed reflexes
         (2) slow and raspy speech
         (3) slow, deliberate movements
         (4) inability to concentrate
         (5) slowed breathing
         (6) skin cool to the touch
         (7) possible vomiting
         (8) itching of the face, arms or body

3. Onset and Duration of Effects
   a. The psychological effects of Heroin begin immediately after the injection
      1) A feeling of pleasure or euphoria
      2) Relief from the symptoms of withdrawal
      3) Relief from pain
   b. The observable signs will usually become evident within 5-30 minutes after the user has injected
   c. The effects will usually be observable for up to 4-6 hours
   d. As the drug wears off, withdrawal signs and symptoms start to develop until the addicted user injects again
      a) As the effects of Heroin diminish, withdrawal symptoms begin
         (1) aches

(2) chills
(3) insomnia
(4) nausea

b) Withdrawal signs start to become observable 8-12 hours following injection
(1) goose bumps (Piloerection) on the skin
(2) sweating
(3) running nose
(4) tearing
(5) vomiting
(6) yawning

e. Withdrawal signs and symptoms closely resemble those of Influenza or the common cold
f. These symptoms begin to intensify from 14-24 hours after injection, and may be accompanied by goose bumps (piloerection), slight tremors, loss of appetite and dilation of the pupils
g. Approximately 24-36 hours after injection, the addicted user experiences insomnia, vomiting, diarrhea, weakness, depression and hot and cold flashes
h. Withdrawal symptoms and signs generally reach their peak 2-3 days after injection
1) muscular and abdominal cramps
2) elevated temperature
3) severe tremors and twitching
i. The addicted user at this point is nauseated, gags, vomits and may lose 10-15 pounds within 24 hours
j. The withdrawal syndrome continues to decrease in intensity over time, and is usually greatly reduced by the fifth day, disappearing in one week to 10 days
k. A common misconception regarding withdrawal from Narcotic Analgesics is that they may be fatal. In reality, however, although narcotic withdrawal is extremely uncomfortable, it rarely, if ever, proves fatal

4. Overdose Signs and Symptoms
a. Narcotic Analgesics depress respiration
1) In overdoses, the user's breathing will become slow and shallow
2) Death can occur from severe respiratory depression
3) The danger of death is heightened by the fact that the addicted user may not know the strength of the drug he or she is taking
b. Other signs and symptoms of an overdose of a Narcotic Analgesic include clammy skin, convulsions and coma, blue lips and pale or blue body, extremely constricted pupils (unless there is brain damage, in which pupils may be dilated), recent needle marks, or perhaps a needle still in the user's arm
c. Narcotic Analgesic overdoses are sometimes treated by the administration of a Narcotic antagonist such as Narcan. A Narcotic antagonist works at neuron receptor sites, blocking or counteracting the effects of Narcotic Analgesics. In effect, these substances

precipitate withdrawal. The short duration of effects produced by Narcotic antagonists, however, require continued medical monitoring of the user

5. Expected Results of the Evaluation
    a. Observable evidence of impairment
        1) Neither Horizontal Gaze Nystagmus nor Vertical Gaze Nystagmus will be present
        2) Eyes will not exhibit a Lack of Convergence
        3) Performance on Romberg will be impaired. Generally, the subject will appear drowsy, and will have a slow internal clock
        4) Performance on Walk and Turn and One Leg Stand will be impaired, and will reflect the slow and deliberate movements caused by this category of drugs
        5) Performance on Finger to Nose will also be impaired. Generally, the subject will appear drowsy, possibly "on the nod," and exhibit slow and deliberate movements
        6) Blood pressure will be down
        7) Pulse will be down
        8) Body temperature will be down
        9) Pupil size generally will be constricted (below 3.0 mm in diameter)
        10) Pupil’s reaction to light will be little or none visible
        11) If the effects of the Narcotic Analgesic are wearing off, hippus may be evident
    b. General indicators
        1) Constricted pupils
        2) Depressed reflexes
        3) Drowsiness
        4) Droopy eyelids (Ptosis)
        5) Dry mouth
        6) Euphoria
        7) Facial itching
        8) Flaccid muscle tone
        9) Nausea
        10) On the nod
        11) Puncture marks
        12) Slowed reflexes
        13) Slow, low, raspy speech
        14) Slowed breathing
6. Injection Site Examination
    a. Examination of suspect's injection sites can give many clues to their drug habits
        1) Many drugs can be injected
        2) Injection sites are a sign of drug use which may or may not be recent
        3) May be evidence of habitual use
    b. The trauma to the skin, muscles and the blood is the basic concept of injection sites
    c. Drugs and medication are injected into the body in three ways

1) Legal injections are usually intramuscular
2) Subcutaneous, means just under the skin
3) For medically drawing of blood or emergency medical procedures, the injection is made into a blood vessel (Intravenous). Veins are usually used. Arteries are deep, thus not lending themselves to injection

d. The primary instrument for injection is the hypodermic syringe
   1) It consists of a hollow needle, a tube and a plunger
   2) Needles vary in size, with the primary variance being the inside diameter of the needle or the gauge
   3) The greater the number the larger the gauge, the smaller the inside diameter of the needle
   4) Most illegal drug users prefer a larger gauge needle
e. The user's equipment is commonly referred to as a "hype kit" or "works"
   1) The kit contains a "cooker" which is any device such as a bottle cap, a metal spoon etc., that is used to heat the drug with water to form an injectable solution
   2) A handle to hold the "cooker" over the flame
   3) Matches, lighters (primarily disposable, adjustable flame types) used to heat the substance in the "cooker"
   4) A tourniquet, which can be a rubber tubing, a tie, belt, etc. It is tied around the arm, above the injection site, to cause the vein to bulge or rise, thus making it easier to inject
   5) "Cottons" are the cotton balls or cigarette filters used to "purify" the drug. The user places the "cottons" into their cooker and draws the drug up through the cottons
f. You may be asked in court to describe the difference between a legal and an illegal injection site
   1) The legal mark is usually intramuscular. Some exceptions would be in an emergency, blood donation or lab tests
   2) Usually there will be only one mark and it will be larger than the typical illegal injection
   3) Legal injections are made with new, sterile needles
   4) The illegal mark is usually over a vein
   5) There will usually be multiple marks in various stages of healing. It takes approximately two weeks for a "mark" to totally heal
   6) Users frequently use the same needle over and over again. Thus making it become dull or barbed
   7) Since the used needles make it more difficult to pierce the skin and vein, the injections sites may be jagged
   8) Use of old, dirty and shared needles cause the spread of infections and diseases such as AIDS
g. Users may frequently use the same spot to inject, as an attempt to reduce their likelihood of detection
   1) The veins may become hard and thick from continuous injections and makes them difficult to find

2) After about 10 to 20 injections, a large sore forms causing the site to enlarge and bruise. Upon close examination, the site reveals there are numerous puncture wounds in the same area, overlapping each other

h. Basic principles of puncture healing
   1) Any needle that punctures the skin leaves a scab. A scab is simply a crust formed by the drying of the discharge from the puncture
   2) These dried remains fill the gap caused by the puncture of the skin. As the fluids dry, they harden (clot and gel)
   3) There are no exact timetables for wounds to heal, but there are some general guidelines
      a) Scabs develop within about 18 - 24 hours after a puncture
      b) After about 14 days a scab usually starts to peel or flake and then falls off. The skin under the scab is shriveled and is lighter in color than the surrounding tissue

i. There is no exact science to classifying the age of puncture wound. Some general guidelines are
   1) Fresh puncture wounds are defined as under 12 hours after injection and will be a red dot and have an oozing appearance or blood crater with no scab formation
   2) Early puncture wound is 12 - 96 hours (half day to 4 days) after injection. It will have a light scab, light bruise, reddened border and a crater appearance
   3) Late puncture wound is 5 - 14 days old and will have a dark scab, dark bruise and the crater will flatten
   4) Healing puncture wound is over 14 days. The scab will be flaking and falling off with shriveled light colored skin underneath

j. Other indicators of injection sites
   1) In an attempt to hide puncture wounds, users may inject into tattoos
   2) Tattooing also refers to dark carbon deposits that result from using a flame to "sterilize" a needle. Carbon deposits on the needle are then injected into the skin, causing a tattoo effect
   3) A "track" is a hardened part of a vein where numerous injections have been administered. The entire vein becomes scarred and hardened and with time may no longer be able to inject into. The area becomes silvery-blue in color and raised. This is referred to as "silver streaks"

7. Expected Location of Injection Marks
   a. Prior to conducting the injection site examination, always remember to wear gloves
   b. Injection sites may be located anywhere on the subject's body
      1) The arms are most frequently used because the veins here are large and easily accessible

2) The ankles are frequently used because the marks can be easily covered with socks
3) The user may even use their neck because the marks can be hidden by hair or makeup
4) They will basically use any part of their body where there is a vein

c. Conduct a thorough, slow, methodical examination of the subject's arms beginning with the left
1) Using a magnifying light or "ski light", examine the inner arm as it is extended with the palm facing you
2) Beginning at the bicep slowly examine the arm. Document the findings of your examination
3) Ask the subject to contract the arm, grasping their shoulder. Starting at the wrist, slowly examine the arm to the elbow documenting the results
4) Next examine the outer arm as it is extended palm facing downward. Start the examination at the shoulder moving to the wrist
5) Subject should extend and spread his/her fingers when examining the hands. Examine both sides of the hands, with particular attention to the areas between the fingers, under watch bands and rings

d. Conduct the entire procedure for the right side
e. Ankles are the next most common injection area
1) Subject should be instructed to remove their shoes and socks to allow the DRE to examine them for puncture wounds
2) The most common area is on the back of the foot

f. On a case by case basis, the DRE may need to examine other parts of the body for marks
g. ALWAYS follow your agencies rules, policies and procedures and laws regarding invasive type searches

8. Conclusion

V. Pulse[19] And Modified Romberg Balance Test (1.0 Hour)

A. Purposes of the examining pulse
1. Clinical signs of impairment
a. Pulse rate
2. Certain drugs speed up the body and elevate the vital signs
a. pulse may quicken
3. Certain Drugs slow down the body and lower the vital signs
a. pulse may slow
4. For purposes of standardization, the pulse will be obtained using the left arm if at all possible

B. Procedures and Cues
1. Measurement of Pulse Rate
a. Point out that pulse rate is equal to the number of contractions of the heart per minute

[19] Drug Recognition Expert Pre-School, Session 6, 2013

   b. By placing your fingers on the skin next to an artery and pressing down, you can feel the artery expand as the blood surges through
   c. Demonstrate this, by holding your fingers on your own radial artery
2. Radial Artery
   a. The radial artery can be located in or near the natural crease of the wrist, on the side of the wrist next to the thumb
   b. Point to the radial artery pulse point on your own wrist
      1) Hold your left hand out, with the palm down
      2) Demonstrate this.
      3) Place the tips of your right hand's index finger and middle finger into the crease of your left wrist, and exert a slight pressure
      4) Demonstrate this
      5) Allow your left hand to curl downward
      6) Demonstrate this
   c. Ask students whether they can feel their pulses. Coach any students who have difficulty in locating the pulse
3. Brachial Artery
   a. Point to the brachial artery pulse point in your own arm
   b. The brachial artery can be located in the crook of the arm, halfway between the center of the arm and the side of the arm closest to the body
   c. Instruct students to roll up their sleeves, if necessary, to expose their brachial artery pulse points
      1) Hold your left hand out, with the palm up
      2) Demonstrate this
      3) Place the tips of your right hand's index and middle fingers into the crook of your left arm, close to the body, and exert a slight pressure
      4) Demonstrate this
   d. Ask students whether they can feel their pulses. Coach any student who has difficulty locating the pulse
4. Carotid Artery
   a. Point out the carotid artery pulse point on your own neck
   b. The carotid artery can be located in the neck, on either side of the Adam's Apple
   c. Place the tips of your right hand's index and middle fingers alongside the right side of your "Adam's Apple"
   d. You should be able to feel the pulse in your carotid artery
   e. Dos and don'ts of measuring pulse
      1) Don't use your thumb
      2) If you use the carotid artery pulse point, don't apply pressure to both sides of the Adam's Apple: this can cut off the supply of blood to the brain.
      3) When measuring the pulse rate, use 30 seconds as the standard time interval
   f. Students' practice at measuring pulse rate
      1) Instruct students to work in pairs, taking turns measuring each other's pulse

2) Tell students to record on paper their partner's pulse rates
3) Monitor, coach and critique the students' practice. Allow the practice to continue for only about 5 minutes
4) Print out pulse intervals on the board
5) Tabulate the numbers of students whose pulse rates were in each of the listed intervals
6) Point out that the "normal range" of pulse rate is 60-90 beats per minute

C. Demonstrations
   1. Pulse Rate Measurement Demonstrations
      a. Select two students to come before the class
         1) Instruct the first student to measure the second's pulse using the radial artery pulse point. (Simultaneously, the instructor should measure the subject's pulse using a carotid artery pulse point)
         2) Instruct the second student to measure the first's pulse using the carotid artery pulse point. (Simultaneously, the instructor should measure the subject's pulse using a radial artery pulse point)
      b. Excuse the two students and thank them for participating

D. Normal Ranges of Vital Signs
   1. Normal human vital signs vary between individuals. However, the DEC program has identified a set of "normal" ranges for each of the three vital sign examinations used in the drug influence evaluation process. The ranges used in the DEC program are normally a bit wider than those used by the medical profession
   2. Remind students that the "normal" ranges identified for the DEC program have been established through years of research and with medical input
   3. DEC Program normal ranges - Pulse rate: 60 to 90 beats per minute

E. Relationship of Drug Categories to the Vital Signs Examinations[20]
   1. **Note**: Draw the matrix (at the end of this session) on the dry erase board or flip-chart at the outset of this session
      a. All seven categories of drugs ordinarily will affect the pulse rate
      b. Some categories usually will lower pulse
      c. Ask the students which categories will lower pulse rate
      d. CNS Depressants and Narcotic Analgesics usually lower pulse
   2. Write "DOWN" on the pulse under the columns for Depressants and Narcotics
      a. Most of the drug categories that elevate pulse rate also elevate blood pressure
      b. CNS Stimulants, Hallucinogens, Dissociative Anesthetics and Cannabis all usually cause blood pressure to rise
   3. Write "UP" on the blood pressure line for those four categories
      a. The vast majority of Inhalants, namely, the volatile solvents and the aerosols, also elevate blood pressure
      b. But the remaining small group of Inhalants, the anesthetic gases, actually lower the blood pressure

[20] Drug Recognition Expert Preschool, Session 7, 2013

   c. Remind students that the anesthetic gases include such things as nitrous oxide, amyl nitrate and ether
   d. So for Inhalants, the effect on blood pressure will be up or down
4. Write “UP/DOWN” with the footnote – down with anesthetic gases, up with volatile solvents and aerosols – on the blood pressure line under the Inhalants column
   a. Three of the categories usually will cause the body temperature to rise
   b. Ask students which categories usually cause an elevation in body temperature
   c. The drug PCP and its analogs from the Dissociative Anesthetics category usually increases body temperature; PCP users have been known to remove their clothing to cool down
5. Write “UP” on the TEMP line under the Dissociative Anesthetics column
6. CNS Stimulants and Hallucinogens also will usually increase body temperature
7. Write “UP” on the TEMP line for CNS Stimulants and Hallucinogens
   a. The effect of Inhalants on body temperature depends on the specific substance that is inhaled
   b. Some inhalants may cause temperature to increase or be down
   c. But other inhalants may leave the temperature near normal
8. Write “UP/DOWN/or NORMAL” on the TEMP line for Inhalants
9. One category usually causes body temperature to be lowered
10. Ask students which category usually lowers temperature
11. Narcotic Analgesics usually lower body temperature
12. Write “DOWN” on the TEMP line for Narcotics
13. The remaining two categories usually do not affect temperature
14. Write “NORMAL” on the TEMP line for Depressants and Cannabis
   a. Three of the categories usually will cause the muscle tone to be rigid
   b. Ask students which categories will cause the muscle tone to be rigid
   c. CNS Stimulants, Hallucinogens and Dissociative Anesthetics will usually cause a flaccid muscle tone
15. Write “RIGID” on the Muscle Tone line for Stimulants, Dissociative Anesthetics and Hallucinogens
   a. Two categories usually cause muscle tone to be flaccid
   b. Ask students which categories cause flaccid muscle tone
   c. CNS Depressants and Narcotic Analgesics usually cause a flaccid muscle tone
16. Write “FLACCID” on the Muscle Tone line for Depressants and Narcotic Analgesics
17. One category usually causes normal muscle tone
18. Ask students which category causes a normal muscle tone
19. Cannabis usually causes normal muscle tone
20. Write “NORMAL” on the Muscle Tone line for Cannabis
21. One category will usually cause either normal or flaccid muscle tone
22. Ask students which categories usually cause either normal or flaccid muscle tone
23. Inhalants usually cause either normal or flaccid muscle tone
24. Write “NORMAL or FLACCID” on the muscle tone line for Inhalants
25. Solicit students’ questions and comments

26. Write “NORMAL or FLACCID” on the muscle tone line for Inhalants
27. Solicit students’ questions and comments

F. Practice
    1. Assignments and Procedures
        a. Team Assignments
            1) Group the students into teams of three (2) members each
        b. Explanation of Practice
            1) Teammates will take turns measuring each other’s pulse rate
            2) Each student will write down every measurement he or she makes and the time at which the measurement was made
            3) Practice will continue until each student has taken at least three complete
    2. Solicit questions about the practice procedures
    3. Testing (students testing students)
        a. Monitor the practice to ensure compliance with the procedures
        b. Offer coaching and constructive criticism as appropriate
        c. The injection site examination may reveal evidence of recent use
        d. The presence of marks however, doesn't mean drug influence or impairment at the time of the evaluation
        e. A slow methodical examination, using a magnifying light, is required to obtain evidence
        f. Conducting an injection mark examination is a skill. As with all skills, such as taking the pulse, competency improves with practice

G. Modified Romberg Balance Test[21]
    1. The Modified Romberg Balance Test is the first divided attention test that is administered during the drug evaluation
        a. The test requires the subject to stand with the feet together and the head titled back slightly and with the eyes closed
        b. The test also requires that the subject notify the officer upon the passage of 30 seconds; the subject must be instructed to open the eyes and tilt the head forward and say “stop” when they think 30 seconds has elapsed
        c. The DRE must record how much time actually elapsed from the start of the test until the subject opened the eyes
        d. If the subject continues to keep the eyes closed for 90 seconds, the DRE should stop the test and record the fact that it was terminated at 90 seconds
    2. Administrative procedures and instructions
        a. “Stand with your feet together, arms at your sides”
        b. “Maintain that position and do not start until told to do so. Do you understand the instructions?”
        c. “When told to begin, tilt your head back and close your eyes.” (demonstrate, but do not close your eyes)
        d. “When I say start, keep your head tilted back with your eyes closed until you think thirty (30) seconds has gone by.”
        e. “Once you think thirty (30) seconds have gone by, bring your head forward, open your eyes and say “Stop”.”

[21] Drug Recognition Expert Preschool, Session 3, Segment A, 2013

f. "Do you understand the instructions?" Once they indicate they understand, direct them to begin.
g. Once the subject opens their eyes and says "Stop", ask "How much time was that?"

3. Instructor-led demonstrations
   a. Instructor-to-instructor demonstrations
   b. Instructor-to-student demonstration
4. Student-led demonstrations
5. Recording results of the Romberg Balance test
   a. The major items that need to be recorded for the Romberg Balance test are:
      1) Subject's ability to follow instructions
      2) The amount and direction in which they subject sways
      3) The subject's estimated passage of 30 seconds. Plus or minus 5 or more seconds is considered signigicant
      4) Eyelid, body and leg tremors
      5) Muscle tone
      6) Bounding pulse at neck
   b. Important Points:
      1) Officer times the subject and records when finished. If necessary, officer stops test after 90 seconds
      2) Suggest subject remove undesired shoes
      3) To record swaying, the DRE must estimate how many inches the subject sways, either front-to-back or left- to-right, or both

VI. Report Writing (1.5 Hours)

A. Narcotic Arrestee Examination
   1. Narcotic Arrestee Examination (Form 8.40.00)
      a. Identify page 1
      b. Identify Page 2
   2. Review first page of the Narcotic Arrestee Examination
      a. Enter page number as part of the arrest report. Failing to do so will result in the page not being copied and submitted to the City Attorney's Office for filing.
      b. Enter the DR Number
      c. Enter the Name of the Person arrested
      d. Enter the name of the Arresting Officer
      e. Enter the name of the evaluator completing the Narcotic Arrestee Examination
      f. Enter the Month, Day, Year, time and the location where the arrestee was evaluated
      g. Complete the preliminary Medical questions
      h. Check the boxes on the signs of influence displayed related to appearance
      i. Check the boxes of the signs of influence displayed related to behavior
      j. Check the boxes of odors observed on the arrestees breath
      k. Check the boxes of observed signs of the face under the Face section
      l. Check boxes of signs of speech observed under the speech section

m. Document the amount sway and estimation of passage of time in the Modified Romberg Balance Test box.
n. Document whether the arrestee has corrective lenses
o. Document whether Horizontal and Vertical Gaze Nystagmus is present
p. Document if the arrestee displays pupillary reaction to light
q. Document the arrestees estimated pupil size in all three lighting conditions
r. Document if the arrestee displayed Pupillary Unrest and/or Rebound Dilation
s. Check if a statement of the arresting officer's expertise was included in the body of the arrest report
t. Check the box to document if the Miranda Admonition was given. Is the Miranda admonishment was given, document the name and serial number of the officer who admonished the arrestee
u. Document any statements given by the arrestee in the area given

3. Review Second Page of Narcotic arrestee Examination
    a. Display a blank second page of the Narcotic Arrestee examination
    b. Display a completed example of a blank second page of the Narcotic Arrestee examination
    c. Document the page as a continuation of the first page and as part of the narrative of the arrest report
    d. Document the arrestee's last Name, first name, and middle Initial in space designated for the arrestee's name
    e. Document the arrestee's booking number in the space designated for the arrestee's booking number
    f. Document the DR Number assigned to the arrest report in the space designated for report DR Number
    g. Check the box indicating whether a photograph of the injection site is attached
    h. In the box labeled right arm, for example, you can document any tattoos observed
    i. In the box labeled left arm, for example, document any fresh puncture wounds 0 to 8 hours old, red and raised oozing a clear and red fluid. Document any other signs of previous ingestion such as puncture older than 8 hours, and/or Various Stages of Healing (VSH), and or scar tissue of the veins which indicate previous usage. You can also document any indicators of ingestion on the fingertips which are consistent with using a glass pipe
    j. In the box with the frontal diagram of a head, document any blistered or burnt lips consistent with using a glass pipe. Also look for any puncture wounds as additional methods of ingestion
    k. In the box with the front and rear view of a diagramed pair of legs, document any document any fresh puncture wounds 0 to 8 hours old, red and raised oozing a clear and red fluid. Document any other signs of previous ingestion such as puncture older than 8 hours, and/or Various Stages of Healing (VSH), and or scar tissue of the veins which indicate previous usage
    l. Photograph of fresh puncture wound

m. With the Arrestee's permission, draw a small circle around the fresh puncture wound on the arrestee's skin
n. Draw an arrow towards the extremity nearest the puncture wound
o. Take a photograph of the puncture wound
p. Print the picture
q. Document the arrestees on the back of the picture
r. Document the Arrestees booking number on the back of the photograph
s. Document the location of the puncture wound photographed on the back of photograph
t. Document the name and serial number of the officer who took the picture on the back of the photograph
u. Staple the photograph to the 5.9 which is attached to the original arrest report for processing

B. Completion of Admonishment for Urine Test For 11550 HS, Under Influence of a Controlled Substance
   1. The Admonishment for urine Test must be completed prior to collecting a urine sample
      a. Read first paragraph to the defendant and ask them if they understand
      b. Write down their response
      c. If they do not understand make an effort answer any question they may have regarding the admonishment for urine
      d. Ask the defendant if they will provide a urine sample now
      e. Document the arrestee's response
      f. If the arrestee agrees, have the arrestee sign the Admonishment for Urine Test at the space designated "Signature of Arrestee"
      g. If the arrestee agrees, have an officer of the same sex collect the urine sample from the defendant
      h. If the examining officer is different from the arresting officer, the arresting officer must collect and book the urine sample as evidence
   2. If the arrestee refuses to provide a sample, inform the arrestee as follows
      a. If the urine test shows that you do not have drugs in your body, the charge of being under the influence may not be filed
      b. Ask Do you understand?
      c. Document the arrestees response
      d. Advise the arrestee If you are, in fact, under the influence of drugs, the urine test may show presence of drugs in your body and the test results will be admissible in court
      e. Ask Do you understand?
      f. Document the arrestee's response
      g. Advice the arrestee your refusal to give a urine sample will be offered in court as evidence of your consciousness of guilt
      h. Ask the arrestee "Do you understand?"
      i. Document the arrestees response
      j. Ask the arrestee "Are you currently on probation or parole?"
      k. Document the arrestee's response
      l. Ask the arrestee if you are on probation or parole, your refusal to provide a urine sample may result in additional charges being filed
      m. Ask the arrestee do you understand?

n. Advise the arrestee since you have stated that you understand what I have explained to you, do you still refuse to give a urine sample?
o. Document the arrestee's response
p. Advise the arrestee If you are unable or state that you are unable to provide a urine sample, you will be requested to provide a blood sample for analysis. All of the conditions which I have explained to you regarding the urine sample also apply to blood samples
q. Ask the Arrestee," Will you now provide a urine sample?"
r. Document the arrestees response
s. Ask the Arrestee," Will you now submit to a blood test?"
t. Document the arrestee's response
u. Enter the Date and time the Narcotic Arrestee Examination was completed
v. Enter the name, serial number, and area/division of the officer completing

C. Complete the Booking Approval
a. Document the date and time of the arrest.
b. Document the arrestee's last name, first name and middle name
c. Document the name(s) of the Arresting officer(s)
d. Document the serial number of the arresting officer(s)
e. Document the area/division of assignment of the arresting officer(s)
f. Document the detail/unit designation of the arresting officer(s)
g. Check the Booking Charge Box
h. Document the booking charge as it appears on the AJIS Charge Table as 11550 HS/ Under the Influence of Controlled Substance
i. Document the basic Bail as $2,500.00
j. Document the urine or blood sample as evidence to be booked
k. Document that a narcotic Arrestee Examination was completed and that the opinion of the examining officer was Under the influence of a controlled substance, consistent with the specific drug named in the 11550 HS section
l. Check reason for search is offense involves controlled substance
m. Check type of search authorized as strip and visual body cavity

D. Narrative of the arrest report
a. Under the narcotics expertise heading, document your training, arrests made, related to narcotics
b. Under the court qualifications heading, document you what you have been court qualified in related to under the influence, possession, possession for sales, and sales of narcotics
c. Under the Source of Activity heading document, the date and time, your partner's information, unit designation, location and direction. Document any information which directed you to the location such a known narcotics location, area which has seen an increase in crime
d. Document your observations of the arrestee's behavior and or actions which lead you to suspect that the arrestee is under the influence
e. Under the Investigation heading, document that you detained the arrestee for being under the influence of a controlled substance
f. Document any additional observations of influence from assessments such as collecting a pulse in the field, performance during Modified

Romberg Test, eyelid tremors, fast or slow internal clock, pupil size, muscle rigidity or flaccidity, initial body temperature. etc

g. Under the Arrest heading, document that you arrested the defendant for 11550 HS, Under the Influence of a Controlled Substance
h. Document that you transported the arrestee to a facility such an area station or Jail Division facility to conduct a Narcotic Arrestee Examination
i. Interpret the signs and symptoms documented on the face sheet of the Narcotic Arrestee Examination which support an opinion of influence on behalf of the arrestee
j. Render an opinion that the Defendant was under the influence of a specific 11550 HS drug within a drug category, except for narcotic analgesics
k. Under the Medical Treatment heading, document any medical treatment provided to the defendant for any claimed injuries, naming the doctor who provided the medical treatment
l. Under the Photographs heading, document that a photograph was taken of a fresh puncture wound, 0 to 8 hours old red and raised, oozing a red fluid. Document all information related to the identity of the officer who took the photograph of the puncture wound
m. Under the Booking heading, document where the defendant was booked, the open charge and the Watch Commander approving the booking
n. Under the Evidence heading document any evidence recovered during the investigation as well as any samples provided by the defendant for toxicological testing by Scientific Investigation Division
o. Document the officer's name and serial number and the items the recovered or toxicological samples they collected from the defendant
p. Under the Statements heading, document any spontaneous statements by the defendant which support your investigation, and/or any statements the defendant makes after being advised of their right and subsequently waiving their rights

E. Review of Page one, Face Sheet of the arrest Report
   a. The defendant shall be Mirandized.
   b. Office of operations, Order No. 4, February 6, 1987.
F. Hand out Exemplar of Arrest Report

VII. Final Exam and Conclusion (**0.5 Hours**)

1. Administer test
   a. Each student get their own test
   b. Students write directly on the test
2. Correct Test
   a. Passing score is 70% or better
3. Collect Test