1 Hour and 35 Minutes

SESSION XIX

INHALANTS

SESSION XIX INHALANTS

Upon successfully completing this session the student will be able to:

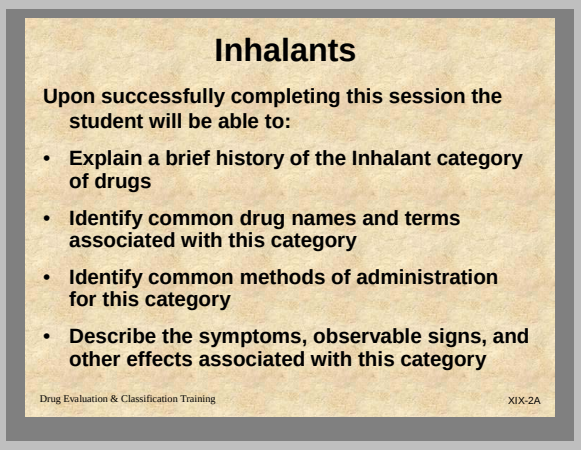
- Explain a brief history of the Inhalant category of drugs.
- Identify common drug names and terms associated with this category.
- Identify common methods of administration for this category.
- Describe the symptoms, observable signs and other effects associated with this category.
- Describe the typical time parameters, i.e. onset and duration of effects associated with this category.
- List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this drug category.
- Correctly answer the "topics for study" questions at the end of this session.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Overview of the Category	▪ Instructor Led Presentations
B. Possible Effects	▪ Review of the Drug Evaluation and Classification Exemplars
C. Onset and Duration of Effects	▪ Reading Assignments
D. Overdose Signs and Symptoms	▪ Video Presentations
E. Expected Results of the Evaluation	▪ Slide Presentations

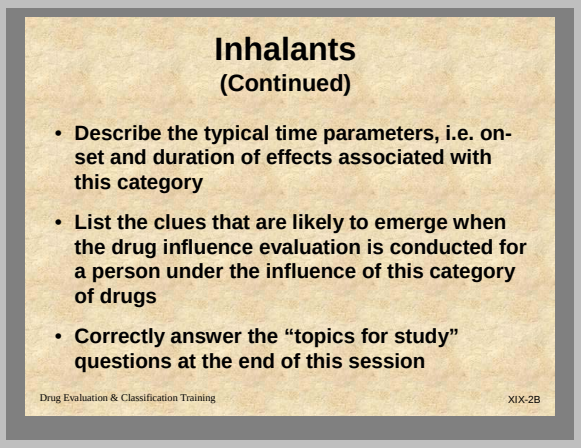
I. INHALANTS

Session 19-1: Inhalants

Session 19-2A: Inhalants



Session 19-2B: Inhalants



Briefly review the objectives, content and activities of this session.

A. Overview of the Category

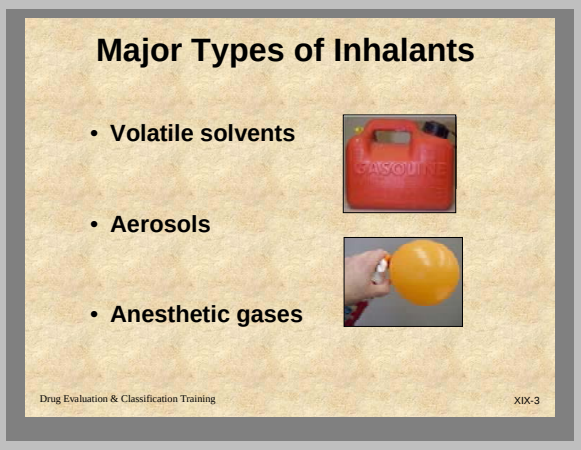
Inhalants are breathable chemicals that produce mind altering results.

- Instructor Notes: Inhalants are sometimes called "Deliriants," in that they may produce delirium. Delirium is usually a brief state characterized by incoherent excitement, confused speech, restlessness and possible hallucinations.

Inhalants vary widely in terms of the chemical involved and the specific effects produced.

Depending on the nature of the particular Inhalant, the effects produced may be similar to those of CNS Stimulants, Depressants or Hallucinogens.

Session 19-3: Major Types of Inhalants



There are three major subcategories of Inhalants.

- Volatile Solvents
- Aerosols
- Anesthetic Gases

Volatile Solvents

The Volatile Solvents include a large number of readily available substances, none of which are intended by their manufacturers to be used as drugs.

- "Volatile" means that they evaporate easily to produce fumes.

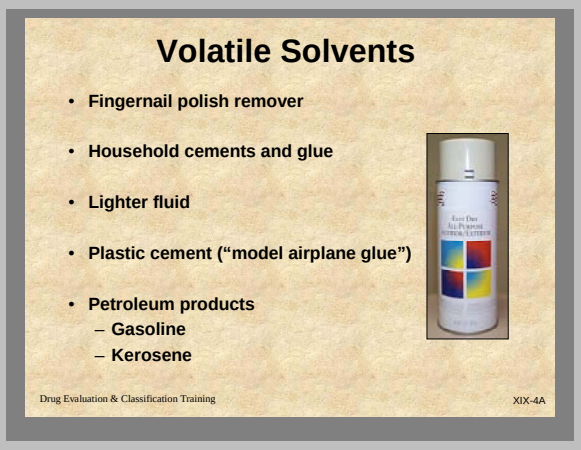
Ask students to name a Volatile Solvent that often is abused as a drug.

- One widely abused Volatile Solvent is plastic cement, or "model airplane glue."

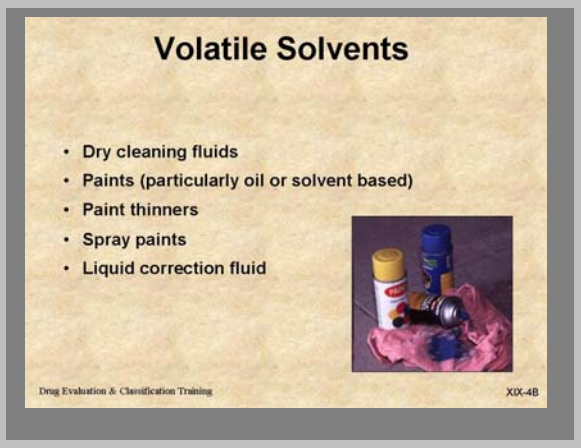
Plastic cement includes the following volatile chemicals:

- Toluene
- Acetone
- Naphtha
- Aliphatic Acetates (straight-chained hydrocarbons)
- Hexane
- Cyclohexane
- Benzene

Session 19-4A: Volatile Solvents



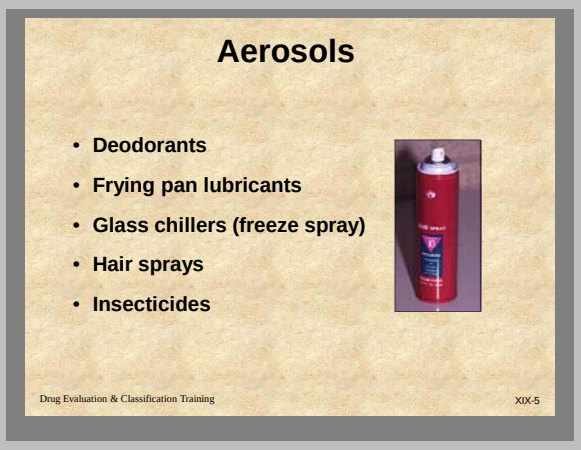
Session 19-4B: Volatile Solvents



Other frequently abused Volatile Solvents include:

- Fingernail polish remover (contains Acetone)
- Household cements and glues (rubber cements contain Benzene)
- Lighter fluid (contains Naphtha)
- Gasoline
- Kerosene
- Dry cleaning fluids
- Paints (particularly oil or solvent based)
- Paint thinners
- Spray paints
- Engine degreasers

Session 19-5: Aerosols



Aerosols

Aerosols are chemicals discharged from a pressurized container by the propellant force of a compressed gas.

- Commonly abused Aerosols include hair sprays, deodorants, insecticides, glass chillers (freeze spray), and vegetable frying pan lubricants.

If available, display slides of typically abused Aerosols.

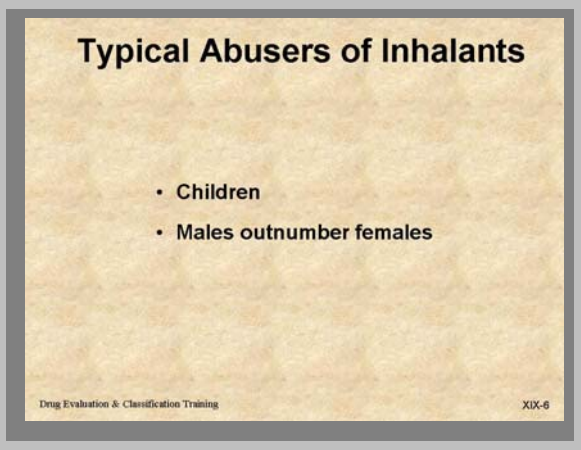
- E.g., Freon, which is now available primarily in many medical Aerosols.

All of these abused Aerosols contain various hydrocarbon gases that produce drug effects.

- The overwhelming majority of abusers of Volatile Solvents and Aerosols are pre-teens and teenagers.

- Some reasons: These substances appear in nearly every household. They are inexpensive and readily accessible.

Session 19-6: Typical Abusers of Inhalants



Anesthetic Gases

The third subcategory is Anesthetic Gases.

Adults may be more frequent users of the anesthetic gases subcategory than of the Aerosols or Volatile Solvents.

Session 19-7: Anesthetic Gases

- Anesthetic gases are drugs that abolish pain.
- They are used medically during surgical procedures such as childbirth, dental surgery, etc.

- Anesthetic gases that sometimes are abused as Inhalants:

    - Ether
    - Nitrous Oxide

Many of these substances have a long history of medical and illicit use, e.g., Ether abuse dates to the 1790's in England.

Nitrous Oxide has been used since 1845. It is still used in certain dental procedures.

Nitrous Oxide is a propellant for whipped cream. Drug paraphernalia stores often sell Nitrous Oxide in cartridges that are identical to carbon dioxide containers. They are termed by users "whippets," and are allegedly sold to purchasers as devices to propel whipped cream.

Other common Inhalants in this subcategory that do not relieve pain are:

- Amyl Nitrite
- Butyl Nitrite

Nitrates are vasodilating substances used medically to relieve angina pectoris (heart-related chest pain) and for treatment of cyanide poisoning. In angina, the nitrates work by dilating blood vessels near the heart so that more blood can reach the heart. Nitroglycerin, ordinarily not abused as an intoxicant, is also used for this purpose.

- Isobutyl Nitrite and Butyl Nitrite have essentially identical effects of Amyl Nitrite.

- Anesthetic gases can dilate the blood vessels around the heart thus causing a lowered blood pressure.

- Common slang and brand names for the nitrates are: "Rush" and "Locker Room."

- Examples: Amyl Nitrite and Butyl Nitrite are sold in small glass bottles or bulbs. The user simply opens the bottle and breathes in the fumes. They have been marketed in drug paraphernalia stores as room deodorizers.

Inhalants obviously are ingested by breathing, or inhaling the fumes.

- Some are ingested directly from the source.

- Some are soaked into rags, handkerchiefs, or tissue paper for repeated inhalation.

- Some are placed in paper or plastic bags which the user places over the face or head. These may be placed in twist lock beverage containers.

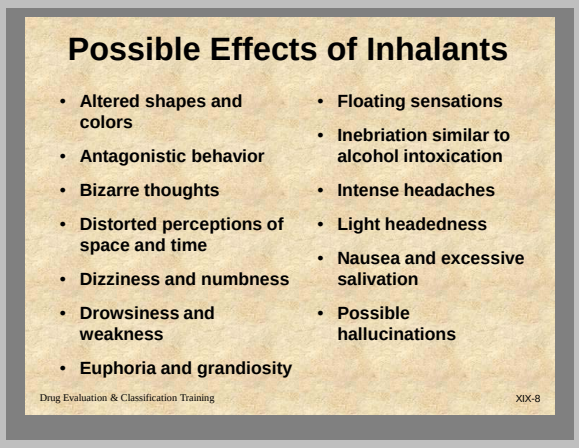
- Some are used by breathing the fumes or vapors from balloons.

- Some common street names that Inhalant users use are: huffing, hacking, ballooning, and glading.

Solicit students' comments or questions concerning this overview of Inhalants.

B. Possible Effects

Session 19-8: Possible Effects of Inhalants



The effects of Inhalants vary somewhat from one substance to another.

In fact, many of the Inhalants are classified as Depressants in medical texts. Their effects, consequently, often mirror alcohol intoxication.

Common effects of Inhalants include:

- Altered shapes and colors.
- Antagonistic behavior.
- Bizarre thoughts.
- Distorted perceptions of time and distance.
- Dizziness and numbness.
- Drowsiness and weakness.
- Euphoria and grandiosity.
- Floating sensations.
- Inebriation similar to alcohol intoxication.
- Intense headaches.
- Light headedness.
- Nausea and excessive salivation.
- Possible hallucinations.

Persons under the influence of Inhalants generally will appear confused and disoriented, and their speech will be slurred.

C. On-set and Duration of Effects

Inhalants' effects are felt virtually immediately.

- Point out that the route of passage of the drugs from lungs to brain can be traveled very quickly.

Duration depends on the particular substance.

- The effects of nitrous oxide last 5 minutes or less.
- Amyl Nitrite and Isobutyl Nitrite produce effects that last a few seconds up to 20 minutes.
- Users claim these substances enhance sexual excitement. This may occur from dilation of genital arteries (vasodilation) and relaxation of other smooth muscles.
    - Inhalation of these produces a distinct "rush" similar to that of the related substance, Nitrous Oxide.
- 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).
- Point out that residue of these substances may be deposited inside the nostrils, causing the user to breathe the fumes constantly.

Solicit students' comments and questions concerning the time parameters of Inhalants.

D. Overdose Signs and Symptoms

There is a risk of death due to overdose of Inhalants.

- All volatile solvents make the heart more sensitive to adrenaline. This sometimes causes a dangerous cardiac arrhythmia. The term "sudden sniffing death" (SSD) has been used to describe death resulting from physical exertion and the breathing of Inhalants in an enclosed, poorly ventilated space.
- Some Inhalants will depress the Central Nervous System to the point where respiration ceases.
- Others can produce instant death from heart failure.
- 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.

- Death can also result indirectly, if a person places a plastic bag over the head, loses consciousness and suffocates.

- Long term abuse of Inhalants can cause permanent damage to the Central Nervous System, and greatly reduce mental and physical abilities.

- Evidence also exists of liver, kidney, bone and bone marrow damage resulting from long term Inhalant abuse.

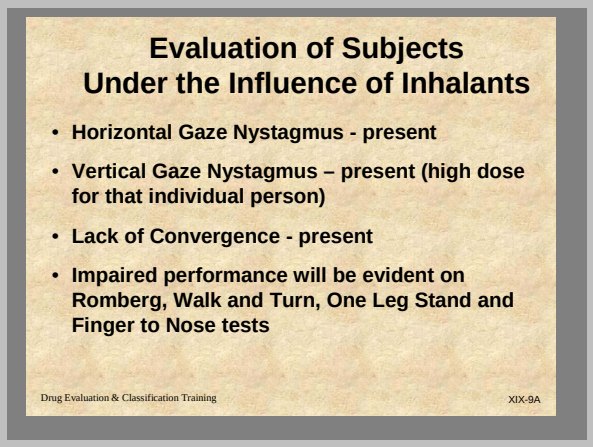
- There are no well defined withdrawal symptoms for these substances. Physical dependence has not been documented, although habituation is common.

Solicit students' questions and comments concerning overdose signs and symptoms.

E. Expected Results of the Evaluation

- Emphasize that, with Inhalants, there is significant variation in effects from one substance to another.

Session 19-9A: Evaluation of Subjects Under the Influence of Inhalants



Observable Evidence of Impairment

HGN

- Horizontal Gaze Nystagmus will generally be present.

- Point out that immediate onset of Nystagmus may be observed.

VGN

- Vertical Gaze Nystagmus may be present.
- Point out that high doses (for that individual) of Inhalants may cause Vertical Gaze Nystagmus.

LOC

- Lack of Convergence will be present.

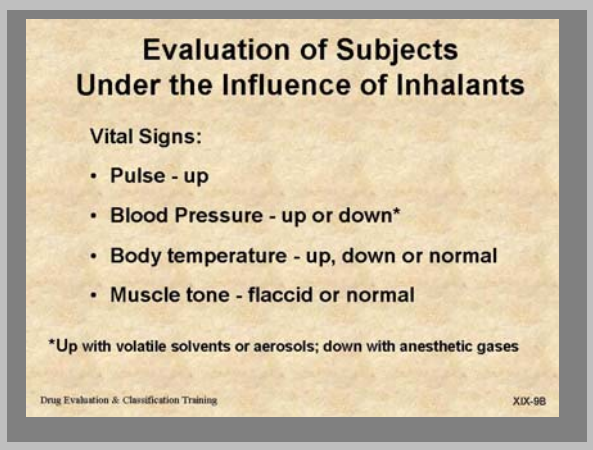
Drug Evaluation Tests

Performance on the Romberg, Walk and Turn, One Leg Stand, and Finger to Nose tests will be impaired.

- Point out that subjects' may sway when performing the Romberg, One Leg Stand, and Finger to Nose tests.

- Point out that subjects may take slow, deliberative steps on the Walk and Turn, and will tend to stagger.

Session 19-9B: Evaluation of Subjects Under the Influence of Inhalants



Vital Signs

- Pulse will be up.
    - Pulse increase is due to many factors, including oxygen displacement. The heart may beat faster in order to supply body tissues with a sufficient supply of oxygen.

- Blood pressure will be up or down.

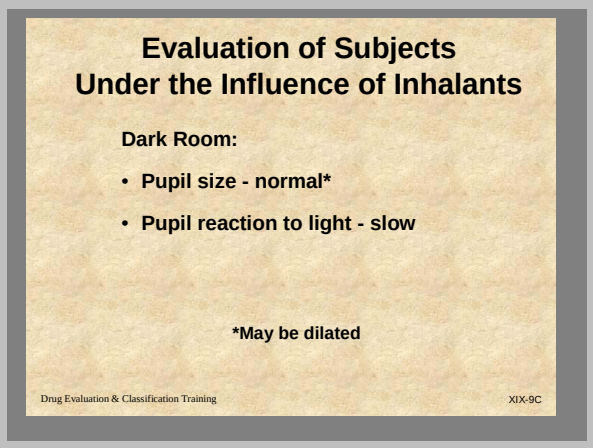
- Note: The Anesthetic Gases generally lower blood pressure while elevating pulse rate. The Volatile Solvents and the Aerosols usually elevate both blood pressure and pulse rate.

- The lowering of blood pressure by Anesthetic Gases is due to their vasodilation effect. The heart compensates for this vasodilation by increasing its heart rate.

- Effect on body temperature may be up, down or normal.

- Muscle tone will be either flaccid or normal. Anesthetic gases may cause the muscles to be flaccid.

Session 19-9C: Evaluation of Subjects Under the Influence of Inhalants

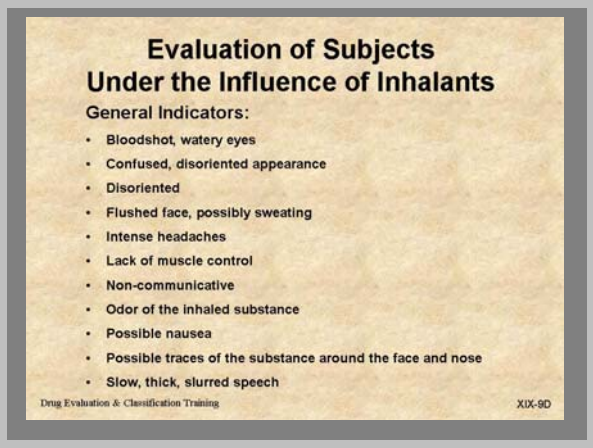


- Pupil size will be normal but may be dilated.

  - Anesthetic gases may produce some dilation, although usually not to the extent seen with CNS Stimulants or Hallucinogens. <u>No</u> Inhalants produce pupillary constriction.

- Reaction to light will be slowed.

Session 30-9D: Evaluation of Subjects Under the Influence of Inhalants



General Indicators

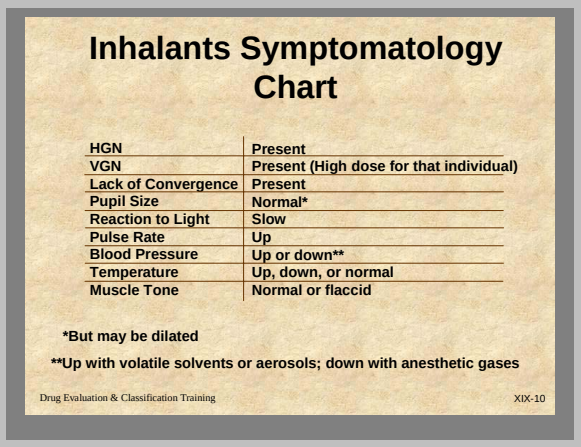
- Bloodshot, watery eyes
- Confusion
- Disoriented
- Flushed face
- Intense headaches
- Lack of muscle control
- Non-communicative
- Normal or Flaccid muscle tone

Point out that muscle tone can be either normal or flaccid. Anesthetic gases normally cause the muscles to be flaccid.

- Odor of the inhaled substance
- Possible nausea
- Residue of the substance around the face and nose and on the hands or clothing
- Slow, thick, slurred speech
- Speech usually clears up quickly when substance is no longer being inhaled.

Summary

Session 19-10: Inhalants Symptomatology Chart



Inhalants Symptomatology Chart

HGN	Present
VGN	Present (High dose for that individual)
Lack of Convergence	Present
Pupil Size	Normal*
Reaction to Light	Slow
Pulse Rate	Up
Blood Pressure	Up or down**
Temperature	Up, down, or normal
Muscle Tone	Normal or flaccid

*But may be dilated

**Up with volatile solvents or aerosols; down with anesthetic gases

Drug Evaluation & Classification Training XIX-10

Demonstrations

- Video demonstrations

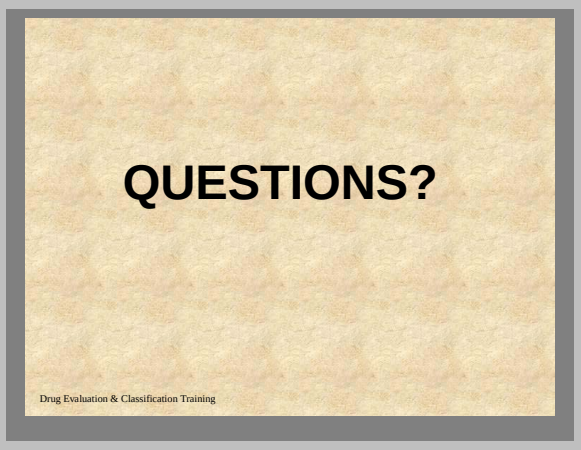
Show video of subject(s) under the influence of Inhalants. Relate behavior/observations to the Symptomatology Chart.

Drug Evaluation and Classification exemplar demonstrations.

- Refer students to the exemplars found at the end of Section XIX of their student manuals.

Point out that the one-page narrative in the example exemplars are not to be construed as the recommended or approved report. The actual narrative report submitted by DREs will be more detailed.

Session 19-11: Questions



Solicit students' comments and questions concerning expected results of the evaluation of subjects under the influence of Inhalants.

DRUG INFLUENCE EVALUATION

Evaluator: Sgt. Gerry Britt, Yarmouth PD	DRE #: 5479	Rolling Log #: 10-07-015	**Session XIX - #1**
Recorder/Witness: Sgt. Don Decker, Marblehead PD	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 10-77997
Arrestee's Name (Last, First, Middle): Graves, James L.	Date of Birth: 6/8/88	Sex: M / Race: W	Arresting Officer (Name, ID#): Sgt. Deb Batista, Middleboro PD #6690
Date Examined / Time / Location: 07/01/10 2200 Middleboro PD	Breath Results: Results: 0.00	Test Refused ☐ Instrument #: 77880	Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐
Miranda Warning Given: ☒ Yes ☐ No Given By: Sgt. Batista	What have you eaten today? When? Hamburger 6PM	What have you been drinking? How much? Coke N/A	Time of last drink? N/A
Time now/ Actual: 10 PM/10:10 PM	When did you last sleep? How long: Last night 6 hrs.	Are you sick or injured? ☐ Yes ☒ No	Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No	Do you have any physical defects? ☐ Yes ☒ No	Are you under the care of a doctor or dentist? ☐ Yes ☒ No	
Are you taking any medication or drugs? ☐ Yes ☒ No	Attitude: Cooperative	Coordination: Poor, unsteady, barely standing	
Speech: Slurred, mumbling	Breath Odor: Paint/chemical odor	Face: Paint residue on cheeks and chin	
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft	Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☒ Watery	Blindness: ☒ None ☐ Left ☐ Right	Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)	Vertical Nystagmus ☐ Yes ☒ No	Able to follow stimulus ☒ Yes ☐ No	Eyelids ☒ Normal ☐ Droopy

Pulse and time	HGN	Left Eye	Right Eye
1. 104 / 2215	Lack of Smooth Pursuit	Yes	Yes
2. 102 / 2234	Maximum Deviation	Yes	Yes
3. 104 / 2250	Angle of Onset	30	30

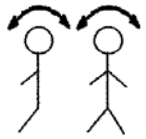
Convergence: Right eye ✓✓✓ Left eye

10 ONE LEG STAND

L R
- ☑ ☐ Sways while balancing
- ☑ ☐ Uses arms to balance
- ☐ ☐ Hopping
- ☑✓ ☐ Puts foot down

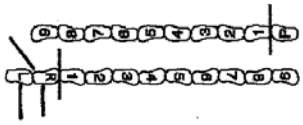
Stopped - fell into wall

Romberg Balance



Test stopped

Walk and Turn test

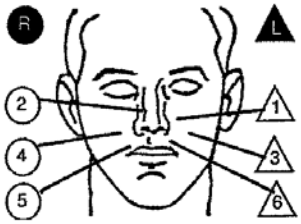


Test stopped - could not stand

	1st Nine	2nd Nine
Cannot keep balance	✓✓✓	
Starts too soon		
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken		

Internal clock	Describe Turn	Cannot do test (explain)	Type of footwear:
N/A estimated as 30 seconds	N/A	Unable to stand heel to toe	Athletic shoes

Draw lines to spots touched



Test administered in seated position

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	4.0	6.5	3.5
Right Eye	4.0	6.5	3.5

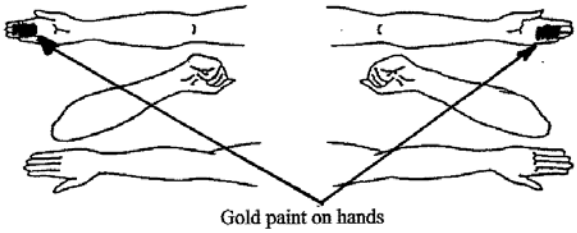
Nasal area: Red

Oral cavity: Odor of paint

REBOUND DILATION ☐ Yes ☒ No

REACTION TO LIGHT: Slow

RIGHT ARM / LEFT ARM



Gold paint on hands

Blood pressure	Temperature
140/100	98.6

Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid

Comments:

What drugs or medications have you been using?	How much?	Time of use?	Where were the drugs used? (Location)
"I huffed some Gold."	"The usual"	8PM	In the park

Date / Time of arrest:	Time DRE was notified:	Evaluation start time:	Evaluation completion time:	Precinct/Station:
07/01/10 2130	2145	2200	2310	

Officer's Signature: | DRE #: 5479 | Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Alcohol ☐ CNS Stimulant ☐ Dissociative Anesthetic ■ Inhalant ☐ Medical ☐ CNS Depressant ☐ Hallucinogen ☐ Narcotic Analgesic ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Graves, James L.

1. **LOCATION:** The evaluation was conducted at the Middleboro Police Department.

2. **WITNESSES:** Sgt. Don Decker of the Marblehead P.D. witnessed the evaluation.

3. **BREATH ALCOHOL TEST:** Graves had a breath test of 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was requested to contact Sergeant Batista at the Middleboro Police Department for a drug evaluation. Sgt. Batista advised she arrested Graves for DUI after observing him fail to stop at a red traffic light at Main and Wareham Street. The suspect was cooperative but appeared dazed. He performed poorly on the SFST's and was arrested for DUI. A can of gold spray paint was located in the front seat of the suspect's vehicle along with paint soaked rags.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room at the P.D. He appeared passive and dazed. He had very poor coordination and balance. Gold paint smears were visible on his hands and face.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Romberg Balance: The suspect was unable to perform the test and it was stopped for safety reasons. Walk & Turn: The suspect lost his balance three times and the test was stopped for safety reasons. One Leg Stand: The suspect put his foot down three times while standing on the left foot and the test was stopped. He was unable to perform the test when attempting to stand on the right foot and the test was stopped for safety reasons. Finger to Nose: The suspect was allowed to sit down for this test. He used the palm of his hands and touched in the general area of his nose.

8. **CLINICAL INDICATORS:** The suspect had six clues of HGN and a Lack of Convergence. His pulse and diastolic blood pressure were above the normal ranges.

9. **SIGNS OF INGESTION:** Paint-like odor on his breath. Paint smears on hands and face.

10. **SUSPECT'S STATEMENTS:** Suspect admitted "huffing" some gold paint in the park to celebrate the 4th of July.

11. **DRE'S OPINION:** In my opinion Graves is under the influence of an ***Inhalant*** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:**

Rev. 10/10

DRUG INFLUENCE EVALUATION

Evaluator: Trooper Marc Griggs, Iowa State Patrol	DRE #: 8102	Rolling Log #: 10-08-20	**Session XIX - #2**
Recorder/Witness: Sgt. Russ Belz, Story Co. S.O.	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 10-12859
Arrestee's Name (Last, First, Middle): Mashburn, Cathy L.	Date of Birth: 9/1/88	Sex: F / Race: W	Arresting Officer (Name, ID#): Deputy Dan Grimm, Polk Co. S.O. #3538
Date Examined / Time /Location: 08/07/10 2335 Polk Co. Jail	Breath Results: Test Refused ☐ Results: 0.00 Instrument #: 16670		Chemical Test: Urine ☒ Blood ☐ Test or tests refused ☐

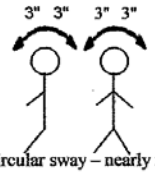
Miranda Warning Given: ☒ Yes ☐ No. Given By: Dpty. Grimm	What have you eaten today? When? Pizza After work	What have you been drinking? How much? Wine coolers "A couple"	Time of last drink? 7 PM	
Time now/ Actual: 9pm/8:10 pm	When did you last sleep? How long: Last night 7 hrs.	Are you sick or injured? ☒ Yes ☐ No "I feel dizzy"	Are you diabetic or epileptic? ☐ Yes ☒ No	
Do you take insulin? ☐ Yes ☒ No	Do you have any physical defects? ☐ Yes ☒ No	Are you under the care of a doctor or dentist? ☐ Yes ☒ No		
Are you taking any medication or drugs? ☐ Yes ☒ No	Attitude: Cooperative, slow to respond	Coordination: Poor, staggering at times		
Speech: Slow, slurred	Breath Odor: Paint-like odor	Face: Flushed		
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft	Eyes: ☐ Reddened Conjunctiva ☐ Normal ☒ Bloodshot ☒ Watery	Blindness: ☒ None ☐ Left ☐ Right	Tracking: ☒ Equal ☐ Unequal	
Pupil Size: ☒ Equal ☐ Unequal (explain)	Vertical Nystagmus ☐ Yes ☒ No	Able to follow stimulus ☒ Yes ☐ No	Eyelids ☒ Normal ☐ Droopy	

Pulse and time	HGN	Left Eye	Right Eye
1. 100 / 2042	Lack of Smooth Pursuit	Yes	Yes
2. 100 / 2105	Maximum Deviation	Yes	Yes
3. 96 / 2120	Angle of Onset	35	35

Convergence: Right eye ✓ Left eye ✓

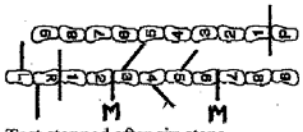
5 ONE LEG STAND

Romberg Balance



Circular sway – nearly fell

Walk and Turn test



Test stopped after six steps

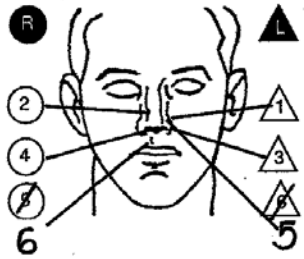
	1st Nine	2nd Nine
Cannot keep balance	✓✓	
Starts too soon		
Stops walking		
Misses heel-toe	✓✓	
Steps off line	✓✓✓	
Raises arms	✓✓	
Actual steps taken	6	

L	R	
✓	☐	Sways while balancing
☑	☐	Uses arms to balance
☐	☐	Hopping
✓	☐	Puts foot down

Test stopped

Internal clock: 19 estimated as 30 seconds	Describe Turn: N/A	Cannot do test (explain): Stopped - nearly fell	Type of footwear: Sandals

Draw lines to spots touched



PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	5.0	6.5	4.5
Right Eye	5.0	6.5	4.5

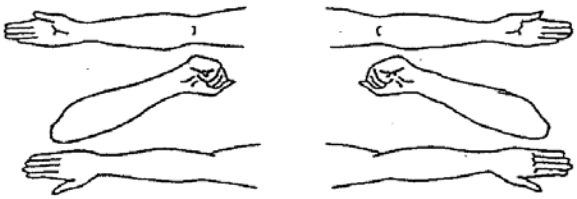
Nasal area: Runny nose, red

Oral cavity: Paint like odor

REBOUND DILATION: ☐ Yes ☒ No

REACTION TO LIGHT: Normal

RIGHT ARM / LEFT ARM



Nothing observed

Blood pressure: 146/104	Temperature: 98.8

Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid

Comments:

What drugs or medications have you been using? "I don't do drugs."	How much? N/A	Time of use? Refused	Where were the drugs used? (Location) Refused
Date / Time of arrest: 08/07/10 1945	Time DRE was notified: 2005	Evaluation start time: 2035	Evaluation completion time: 2140	Precinct/Station:
Officer's Signature:	DRE #: 8102	Reviewed/approved by / date:	

Opinion of Evaluator: ☐ Rule Out ☐ Alcohol ☐ CNS Stimulant ☐ Dissociative Anesthetic ■ Inhalant ☐ Medical ☐ CNS Depressant ☐ Hallucinogen ☐ Narcotic Analgesic ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Mashburn, Cathy

1. **LOCATION:** The evaluation was conducted at the Polk County Jail.

2. **WITNESSES:** The evaluation was witnessed and recorded by Sergeant Russ Belz of the Story County Sheriff's Office.

3. **BREATH ALCOHOL TEST:** Mashburn's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was notified by radio to contact Deputy Grimm at the Polk County Jail for a drug evaluation. Deputy Grimm advised he arrested Mashburn after observing her pull out in front of oncoming traffic nearly causing a crash. The suspect was cooperative but slow to respond to questions. She performed poorly on the SFST's and was arrested for DUI. After arresting her, Deputy Grimm located a can of paint remover and several rags in her vehicle.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room at the jail. Her speech was slow and slurred. Her coordination was poor and she staggered several times. Her eyes were watery and bloodshot.

6. **MEDICAL PROBLEMS AND TREATMENT:** The suspect stated she felt dizzy.

7. **PSYCHOPHYSICAL TESTS:** Romberg Balance: The suspect had an approximate 3" circular sway and she estimated 30 seconds in 19 seconds. Walk & Turn: The suspect lost her balance twice during the instructions, staggered and nearly fell. The test was stopped after six steps when she again nearly fell. One Leg Stand: After putting her right foot down three times and nearly falling, the test was stopped. Finger to Nose: The suspect had difficulty with this test. She touched the tip of her nose on one of the six attempts. She also used the wrong hand on attempts #5 and #6.

8. **CLINICAL INDICATORS:** The suspect had six clues of HGN and a Lack of Convergence. Her pulse and blood pressure were above the normal ranges.

9. **SIGNS OF INGESTION:** The suspect had a red, runny nose. Her eyes were bloodshot and watery. She also had a paint-like odor on her breath and clothing.

10. **SUSPECT'S STATEMENTS:** Suspect admitted drinking a "couple of wine coolers" but denied using any other substances.

11. **DRE'S OPINION:** In my opinion Mashburn is under the influence of an ***Inhalant*** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:**

Rev. 10/10

Topics for Study

1. What are the three major subcategories of Inhalants?

   Volatile Solvents, Aerosols, Anesthetic Gases

2. What are some of the principal active ingredients in many volatile substances?

   Toluene, Acetone, Naphtha, Aliphatic Acetates, Hexane, Cyclohexane, Benzene

3. In what important respect do the effects of Anesthetic Gases differ from the effects of Volatile Solvents and Aerosols?

   Anesthetic gases lower blood pressure while keeping the pulse rate elevated, Volatile Solvents and Aerosols elevate blood pressure and pulse.

4. Do any of the subcategories of Inhalants cause pulse rate to decrease?

   No

5. The effects of Amyl Nitrite and Butyl Nitrite last from a few seconds to up to _____ minutes.

   20