

**SESSION VIII**

**CONCEPTS AND PRINCIPLES OF THE  
STANDARDIZED FIELD SOBRIETY TESTS**

## SESSION VIII

### CONCEPTS AND PRINCIPLES OF THE STANDARDIZED FIELD SOBRIETY TESTS

Upon successfully completing this session, the participant will be able to:

- o Discuss the development and validity of the research and the standardized elements, clues and interpretation of the three standardized field sobriety tests.
- o Discuss the different types of nystagmus and their effects on the Horizontal Gaze Nystagmus test.
- o Discuss and properly administer the three Standardized Field Sobriety Tests.
- o Discuss and recognize the clues of the three Standardized Field Sobriety Tests.
- o Describe in a clear and convincing fashion and properly record the results of the three Standardized Field Sobriety Tests on a standard note taking guide.
- o Discuss the limiting factors of the three Standardized Field Sobriety Tests.

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| A. Overview: Development and Validation                                   | o Instructor-Led Presentation                  |
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| C. Horizontal Gaze Nystagmus  | o Participant Practice Session & Demonstration |
| D. Vertical Gaze Nystagmus  |  |
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## OVERVIEW OF SFST RESEARCH AND DEVELOPMENT

1. For many years law enforcement officers have utilized field sobriety tests to determine the impairment of a person's driving due to alcohol influence. The performance of the person on those field sobriety tests was used by the officer to develop probable cause for arrest and as evidence in court. A wide variety of field sobriety tests existed and there was a need to develop a battery of standardized valid tests.
2. Beginning in late 1975, extensive scientific research studies were sponsored by NHTSA through a contract with the Southern California Research Institute (SCRI) to determine roadside field sobriety tests were the most accurate. SCRI published the following three reports:
  - o California: 1977 (Lab)
  - o California: 1981 (Lab and Field)
  - o Maryland, D.C., V.A., N.C., 1983 (Field)
3. SCRI traveled to law enforcement agencies throughout the United States to select the most commonly used field sobriety tests. Six tests were used in the initial stages of this study.
4. Laboratory research indicated that three of these tests, when administered in a standardized manner, were a highly accurate and reliable battery of tests for distinguishing BACs above 0.10:
  - o Horizontal Gaze Nystagmus (HGN)
  - o Walk-and-Turn (WAT)
  - o One-Leg Stand (OLS)
5. NHTSA analyzed the laboratory test data and found:
  - o HGN, by itself, was 77% accurate
  - o WAT, by itself, was 68% accurate
  - o OLS, by itself, was 65% accurate
  - o By combining HGN and WAT an 80% accuracy can be achieved.
6. The final phase of this study was conducted as a field validation.
  - o Standardized, practical and effective procedures were developed
  - o The tests were determined to discriminate in the field, as well as in the laboratory.

7. The three standardized test were found to be highly reliable in identifying subjects whose BACs were above 0.10. The results of the study unmistakably validated the SFSTs.

## SFST VALIDATION STUDIES

1. Three SFST validation studies were undertaken between 1995 and 1998:
  - o Colorado - 1995
  - o Florida - 1997
  - o San Diego - 1998
2. The Colorado SFST validation study was the first full field study that utilized law enforcement personnel experienced in the use of SFSTs.
  - o The initial study utilized only a few experienced officers in DWI enforcement in both a laboratory setting and field setting.
  - o Correct arrests decisions were made 93% of the time based on the 3-test battery (HGN, WAT, OLS). Substantially higher than the initial study results.
3. The Florida SFST field validation study was undertaken in order to answer the question of whether SFSTs are valid and reliable indices of the presence of alcohol when used under present day traffic and law enforcement conditions.
  - o Correct decisions to arrest were made 95% of the time based on the 3-test battery (HGN, WAT, OLS).
  - o This is the third SFST field validation study that has been undertaken. Each has shown that the SFST 3-test battery is the only scientifically validated and reliable method for discriminating between impaired and unimpaired drivers.
4. The San Diego SFST validation field study was undertaken because of the nationwide trend towards lower the BAC limits to 0.08. The question to be answered was "does SFST discriminate at BAC's below 0.10".
  - o Correct arrest decisions were made 91% of the time based on the 3-test battery (HGN, WAT, OLS) at the 0.08 level and above.

- o The results of this study provide a clear evidence of the validity of the 3-test battery. To support arrest decisions at above or below 0.08, it strongly suggests that the SFSTs also accurately discriminate BACs at 0.04 and above.

## OVERVIEW OF NYSTAGMUS

### Nystagmus

Nystagmus is defined as an involuntary jerking of the eyes. Alcohol and certain other drugs cause Horizontal Gaze Nystagmus.

### Categories of Nystagmus

There are three general categories of nystagmus:

1. Vestibular Nystagmus is caused by movement or action to the vestibular system.
  - A. Types of vestibular nystagmus:
    - o Rotational Nystagmus occurs when the person is spun around or rotated rapidly, causing the fluid in the inner ear to be disturbed. If it were possible to observe the eyes of a rotating person, they would be seen to jerk noticeably.
    - o Post Rotational Nystagmus is closely related to rotational nystagmus: when the person stops spinning, the fluid in the inner ear remains disturbed for a period of time, and the eyes continue to jerk.
    - o Caloric Nystagmus occurs when fluid motion in the canals of the vestibular system is stimulated by temperature as by putting warm water in one ear and cold in the other.
    - o Positional Alcohol Nystagmus (PAN) occurs when a foreign fluid, such as alcohol, that alters the specific gravity of the blood is in unequal concentrations in the blood and the vestibular system.
2. Nystagmus can also result directly from neural activity:
  - o Optokinetic Nystagmus occurs when the eyes fixate on an object that suddenly moves out of sight, or when the eyes watch sharply contrasting moving images.

Examples of optokinetic nystagmus include watching strobe lights, rotating lights, or rapidly moving traffic in close proximity. The Horizontal Gaze Nystagmus test will not be influenced by optokinetic nystagmus when administered properly.

- o Physiological Nystagmus is a natural nystagmus that keeps the sensory cells of the eye from tiring. It is the most common type of nystagmus. It happens to all of us, all the time. This type of nystagmus produces extremely minor tremors or jerks of the eyes. These tremors are generally too small to be seen with the naked eye. Physiological nystagmus will have no impact on our Standardized Field Sobriety Tests, because its tremors are generally invisible.
  - o Gaze Nystagmus occurs as the eyes move from the center position. Gaze nystagmus is separated into three types:
    - (1) Horizontal Gaze Nystagmus occurs as the eyes move to the side. It is the observation of the eyes for Horizontal Gaze Nystagmus that provides the first and most accurate test in the Standardized Field Sobriety Test battery. Although this type of nystagmus is most accurate for determining alcohol impairment, its presence may also indicate use of certain other drugs.
    - (2) Vertical Gaze Nystagmus is an involuntary jerking of the eyes (up and down) which occurs when the eyes gaze upward at maximum elevation. The presence of this type of nystagmus is associated with high doses of alcohol for that individual and certain other drugs. The drugs that cause Vertical Gaze Nystagmus are the same ones that cause Horizontal Gaze Nystagmus.

Note: There is no drug that will cause Vertical Gaze Nystagmus that does not cause Horizontal Gaze Nystagmus. If Vertical Gaze Nystagmus is present and Horizontal Gaze Nystagmus is not, it could be a medical condition.
    - (3) Resting Nystagmus is referred to as a jerking of the eyes as they look straight ahead. Its presence usually indicates a pathology or high doses of a Dissociative Anesthetic drug such as PCP. If detected, take precautions. **(OFFICER SAFETY.)**
3. Nystagmus may also be caused by certain pathological disorders. They include brain tumors and other brain damage or some diseases of the inner ear. These pathological disorders occur in very few people and in even fewer drivers.

## Medical Impairment

The examinations that you can conduct to assess possible medical impairment include:

- o Pupil size
- o Resting Nystagmus
- o Tracking ability

## PROCEDURES

### Procedures to Assess Possible Medical Impairment

Prior to administration of HGN, the eyes are checked for equal pupil size, resting nystagmus, and equal tracking (can they follow an object together). If the eyes do not track together, or if the pupils are noticeably unequal in size, the chance of medical disorders or injuries causing the nystagmus is present.

### Procedures of Horizontal Gaze Nystagmus Testing: The Three Clues

The test you will use at roadside is "Horizontal Gaze Nystagmus" -- an involuntary jerking of the eyes occurring as the eyes gaze toward the side. Some jerking will be seen if the eyes are moved far enough to the side.

1. The Lack of Smooth Pursuit (Clue Number One) - The eyes can be observed to jerk or "bounce" as they follow a smoothly moving stimulus, such as a pencil or penlight. The eyes of an unimpaired person will follow smoothly, i.e., a marble rolling across a smooth pane of glass, or windshield wipers moving across a wet windshield.
2. Distinct and Sustained Nystagmus At Maximum Deviation (Clue Number Two) - Distinct and sustained nystagmus will be evident when the eye is held at maximum deviation for a minimum of four seconds. People exhibit slight jerking of the eye at maximum deviation, even when unimpaired, but this will not be evident or sustained for more than a few seconds. When impaired by alcohol, the jerking will be larger, more pronounced, sustained for more than four seconds, and easily observable.
3. Onset of Nystagmus Prior To 45 Degrees (Clue Number Three) - The point at which the eye is first seen jerking. If the jerking begins prior to 45 degrees it is evident that the person has a BAC above 0.08, as shown by recent research.

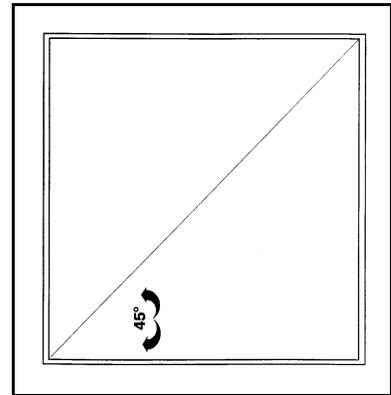
The higher the degree of impairment, the sooner the nystagmus will be observable.

## Estimating a 45-Degree Angle

It is important to know how to estimate a 45-degree angle. How far you position the stimulus from the suspect's nose is a critical factor in estimating a 45-degree angle. (i.e., If the stimulus is held 12" in front of the suspect's nose, it should be moved 12" to the side to reach 45 degrees. Likewise, if the stimulus is held 15" in front of the suspect's nose, it should be moved 15" to the side to reach 45 degrees.)

For practice, a 45-degree template can be prepared by making a 15"-square cardboard and connecting its opposite corners with a diagonal line.

To use this device, hold it up so that the person's nose is above the diagonal line. Be certain that one edge of the template is centered on the nose and perpendicular to (or, at right angles to) the face. Have the person you are examining follow a penlight or some other object until suspect is looking down the 45-degree diagonal. Note the position of the eye. With practice, you should be able to recognize this angle without using the template.



## Specific Procedures

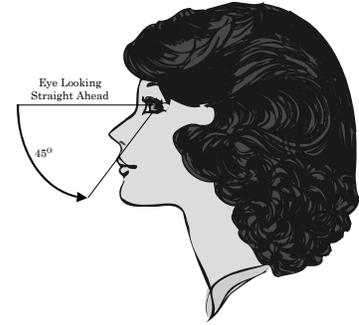
If the suspect is wearing eyeglasses, have them removed.

Give the suspect the following instructions from a safe position. **(FOR OFFICER SAFETY KEEP YOUR WEAPON AWAY FROM THE SUSPECT):**

- o "I am going to check your eyes."
- o "Keep your head still and follow this stimulus with your eyes only."
- o "Keep following the stimulus with your eyes until I tell you to stop."

Position the stimulus approximately 12-15 inches from the suspect's nose and slightly above eye level. Check to see that both pupils are equal in size. If they are not, this may indicate a head injury. You may observe Resting Nystagmus at this time, then check the suspect's eyes for the ability to track together. Move the stimulus smoothly across the suspect's entire field of vision. Check to see if the eyes track the stimulus together or one lags behind the other. If the eyes don't track together it could indicate a possible medical disorder, injury, or blindness.

Check the suspect's left eye by moving the stimulus to your right. Move the stimulus smoothly, at a speed that requires approximately two seconds to bring the suspect's eye as far to the side as it can go. While moving the stimulus, look at the suspect's eye and determine whether it is able to pursue smoothly. Now, move the stimulus all the way to the left, back across suspect's face checking if the right eye pursues smoothly. Movement of the stimulus should take approximately two seconds out and two seconds back for each eye. Repeat the procedure.



After you have checked both eyes for lack of smooth pursuit, check the eyes for distinct and sustained nystagmus at maximum deviation beginning with the suspect's left eye. Simply move the object to the suspect's left side until the eye has gone as far to the side as possible. Usually, no white will be showing in the corner of the eye at maximum deviation. Hold the eye at that position for a minimum of four seconds, and observe the eye for distinct and sustained nystagmus. Move the stimulus all the way across the suspect's face to check the right eye holding that position for a minimum of four seconds. Repeat the procedure.

Note: Fatigue Nystagmus. This type of nystagmus may begin if a subject's eyes are held at maximum deviation for more than 30 seconds.

Next, check for onset of nystagmus prior to 45 degrees. Start moving the stimulus towards the right (suspect's left eye) at a speed that would take approximately four seconds for the stimulus to reach the edge of the suspect's shoulder. Watch the eye carefully for any sign of jerking. When you see it, stop and verify that the jerking continues. Now, move the stimulus to the left (suspect's right eye) at a speed that would take approximately four seconds for the stimulus to reach the edge of the suspect's shoulder. Watch the eye carefully for any sign of jerking. When you see it, stop and verify that the jerking continues. Repeat the procedure. NOTE: It is important to use the full four seconds when checking for onset of nystagmus. If you move the stimulus too fast, you may go past the point of onset or miss it altogether.

If the suspect's eyes start jerking before they reach 45 degrees, check to see that some white of the eye is still showing on the side closest to the ear. If no white of the eye is showing, you either have taken the eye too far to the side (that is more than 45 degrees) or the person has unusual eyes that will not deviate very far to the side.

- | ADMINISTRATIVE PROCEDURES |   |
|---------------------------|---|
| 1.                        | CHECK FOR EYEGLASSES                    |
| 2.                        | VERBAL INSTRUCTIONS                     |
| 3.                        | POSITION STIMULUS (12-15 INCHES)        |
| 4.                        | EQUAL PUPIL SIZE AND RESTING NYSTAGMUS  |
| 5.                        | TRACKING                                |
| 6.                        | LACK OF SMOOTH PURSUIT                  |
| 7.                        | DIST. & SUSTAINED NYSTAGMUS @ MAX. DEV. |
| 8.                        | ONSET OF NYSTAGMUS PRIOR TO 45°         |
| 9.                        | TOTAL THE CLUES                         |
| 10.                       | CHECK FOR VERTICAL GAZE NYSTAGMUS       |

NOTE: Nystagmus may be due to causes other than alcohol. These other causes include seizure medications and some other drugs. A large disparity between the performance of the right and left eye may indicate a medical condition.

### Test Interpretation

You should look for three clues of nystagmus in each eye.

1. The eye cannot follow a moving object smoothly.
2. Nystagmus is distinct and sustained when the eye is held at maximum deviation for a minimum of four seconds.
3. The angle of onset of nystagmus is prior to 45 degrees.

Based on the original research, if you observe four or more clues it is likely that the suspect's BAC is above 0.10. Using this criterion you will be able to classify about 77% of your suspects accurately. This was determined during laboratory and field testing and helps you weigh the various field sobriety tests in this battery as you make your arrest decision.

### Vertical Gaze Nystagmus

The Vertical Gaze Nystagmus test is simple to administer. During the Vertical Gaze Nystagmus test, look for jerking as the eyes move up and are held for approximately four seconds at maximum elevation.

1. Position the stimulus horizontally, about 12-15 inches in front of the suspect's nose.
2. Instruct the suspect to hold the head still, and follow the object with the eyes only.
3. Raise the object until the suspect's eyes are elevated as far as possible.
4. Hold for approximately four seconds.
5. Watch closely for evidence of jerking.

Horizontal and Vertical Gaze Nystagmus can be observed directly and does not require special equipment. You will need a contrasting stimulus for the suspect to follow with their eyes. This can be the tip of your index finger, penlight, or pen. The stimulus used should be held slightly above eye level, so that the eyes are wide open when they look directly at it. It should be held approximately 12-15 inches in front of the nose. Remain aware of your position in relation to the suspect at all times.

# **OFFICER SAFETY IS THE NUMBER ONE PRIORITY ON ANY TRAFFIC STOP.**

## Procedures for Walk-and-Turn Testing

### 1. Instructions Stage: Initial Positioning and Verbal Instructions

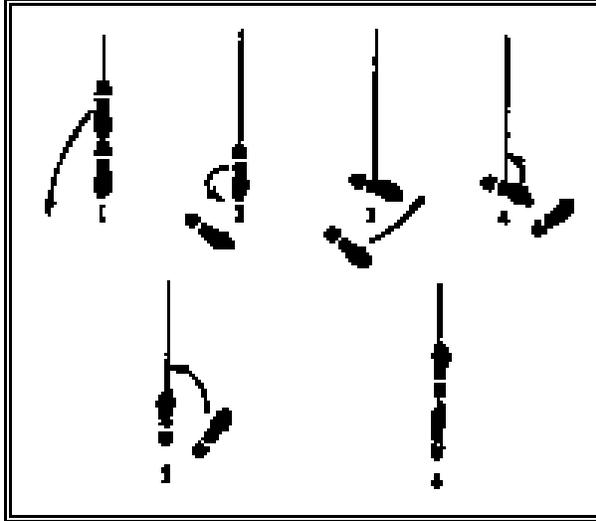
For standardization in the performance of this test, have the suspect assume the heel-to-toe stance by giving the following verbal instructions, accompanied by demonstrations:

- o "Place your left foot on the line" (real or imaginary). Demonstrate.
- o "Place your right foot on the line ahead of the left foot, with heel of right foot against toe of left foot." Demonstrate.
- o "Place your arms down at your sides." Demonstrate.
- o "Maintain this position until I have completed the instructions. Do not start to walk until told to do so."
- o "Do you understand the instructions so far?" (Make sure suspect indicates understanding.)

### 2. Demonstrations and Instructions for the Walking Stage

Explain the test requirements, using the following verbal instructions, accompanied by demonstrations:

- o "When I tell you to start, take nine heel-to-toe steps, turn, and take nine heel-to-toe steps back." (Demonstrate 3 heel-to-toe steps.)
- o "When you turn, keep the front foot on the line, and turn by taking a series of small steps with the other foot, like this." (Demonstrate).
- o "While you are walking, keep your arms at your sides, watch your feet at all times, and count your steps out loud."
- o "Once you start walking, don't stop until you have completed the test."
- o "Do you understand the instructions?" (Make sure suspect understands.)
- o "Begin, and count your first step from the heel-to-toe position as 'One.'"



### 3. Test Interpretation

You may observe a number of different behaviors when a suspect performs this test. Original research demonstrated that the behaviors listed below are likely to be observed in someone with a BAC above 0.10. Look for the following clues each time this test is given:

- A. Cannot keep balance while listening to the instructions. Two tasks are required at the beginning of this test. The suspect must balance heel-to-toe on the line, and at the same time, listen carefully to the instructions. Typically, the person who is impaired can do only one of these things. The suspect may listen to the instructions, but not keep balance. Record this clue if the suspect does not maintain the heel-to-toe position throughout the instructions. (Feet must actually break apart.) Do not record this clue if the suspect sways or uses the arms to balance but maintains the heel-to-toe position.
- B. Starts before the instructions are finished. The impaired person may also keep balance, but not listen to the instructions. Since you specifically instructed the suspect not to start walking "until I tell you to begin," record this clue if the suspect does not wait.
- C. Stops while walking. The suspect pauses for several seconds. Do not record this clue if the suspect is merely walking slowly.
- D. Does not touch heel-to-toe. The suspect leaves a space of more than one-half inch between the heel and toe on any step.
- E. Steps off the line. The suspect steps so that one foot is entirely off the line.

- F. Uses arms to balance. The suspect raises one or both arms more than 6 inches from the sides in order to maintain balance.
- G. Improper turn. The suspect removes the front foot from the line while turning. Also record this clue if the suspect has not followed directions as demonstrated, i.e., spins or pivots around.
- H. Incorrect number of steps. Record this clue if the suspect takes more or fewer than nine steps in either direction.

Note: If suspect can't do the test, record observed clues and document the reason for not completing the test, e.g. suspect's safety.

If the suspect has difficulty with the test (for example, steps off the line), continue from that point, not from the beginning. This test may lose its sensitivity if it is repeated several times.

Observe the suspect from a safe distance and limit your movement which may distract the suspect during the test. **Always consider officer safety.**

Based on original research, if the suspect exhibits two or more clues on this test or fails to complete it, classify the suspect's BAC as above 0.10. Using this criterion, you will be able to accurately classify 68% of your suspects.

#### 4. Test Conditions

Walk-and-Turn test requires a designated straight line, and should be conducted on a reasonably dry, hard, level, nonslippery surface. There should be sufficient room for suspects to complete nine heel-to-toe steps. Note: Recent field validation studies have indicated that varying environmental conditions have not affected a suspect's ability to perform this test.

The original research indicated that individuals over 65 years of age, back, leg or inner ear problems had difficulty performing this test. Individuals wearing heels more than 2 inches high should be given the opportunity to remove their shoes.

#### 5. Combined Interpretation of Horizontal Gaze Nystagmus and Walk-and-Turn Tests

Based on the original research, combining four or more clues of HGN and two or more clues of the Walk-and-Turn, suspects can be classified as above 0.10 BAC 80% of the time.

## Procedures for One-Leg Stand Testing

### 1. Instructions Stage: Initial Positioning and Verbal Instructions

Initiate the test by giving the following verbal instructions, accompanied by demonstrations.

- o "Please stand with your feet together and your arms down at the sides, like this." (Demonstrate)
- o "Do not start to perform the test until I tell you to do so."
- o "Do you understand the instructions so far?" (Make sure suspect indicates understanding.)

### 2. Demonstrations and Instructions for the Balance and Counting Stage

Explain the test requirements, using the following verbal instructions, accompanied by demonstrations:

- o "When I tell you to start, raise one leg, either leg, with the foot approximately six inches off the ground, keeping your raised foot parallel to the ground." (Demonstrate one leg stance.)
- o "You must keep both legs straight, arms at your side."
- o "While holding that position, count out loud in the following manner: "one thousand and one, one thousand and two, one thousand and three, until told to stop." (Demonstrate a count, as follows: "one thousand and one, one thousand and two, one thousand and three, etc." Officer should not look at his foot when conducting the demonstration - OFFICER SAFETY.)
- o "Keep your arms at your sides at all times and keep watching the raised foot."
- o "Do you understand?" (Make sure suspect indicates understanding.)
- o "Go ahead and perform the test." (Officer should always time the 30 seconds. Test should be discontinued after 30 seconds.)

Observe the suspect from a safe distance. If the suspect puts the foot down, give instructions to pick the foot up again and continue counting from the point at which the foot touched the ground. If the suspect counts very slowly, terminate the test after 30 seconds.

### 3. Test Interpretation

You may observe a number of different behaviors when a suspect performs this test. The original research found the behaviors listed below are the most likely to be observed in someone with a BAC above 0.10. Look for the following clues each time the One-Leg Stand test is administered.

- A. The suspect sways while balancing. This refers to side-to-side or back-and-forth motion while the suspect maintains the one-leg stand position.
- B. Uses arms for balance. Suspect moves arms 6 or more inches from the side of the body in order to keep balance.
- C. Hopping. Suspect is able to keep one foot off the ground, but resorts to hopping in order to maintain balance.
- D. Puts foot down. The suspect is not able to maintain the one-leg stand position, putting the foot down one or more times during the 30-second count.

Note: If suspect can't do the test, record observed clues and document the reason for not completing the test, e.g. suspect's safety.

Remember that time is critical in this test. The original research has shown a person with a BAC above 0.10 can maintain balance for up to 25 seconds, but seldom as long as 30.

Based on original research, if an individual shows two or more clues or fails to complete the One-Leg Stand, there is a good chance the BAC is above 0.10. Using that criterion, you will accurately classify 65% of the people you test as to whether their BAC's are above 0.10.

Observe the suspect from a safe distance and remain as motionless as possible during the test so as not to interfere. If the suspect puts the foot down, give instructions to pick the foot up again and continue counting from the point at which the foot touched the ground. If the suspect counts very slowly, terminate the test after 30 seconds.

### 4. Test Conditions

One-Leg Stand requires a reasonably dry, hard, level, and non-slippery surface. Suspect's safety should be considered at all times.

The original research indicated that certain individuals over 65 years of age, back, leg or inner ear problems, or people who are overweight by 50 or more pounds had difficulty performing this test. Individuals wearing heels more than 2 inches high should be given the opportunity to remove their shoes.

5. Taking Field Notes on Suspects' Performance of Field Sobriety Tests

For purposes of the arrest report and courtroom testimony, it is not enough to record the total number of clues on the three tests. The number of clues is important to the police officer in the field because it helps determine whether there is probable cause to arrest. But to secure a conviction, more descriptive evidence is needed.

The officer must be able to describe how the suspect performed on the tests, and exactly what the suspect did.

The standard note taking guide provided in this Manual is designed to help you develop a clear description of the suspect's performance on the tests.

6. Taking Field Notes on The Eye Procedures

First, have subject remove glasses.

The section for Medical Assessment appears at the bottom of the guide's front page.

- o Check "Yes" or "No" box for equal pupil size.
- o Check "Yes" or "No" box for equal tracking.

In the section labeled "other", record any facts, circumstances, conditions, or observations that may be relevant to this procedures (i.e., Resting Nystagmus).

The section on the Horizontal Gaze Nystagmus test appears on the bottom of the guide's front side.

Complete the entire test for both eyes, writing "yes" or "no" for each nystagmus clue.

Equal Pupils	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Equal Tracking	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Vertical Nystagmus	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other (i.e., Resting Nystagmus)	_____	

<u>HORIZONTAL GAZE NYSTAGMUS</u>		
	LEFT	RIGHT
★ LACK OF SMOOTH PURSUIT		
★ DISTINCT AND SUSTAINED NYSTAGMUS AT MAXIMUM DEVIATION		
★ ONSET OF NYSTAGMUS PRIOR TO 45 DEGREES		

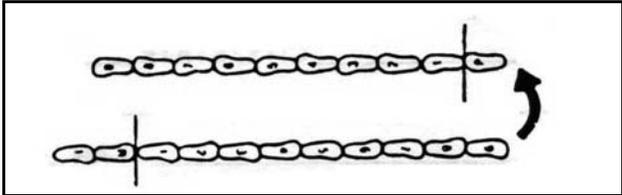
- o Write "yes" if the clue is present;
- o Write "no" if the clue is not present.

In the section labeled "other," record any facts, circumstances, conditions or observations that may be relevant to this test.

- o Examples of additional evidence of impairment emerging during nystagmus test:
  - suspect unable to keep head still;
  - suspect swaying noticeably;
  - suspect utters incriminating statements.
  
- o Examples of conditions that may interfere with suspect's performance of the Horizontal Gaze Nystagmus test:
  - wind, dust, etc. irritating suspect's eyes;
  - visual or other distractions impeding the test (always face suspect away from rotating lights, strobe lights and traffic passing in close proximity).

### 7. Taking Field Notes on Walk-and-Turn Testing

The section on the Walk-and-Turn test appears at the top of the guide's back side.

<u>WALK AND TURN</u>		
CANNOT KEEP BALANCE	<input style="width: 60px; height: 20px;" type="text"/>	
STARTS TOO SOON	<input style="width: 60px; height: 20px;" type="text"/>	
		
	FIRST NINE STEPS	SECOND NINE STEPS
STOPS WALKING	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
MISSES HEEL -TO- TOE	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
STEPS OFF LINE	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
RAISES ARMS	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
ACTUAL STEPS TAKEN	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
IMPROPER TURN (Describe)		
CANNOT DO TEST (EXPLAIN)		
OTHER:		

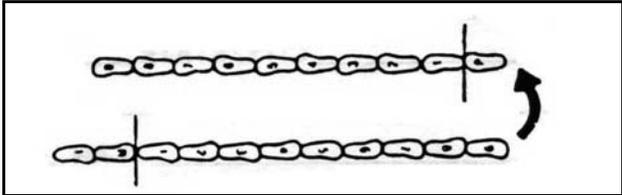
The first two clues, "cannot keep balance" and "starts too soon" apply only during the instructions stage of the test. Record the number of times each of those clues appear.

For example, if the suspect's feet "break apart" from the heel-to-toe stance twice during the instructions stage, write "2" in the box alongside the "cannot keep balance" clue. Similarly, if the suspect never "starts too soon," write "0" in that box. Note: Actual steps taken is for scoring purposes only. Wrong number of steps is the validated clue.

Don't leave boxes blank. If a particular clue never shows up, write "0" in the corresponding box.

Record the next five clues separately for the walk down the line, and then up the line.

- A. If a suspect stops walking, record it by drawing a vertical line across the toe of the step at which the stop occurred. Do this for the first as well as the second nine steps. Place the letter "S" at bottom of the vertical line to indicate stops walking.

<u>WALK AND TURN</u>					
CANNOT KEEP BALANCE	<input style="width: 50px; height: 20px;" type="text"/>				
STARTS TOO SOON	<input style="width: 50px; height: 20px;" type="text"/>				
					
<table style="width: 100%; border: none;"> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center; padding: 0 20px;">FIRST NINE STEPS</td> <td style="border: none; text-align: center;">SECOND NINE STEPS</td> </tr> </table>				FIRST NINE STEPS	SECOND NINE STEPS
	FIRST NINE STEPS	SECOND NINE STEPS			
STOPS WALKING	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>			
MISSES HEEL -TO- TOE	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>			
STEPS OFF LINE	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>			
RAISES ARMS	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>			
ACTUAL STEPS TAKEN	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>			
IMPROPER TURN (Describe)					
CANNOT DO TEST (EXPLAIN)					
OTHER:					

- B. If suspect fails to touch heel-to-toe, record how many times this happens. Draw a vertical line across the toe of the step at which the miss occurred. Place the letter "M" at the top of the vertical line to indicate missed heel to toe.
- C. If suspect steps off the line while walking, record it by drawing a line from the appropriate foot print at an angle in the direction in which the foot stepped. Do it for each nine steps.
- D. If suspect uses arms to balance, give some indication of how often or how long this happens.
- o Example: suspect raised arms from sides three times; place a check for each occurrence in appropriate box.
  - o Example: suspect held arms away from sides during 3 through 7; place a check for each occurrence in appropriate box.
  - o Example: suspect "flapped" arms continuously; make a note.
- E. Record the actual number of steps taken by suspect in each direction.

For the next point, "improper turn," record a description of the turn.

If you note that the suspect "cannot perform test," indicate explicitly why you did so.

- o Example: "off line three times;"
- o Example: "staggered six steps to right, nearly fell;"
- o Example: "fear of injury."

At end of the test, examine each factor and determine how many clues have been recorded. Remember, each clue may appear several times, but still only constitutes one clue.

In the section labeled "other," record any facts, circumstances, conditions or observations that may be relevant to this test.

- o Examples of additional evidence of impairment during Walk-and-Turn test:
  - suspect verbally miscounts steps;
  - suspect utters incriminating statements.

- o Examples of conditions that may interfere with suspect's performance of the Walk-and-Turn test:
  - wind/weather conditions;
  - suspect's age, weight;
  - suspect's footwear.

8. Taking Field Notes on the Combined Interpretation of Nystagmus and Walk-and-Turn

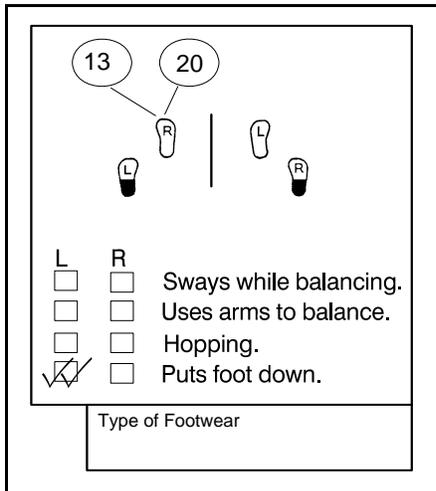
By combining four or more clues of HGN with two or more clues of the WAT test, suspects can be correctly classified as above 0.10 BAC 80% of the time.

9. Taking Field Notes on One-Leg Stand Testing

The section on the One-Leg Stand test appears midway down the page.

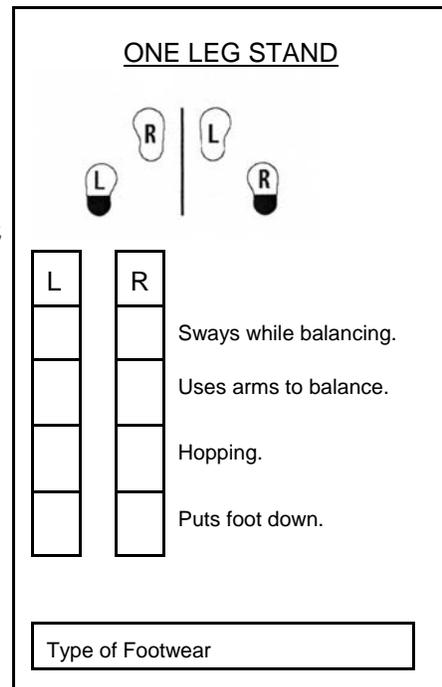
By recording when things happen as well as what happens, you will be able to prepare a more descriptive arrest report.

You will place check marks in or near the small boxes to indicate how many times you observed each of the clues. You will do this separately for the test on the left leg (L) or on the right leg (R).



In addition, if the suspect puts the foot down during the test, you will record when it happened (write the count on new note guide). For example, when standing on the left leg the suspect lowered the right foot at a count of "one thousand and thirteen", and again at "one thousand and twenty". Your diagram should look like the sketch to the left. You must also pay attention to the suspect's general appearance and behavior while the test is being performed.

At end of the test, examine each factor and determine how many distinct clues have appeared.



**IT IS NECESSARY TO EMPHASIZE THIS VALIDATION APPLIES ONLY WHEN:**

- o **THE TESTS ARE ADMINISTERED IN THE PRESCRIBED, STANDARDIZED MANNER**
- o **THE STANDARDIZED CLUES ARE USED TO ASSESS THE SUSPECT'S PERFORMANCE**
- o **THE STANDARDIZED CRITERIA ARE EMPLOYED TO INTERPRET THAT PERFORMANCE.**

**IF ANY ONE OF THE STANDARDIZED FIELD SOBRIETY TEST ELEMENTS IS CHANGED, THE VALIDITY IS COMPROMISED.**

At end of the test, examine each factor and determine how many clues have been recorded. Remember, each clue may appear several times, but still only constitutes one clue.

## TEST YOUR KNOWLEDGE

INSTRUCTIONS: Complete the following sentences.

1. Walk-and-Turn is an example of \_\_\_\_\_ field sobriety test.
2. The Walk-and-Turn requires a real or imaginary line and \_\_\_\_\_  
\_\_\_\_\_
3. During the \_\_\_\_\_ stage of the Walk-and-Turn, the suspect is required to count out loud.
4. Per the original research, the Walk-and-Turn can determine whether a suspect's BAC is above or below 0.10, \_\_\_\_\_ percent of the time.
5. In the Walk-and-Turn test, a suspect who steps off the line during the first 9 steps and once again during the second 9 steps and who raises arms for balance twice during the second nine steps has produced \_\_\_\_\_ distinct clue(s).
6. The Walk-and-Turn may not be valid when administered to persons who are over \_\_\_\_\_ years of age.
7. During the \_\_\_\_\_ stage of the One-Leg Stand the suspect must maintain balance for 30 seconds.
8. The One-Leg Stand requires that the suspect keep the foot elevated for \_\_\_\_\_ seconds.
9. Per original research, the One-Leg Stand can determine whether a suspect's BAC is above or below 0.10, \_\_\_\_\_ percent of the time.
10. In the One-Leg Stand test, a suspect who sways has exhibited \_\_\_\_\_ clue(s).
11. In the One-Leg Stand test, a suspect who raises arms, hops, and puts foot down has exhibited \_\_\_\_\_ clue(s).
12. The maximum number of clues for Horizontal Gaze Nystagmus that can appear in one eye is \_\_\_\_\_.
13. Per original research, the HGN test can determine whether a suspect's BAC is above 0.10, \_\_\_\_\_ percent of the time.
14. The third clue of HGN is an onset of nystagmus prior to \_\_\_\_\_ degrees.