

# AGN Roadside Sobriety Test, DUI, and Childhood Nystagmus: A Charge with no Foundation, Test with Flawed Scientific Bases, and Trial that Never Should have Occurred

Louis F. Dell'Osso, Ph.D.\*

\* Professor Emeritus

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## **Introduction**

I recently had the opportunity to provide expert-witness testimony in a case where the defendant, who had childhood nystagmus, was charged with Driving Under the Influence (DUI) based solely on a contraindicated and poorly administered Alcohol Gaze Nystagmus (AGN) Roadside Sobriety Test. Ever since I was first made aware of the AGN test in ~1989, I have looked forward to the possibility that I might be stopped while driving and, because of my Infantile Nystagmus Syndrome (INS), charged with DUI. Unfortunately/fortunately (?) that never happened. However, the present case afforded me the opportunity to expose the fatal flaws in a test that has been labeled “fraudulent science” (1). The defendant was stopped without probable cause, given an AGN test despite informing the officer that she had a “lazy eye,” and based on her Fusion Maldevelopment Nystagmus Syndrome (FMNS) alone, was charged with DUI.

This editorial is aimed at those of us whose research or medical care is devoted to improving the visual function of patients with nystagmus thereby enabling them to better perform tasks in their personal and professional lives. One of those tasks, achievable with proper therapy, is driving an automobile. However, the very existence of a so-called “sobriety” test that could be used to falsely convict them of DUI because they have nystagmus is something they should be informed of; additionally, they should be advised to refuse to take such a test. Hopefully, the contents of this editorial will provide physicians with information they can pass onto their patients to help them avoid the serious consequences of an undeserved DUI conviction.

## **The Bases of the AGN Test**

There are several assumptions about the eye movements of normal individuals that are the bases of the AGN test (2).

1. Normals do not develop nystagmus (physiological “end-point” nystagmus) at lateral gaze angles less than 45°.
2. A police officer (with no medical training) is able by observation alone, to differentiate nystagmus secondary to alcohol ingestion from the many other types of nystagmus (acquired and present from infancy). The AGN test is not supposed to be given to drivers with known nystagmus.

## **False Assumptions about Normals Underlying the AGN Test**

1. Eye-movement studies have demonstrated that many normals develop physiological “end-point” nystagmus at lateral gaze angles far less than 45°.

One study contained a subject whose nystagmus occurred at 20° of lateral gaze (3). In another, several subjects developed nystagmus at 10°, 20°, and 30° (4). If this latter study is representative of the general population, 12% would have nystagmus at 10°, 20% at 20°, and 30% at 30°.

2. As the present case illustrates, the AGN test has been given to drivers with life-long nystagmus and a history of strabismus (“lazy eye”). Officers with no training in the differential diagnosis of the many types of nystagmus are presumed to be able to eliminate drivers with nystagmus other than AGN. That presumption is without basis and contradicted by the fact that most physicians cannot do so despite 4 years of medical school. Our research using eye-movement data revealed that many cases of complex nystagmus couldn’t be reliably diagnosed by clinical observation alone, even by more highly trained physicians or nystagmus researchers (including this author).

### **False-Positive Results for Drivers with Nystagmus**

The AGN test will yield false-positive results (i.e., presumption and charge of DUI) not only for drivers with INS, FMNS, and Spasmus Nutans Syndrome (SNS), but also could do so for some normal drivers with physiological end-point nystagmus at small lateral gaze angles or are taking some prescription drugs, have had coffee or even aspirin. This lack of specificity alone should be sufficient to disqualify its use in determining such a serious charge.

### **Specific Court Case**

The defendant in this case was a female with childhood nystagmus who also happened to be a police lieutenant; a guilty DUI verdict would have seriously affected her livelihood. As the supplemental transcript shows, the arresting officer did not have probable cause to stop the defendant, administered the AGN test despite being told that the defendant had a “lazy eye” since childhood, did not administer the test properly, and claimed the test was positive despite the fact that he did not have a clear view of her eye movements due to the defendant’s myogenic ptosis of the eye lids. The officer claimed the defendant’s car crossed the midline many times but a careful examination of the officer’s video recording showed that during the whole drive along a winding country road the driver’s side rear wheel never touched or crossed the midline. The only times it did was at intersections when she made left turns. The physics of a four-wheeled vehicle with directionally fixed rear wheels and controllable front wheels dictates that the track of the rear wheels will always be within (i.e., along a shorter radius) that of the front wheels by an amount determined by the length of the vehicle and the sharpness of the turn. By the tortured reasoning of this officer, most drivers of cars and all drivers of trucks who made left turns could reasonably be stopped for possible DUI interrogation. Clearly, he did not have probable cause to stop the defendant’s car. When informed of the “lazy eye” condition, he should have suspected the possible accompaniment of nystagmus (50% of INS patients and 100% of FMNS patients have strabismus). He did not question the defendant about possible nystagmus. The AGN test should be performed with the target held above eye level to facilitate a clear view of the subject’s eyes. In this case, because of her “droopy eye lids” it should have been held even higher than normal. Instead, the video clearly shows that the target was held below the subject’s nose, thereby preventing a clear view of her eyes. Yet, the officer claimed the test was positive, just as he falsely claimed her car repeatedly crossed the midline while driving.

Prior to trial, the defendant eye movements were examined clinically and using eye-movement recordings by Dr. Richard Hertle and me. We positively identified her nystagmus as that of FMNS and so stated in our reports. That should have precluded the use of the AGN test and disqualified its putative findings as evidence of high blood alcohol level. In short, this case should never have been brought to trial; why the prosecutor chose to do so is an unanswered

question. Fortunately, the jury understood the fatal shortcomings of the AGN test in this case and ruled, "NOT GUILTY;" hopefully, this will be used as a precedent in future DUI cases.

## Discussion

The history of the AGN roadside sobriety test is fraught with scientific error and lack of expertise in eye movements by its authors. It was written under contract and was not subjected to peer review in any of the many journals specializing in eye movement and/or nystagmus. It is non-specific for alcohol and requires medical evaluation of a driver's nystagmus by an untrained officer, possibly under extreme conditions (i.e., darkness, roadside, inclement weather, etc.) (5). Such a test should never be the determining factor in a charge of DUI, as it was in this case despite specific instructions in the HGN test manual that it be used only in conjunction with other tests. Given the many flaws listed above, I contend that it has no place in determining DUI, even in conjunction with other tests.

The past several decades have seen a rise in the number of successfully treated patients with childhood nystagmus. Thanks to improved therapies, ~60% have been able to pass the vision test for a driving license (6). The physicians who helped make this dramatic improvement in the personal and professional lives of those patients should also inform them of the potential dangers that the use of the AGN test exposes them to (e.g., a false DUI charge or conviction, the time and stress involved in defending themselves against such a charge, and the large expenses that defense may entail). In addition to informing their patients of this danger, physicians should provide them with a signed note delineating the type of nystagmus the patient has; that note should be kept with the driver at all times when driving; some physicians may already do this (e.g., David Granet, personal communication). This preventative measure will provide a reasonable officer with the facts that should deter him from administering the AGN test to drivers with nystagmus. In cases where it does not, the patient should refuse to take that test since the presumed false-positive outcome could then be used against them, possibly violating their rights under the Fifth Amendment of the US Constitution. Our research and treatments have enhanced the lives of these patients; we owe it to them to provide the tools to prevent undeserved legal, economic, and psychological damage that would accompany a false DUI charge.

## Supplemental Material

### Transcript of L.F. Dell'Osso's Court Testimony

Downloadable from: <http://www.omlab.org/editorial/editorial.html>

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***Citation***

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