Point out: Even though the possibility of alcohol and/or drug impairment exists, officers should be aware of medical conditions having symptoms in common with alcohol influence.

By passing a stimulus across both eyes, you can check to see if both eyes are tracking equally. If they don’t (i.e., if one eye tracks the stimulus, but the other fails to move, or lags behind the stimulus) there is the possibility of a neurological disorder.

If a person has sight in both eyes, but the eyes fail to track together, there is a possibility that the person is suffering from an injury or illness affecting the brain.

For further information on drugs other than alcohol and procedures for conducting a preliminary examination to check for medical impairment, injury or drug impairment, see the curriculum package entitled “Introduction to Drugged Driving” or “ARIDE.”

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 may be present. If the eyes track together, continue with the test and document the results.

Officers are reminded to ask questions about the subject’s eye and general health conditions prior to administering the HGN test. If a subject responds or volunteers information that he or she is blind in one eye or has an artificial eye, the officer should make note of that and may proceed with the HGN test. If there are any abnormal findings on the pre-test checks, the officer may choose not to continue with the testing. If HGN testing is continued, officers are reminded that this does not follow the standardized protocol and should acknowledge such in any report.

If HGN testing is conducted on a person with a blind eye, typical inconsistent findings could be related to the blind eye not being able to see or track the stimulus, or when the normal eye can no longer see the stimulus, e.g., when checking distinct and sustained nystagmus at maximum deviation on the blind eye side.
For most HGN testing, the normal eye can see the stimulus and the movement of either eye should be consistent with what is expected. When the normal eye can no longer see the stimulus, most commonly when assessing Distinct and Sustained Nystagmus at Maximum Deviation on the blind eye side, normal tracking may be disrupted and eye movements not consistent with nystagmus may be observed.

In the “Robustness of the Horizontal Gaze Nystagmus Test” study conducted by Dr. Marcelline Burns, published by NHTSA in 2007, she assessed seven individuals with different causes and levels of blindness in one eye, including one with a prosthetic eye. The general results, at least for the HGN test, indicated that the non-blind eyes exhibited clues consistent with performance of otherwise normal subjects, while the blind eye exhibited fewer clues on average. And, per Dr. Burns, her results should only be understood as preliminary findings.