

## Examinee Suitability for EyeDetect Testing

This description is intended to assist in determining the suitability of examinees prior to testing with EyeDetect.

If administering EyeDetect+ tests (automated polygraph), we recommend you adhere to APA Guidelines on examinee suitability for polygraph exams.

The following are basic guidelines for EyeDetect tests:

- 1) As with any other psychophysiological test, examinees should get a good night's rest and have a meal prior to testing.
- 2) Functional maturity as it relates to reading and comprehension skills are considered more important than age. Examinees must be able to read and comprehend standard test questions. Note: Examinees with reasonable reading skills as young as 11 years old have been successfully tested.
- 3) Examinees must be able to see well enough to read a computer monitor unassisted or with glasses. Readers are helpful to standardize conditions. For Audio MCT, the examinee does not have to read, but must have functioning eyes.
- 4) Examinees impaired by alcohol or drugs should return another day for testing.
- 5) Examinees that have used eye drops such as tropicamide, an antimuscarinic drug that produces short-acting pupil dilation, should return another day for testing. If such examinees are tested, the eye tracker and algorithm will more than likely determine their pupils are reacting atypically and will be given a failing EyeDetect test score for use of a countermeasure.
- 6) Examinees with excessively dry eyes related to the use of antihistamines, age, or other eye conditions may be difficult to test due to calibration issues with the eye tracker. However, lubricating eye drops have been shown to resolve the issue sufficiently for testing. If the EyeDetect software calibrates to the eyes during the process, testing may proceed.
- 7) Examinees wearing excessive mascara, eye liner, or false eyelashes may be difficult to calibrate with the eye tracker. However, removal of such make-up usually resolves the issue.
- 8) EyeDetect does not measure heart rate, respiration, blood pressure, or skin conductance and conditions that affect those physiological measures do not generally impact EyeDetect test results.
- 9) Examinees that have suffered a traumatic brain injury should be given clearance by a neuropsychologist or neurologist to be tested with EyeDetect.

The following conditions should not negatively impact examinee suitability during an EyeDetect test, if the condition does not have a significant or dramatic impact on examinee mental acuity or physical functionality. We also recommend that if using EyeDetect+, the automated polygraph, you adhere to APA Guidelines on examinee suitability. In that case, some of the following conditions would make an examinee unsuitable for testing. In those cases, we recommend using EyeDetect.

- 1) Attention Deficit Disorder (ADD)
- 2) Post-traumatic Stress Disorder (PTSD)
- 3) High functioning autism or Asperger's Syndrome
- 4) Mild atrial or ventricular arrhythmia or premature ventricular contraction (PVC)
- 5) Asthma or other breathing disorder
- 6) Hyperhidrosis (excessive sweating)

- 7) Mild anxiety
- 8) Pregnancy
- 9) Typical use of medications such as antidepressants
- 10) Examinees as young as 11 years old have been successfully tested

The following eye or vision-related conditions may impact testing. The table below indicates the condition and possible impact, as well as potential remedies. (See “Notes” column below.)

Condition	EyeDetect OK	Potential Problem	Notes
• Amblyopia		Yes	
• Astigmatism	Yes		OK with glasses
• Blepharitis		Yes	
• Blepharospasm		Yes	
• Cataracts	Possible		Depends on severity
• Allergic conjunctivitis		Yes	
• Color blindness	Yes		
• Macular degeneration		Yes	
• Entropion and Ectropion		Yes	
• Strabismus		Yes	
• Glaucoma		Yes	
• Hyperopia	Yes		OK with glasses
• Lagophthalmos	Yes		
• Nystagmus	Possible	Yes	Depends on severity
• Tearing	Yes		
• Myopia	Yes		
• Dry eye	Yes		Use lubricating drops
• Presbyopia or tired eye	Yes		OK with glasses
• Eyelid ptosis		Yes	
• Keratitis		Yes	
• Keratoconus	Yes		OK with glasses
• Diabetic retinopathy		Yes	
• Hypertensive retinopathy		Yes	
• Sjogren's syndrome	Yes		

### Definitions

- Amblyopia (lazy eye) – occurs when vision in one eye is reduced because the eye and brain are not working together properly. The eyes may look normal, but the brain favors one eye.
- Astigmatism – common condition causing blurred vision. It occurs when the cornea is irregularly shaped or because of lens curvature inside the eye. Either condition prevents light from focusing properly on the retina. Vision is blurred at any distance.
- Blepharitis - inflammation of the eyelids; usually involves the part of the eyelid where the eyelashes grow.
- Blepharospasm - abnormal, involuntary blinking or spasm of the eyelids.
- Cataracts - clouding of the lens in the eye that affects vision.

- Allergic conjunctivitis - eye inflammation caused by an allergic reaction to substances like pollen or mold spores.
- Color blindness - caused by abnormal photopigments. There are three types based on photopigment defects in the different cones that respond to blue, green, and red light. Red-green color blindness is the most common.
- Macular degeneration - deterioration of the macula (area of the retina) that controls visual acuity.
- Dry Eye - caused by a chronic lack of sufficient lubrication and moisture on the surface of the eye.
- Entropion - when the lower eyelid and eyelashes turn towards the eye and rub against the cornea and conjunctiva, which can lead to excessive tearing, crusting, mucous discharge, irritation, impaired vision, etc.
- Ectropion - sagging and outward turning of the lower eyelid and eyelashes which can lead to excessive tearing, crusting, mucous discharge and irritation. During blinking, tearing occurs because the eyelids are not able to wipe the surface of the cornea properly to pump the tears into the tear duct.
- Glaucoma - disease that damages the optic nerve. It usually happens when fluid builds up in the front part of the eye.
- Hyperopia (farsightedness) - common refractive error where near objects are seen more clearly than distant objects.
- Keratitis - an inflammation of the cornea.
- Keratoconus - progressive eye disease in which the cornea thins and bulges into a cone-like shape and deflects light as it enters the eye on its way to retina, causing distorted vision.
- Lagophthalmos - inability to close the eyelids completely.
- Nystagmus - the eyes make involuntary, repetitive, uncontrolled movements which often result in reduced vision and depth perception and may affect balance and coordination. Eye movements can occur from side to side, up and down, or in a circular pattern.
- Myopia (Nearsightedness) - common refractive error where distant objects are seen more clearly than objects that are far.
- Presbyopia (tired eye) - difficulty in seeing near objects that occurs due to aging of the lens; typically manifests itself from the age of 40 years.
- Eyelid ptosis - when the upper eyelid droops over the eye and covers the pupil.
- Diabetic retinopathy - diabetes complication that affects eyes. It's caused by damage to the blood vessels.
- Hypertensive Retinopathy - retinal vascular damage caused by hypertension.
- Strabismus - condition in which a person cannot align both eyes simultaneously under normal conditions.
- Tearing - when a person produces an excess of tears without any apparent reason.