

Troubleshooting Client Vision Problems

This document describes problems clients frequently present and possible causes. The occupational therapist may be able to solve some of the problems, but others must be handled by the low vision doctor (optometrist or ophthalmologist). If an occupational therapist is not certain or has any question about complaints or problems clients pose, he or she should consult with the client's low vision doctor. Clients with low vision may present with the following problems. Possible causes for each problem appear after the list below.

- Binocular diplopia
- Black spots through the system
- Blurred vision (constant)
- Chromatic aberration (color distortion)
- Difficulty keeping place when reading
- Difficulty locating the target
- Dimness of vision or reduced illumination with the aid
- Distorted images
- Eyestrain, fatigue, or asthenopia
- Frame discomfort
- Glare sensitivity and photophobia
- Inability to see at distance with microscope or at near with telescope
- Inability to see at intermediate distances
- Moving, vibrating, or jumping images
- Print or objects that go in and out of focus
- Reflections in the system
- Shadows, silver crescents, or moonlike sector losses through the system
- Stiff neck or poor balance
- Vision flashing on or off

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Binocular Diplopia

With binocular diplopia, binocular units are out of collimation. The following may be occurring:

- Pathology change (especially if the client did not initially report this problem)
- Failure to suppress uncorrected eye (for monocular units)
- Client viewing through the bifocal edge
- Manifest squint (eye turn)
- Frame out of adjustment (especially on high-power lenses).

Occupational therapists should also be aware of the possibility of monocular diplopia due to either a pathology change or the client's looking at the edge of the bifocal.

Black Spots Through the System

Complaints of black spots through the low vision system usually indicate that the client is seeing floaters (objects usually appearing as black spots or threads due to something inside the eye (usually parts of the vitreous) casting a shadow on the retina). Floaters are normally seen against a uniform, light background. In addition, if a client using a telescope has a small central cataract and the exit pupil of the telescope is too small, the cataract may become visible. Such clients should try a telescope with a larger exit pupil.

Blurred Vision (Constant)

Constant blurred vision may indicate the following:

- Change in pathology causing a change in visual acuity
- Refractive error change
- Scratches, smudges, oil film, or something else on the lenses
- System misalignment on the client's face (e.g., client is not perpendicular to microscope, bifocal is not high enough)
- Frame out of adjustment
- Problems with the optics of the system itself
- Need for additional training with the aid—for example, to focus system, to remove reading cap (telescope), to keep proper working distance (microscope and reading telescope), to reduce eye movement (scanning) behind the system, or to adjust illumination.

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Chromatic Aberration (Color Distortion)

Chromatic aberration (color distortion) may indicate the following:

- System misalignment on the client's face
- Problems with the optics of the system itself
- Frame out of adjustment.

Difficulty Keeping One's Place When Reading

Client difficulty keeping his or her place when reading may indicate the following:

- Need for additional training with the aid (e.g., keeping print in focus, eccentric viewing training, use of thumb as guide, use of typoscope)
- Need to enlarge the field of view or increase or decrease the size of letters; may necessitate changing the power or the type of system or changing the power of the reading cap on a telescope
- Need to use a reading stand because of hand tremors
- System misalignment on the client's face
- Poor posture when using the aid that causes the client to lose his or her place.

Difficulty Locating the Target

Client difficulty locating a target object may indicate the following:

- Need for additional training with the aid
- System misalignment on the client's face
- Too much or too little magnification
- Need for a change in the type of system (e.g., from a bifocal microscope to a full-diameter microscope).

Dimness of Vision or Reduced Illumination With the Aid

Dimness of vision and reduced illumination with the aid are often evidenced by client complaints that "it's too dark." They may indicate the presence of the following:

- Pathology change
- Shadows on the page
- Poor alignment of the system with the client's eyes
- Poor lighting for use of the system
- Too much tint in the system.

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Distorted Images

Distorted images may indicate one or more of the following:

- Change in pathology
- Problems with the optics of the system
- System misalignment on the client's face
- Scratches, smudges, oil film, or something else on the lenses.

Eyestrain, Fatigue, or Asthenopia

Reports of eyestrain, fatigue, or asthenopia generally indicate adaptive problems—that is, the client may still be getting used to the aid and to using his or her eyes in a different way. The client either needs further practice with the aid or should practice for shorter periods of time. If the complaint continues without improvement, further evaluation is needed to determine if any of the other options discussed in this Module would be beneficial.

Frame Discomfort

Discomfort in the area of contact with the frame usually indicates that the frame is out of adjustment. Consider the use of jumbo nose pads or a headband to try to relieve these symptoms.

Glare Sensitivity and Photophobia

Glare sensitivity and photophobia may indicate the following:

- Pathology change (especially if the client did not initially report this problem)
- Need to adjust illumination
- Need for a tint, sunshields, or black housing on the low vision device (especially a spectacle-mounted device) or tinted caps.

The occupational therapist can have the client use a typoscope or decrease light causing glare on the material. The therapist can also check the pantoscopic angle of the frame (the client might be getting reflections in his or her eyes). The *pantoscopic angle* is the angle (with respect to vertical) of the lenses when worn by the client—that is, how much the bottom of the lens is angled in toward the client's face.

Inability to See at Distance With Microscope or at Near With Telescope

Clients who are unable to see far away with a microscope or up close with a telescope may need the following:

- Additional instruction and explanation
- A different system (e.g., bioptic telescope or bifocal microscope).

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Inability to See at Intermediate Distances

Client difficulty seeing at intermediate distances—between 3 and 8 inches—may indicate the following:

- Need to learn to focus telescope
- Need for caps for telescope
- Need for more training in and explanation of how to use the aid
- Need to switch glasses (e.g., when trying to look up though reading glasses).

Moving, Vibrating, or Jumping Images

The client may complain of inability to make an object “hold still.” Moving, vibrating, or jumping images may indicate the following:

- Too much eye movement
- Presence of head tremor; client possibly needs more time to adapt to the system and may benefit from propping his or her head in the hands or sitting in a high-backed chair
- Need to use a reading stand (especially with hand tremors).

Print or Objects That Go In and Out of Focus

Clients who find that print or objects go in and out of focus may need the following:

- More training; possibly there is too much eye movement because of scotomas
- Use of a reading stand
- Training on keeping working distance steady.

Reflections in the System

Reflections in the system may indicate the following:

- Problems with the optics of the system itself (e.g., misalignment of lenses within the system)
- Need for frame adjustment to correct the pantoscopic angle of the system (i.e., the angle with respect to vertical of the lenses when worn by the client)
- Need for tinted caps or black housing
- Scratches, smudges, oil film, or something else on the lenses of the system
- Need to adjust illumination.

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Shadows, Silver Crescents, or Moonlike Sector Losses Through the System

Shadows, silver crescents, or moonlike sector losses through a system, particularly with telescopes, indicate one or more of the following:

- Field loss through the system
- Client's field of view not being round
- System out of alignment with client's face
- Problem with the optics of the system itself.

Stiff Neck or Poor Balance

A stiff neck or poor balance can indicate the following:

- Need to check positioning of the aid (e.g., bioptic telescope too low, reading telescope too high); need to use a head strap to keep the aid in position
- Need to use a reading stand
- Need for additional training or practice with the aid.

Vision Flashing On or Off

Client complaints that vision flashes on or off may indicate the following:

- System misalignment on the client's face
- Too much eye movement (because of central scotoma)
- Field of vision that is too small (peripheral field loss), in which case client needs more training or a different type of aid.