

APPENDIX 1

ACQUIRED MONOCULAR VISION REHABILITATION EVALUATION FORM: PROBLEM FOCUSED HISTORY¹

1) DATE OF LAST OPHTHALMOLOGIC EXAM: _____ BY: DR. _____

SUBSEQUENT DIAGNOSIS & TREATMENT: (TRAUMA) (TUMOR) (GLAUCOMA) (INFECTION) (OTHER): _____
_____ ; date of vision loss _____

Eye removed? OD OS no ; Ocular prosthesis? OD OS no; Patient reports history of _____

BETTER EYE: OD OS Better eye is DOMINANT EYE?: yes no

NO LIGHT PERCEPTION: OD OS Psychological reaction to loss of an eye: _____

2) ENTRY ROOM/CHAIR: natural hesitant needs assistance other: _____

PERSONALITY: neutral outgoing withdrawn

ALERTNESS: good fair poor

3) WALKS ABOUT alone: (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

STEPS, STAIRS AND CURBS: (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

BUMPING INTO PEOPLE: (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

CUTTING PEOPLE OFF: (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

ASSOCIATED NECK PAIN: (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

DRIVING: (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

4) WATCHES TV? (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

5) Patient reports glare (slightly) (moderately) (severely) (does not) bother(s); patient reports utilizing _____
to reduce glare; patient reports glare reducing filters are (sufficient) (not sufficient) .

6) NEAR VISION: patient reports utilizing _____ ;

FATIGUE WHILE READING ? (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

LOOSING ONES PLACE? (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

SPILLS OCCUR WHEN POURING? (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

7) EMPLOYMENT: (yes) (no) Type of work: _____ difficulty?: (none) (mild) (moderate) (severe)

patient reports hobbies: _____ difficulty?: (none) (mild) (moderate) (severe)

8) MAIN CONCERNS / REASONS FOR VISIT / MEDICAL NECESSITY:

COSMETIC APPEARANCE: (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

ABILITY TO PERFORM SPORTS: (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

ABILITY TO WORK: (yes) (no) if yes, difficulty?: (none) (mild) (moderate) (severe)

Patient is partially sighted due to _____. Patient would like to _____
(Patient would also like to know any treatment or management options available to help function better with acquired monocular vision).

PRESENT RX: OD _____ DISTANCE VA _____ ADD _____ NEAR VA _____ M
OS _____ DISTANCE VA _____ ADD _____ NEAR VA _____ M

DATE OF RX: _____ POLYCARBONATE LENSES: (yes) (no) OTHER SPECTACLE CORRECTIONS:

UNAIDED ACUITY: DISTANCE VA OD _____ NEAR VA OD _____
DISTANCE VA OS _____ NEAR VA OS _____

PSYCHIATRIC: mood and affect: (depression); (anxiety); (agitation);

CONFRONTATION PERIPHERAL FIELDS: _____ peripheral restrictions OD OS

SUBJECTIVE REFRACTION: OD _____ VA _____ ; ADD: OD _____ D; VA _____ M;
OS _____ VA _____ ; OS _____ D; VA _____ M;

GLARE REDUCING FILTERS: _____

RECOMMENDATIONS AND TREATMENT PLAN:

- 1) Spectacle correction (yes) (no)
- 2) Illumination:
- 3) Filters:
- 4) Continue care with Dr. _____; Counseling; Educate coworkers and supervisors;
safety and general medical care:
specific active daily living adaptations:
Relative Motion training:
Perspective Training:
Saccadic Eye Movement Training:
Mobility Training:
"Brady Points" (driving and parking):

APPENDIX 2

Monocular Visual Functioning Questionnaire - 46 Item (MV VFQ - 46)

Directions: to generate a score, mark the indicated level of difficulty for each item below.

1. NOT difficult
2. SLIGHTLY / MODERATELY difficult
3. EXTREMELY difficult
4. IMPOSSIBLE
- U. Difficult / Don't do for non-monocular reasons (U = Unscored/leave blank)

After losing one eye (or the sight of one eye) _____

Item:

RATING:

1. Is it difficult to walk about alone?
 2. Is it difficult to run?
 3. Is it difficult to see steps/curbs/stairs?
 4. Is it difficult to cross the street?
 5. Is it difficult to drive a vehicle?
 6. Is it difficult ride a motorcycle?
 7. Is it difficult to ride a bicycle?
 8. Is it difficult to play sports/catching or hitting a ball?
 9. Is it difficult to go out at night?
 10. Is it difficult to get around in a crowd?
 11. Is it difficult to avoid bumping into things?
 12. Is it difficult to avoid cutting people off?
 13. Is it difficult to swivel your head from side to side?
 14. Is it difficult to do yard work?
 15. Is it difficult to work at your current job?
 16. Is it difficult to eat and drink neatly?
 17. Is it difficult to go to a restaurant?
 18. Is it difficult to prepare meals?
 19. Is it difficult to fix a snack?
 20. Is it difficult to pour liquids into smaller containers without spilling?
 21. Is it difficult to use appliance dials?
 22. Is it difficult to read?
 23. Is it difficult to read for long period of time?
 24. Is it difficult to focus while reading (with correction if needed)?
 25. Is it difficult to read without feeling tired?
 26. Is it difficult to keep your place while reading?
 27. Is it difficult to adjust to bright lights?
 28. Is it difficult to shop?
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29. Is it difficult to use a computer?
 30. Is it difficult to do woodworking/plumbing &/or electrical projects?
 31. Is it difficult to do fine hand work such as sewing, knitting, crocheting , or carpentry?
 32. Is it difficult to clean the house?
 33. Is it difficult to groom yourself or put on makeup?
 34. Is it difficult to play table and card games?
 35. Is it difficult to work on your favorite hobby?
 36. Is it difficult to watch TV?
 37. Is it difficult to play video games?
 38. Is it difficult to go to the movies?
 39. Is it difficult to go to spectator events?
 40. Is it difficult to feel confident in social setting?
 41. Is it difficult to feel confident at work?
 42. Is it difficult to feel confident with family and friends?
 43. Is it difficult to adjust to cosmetic appearance?
 44. Is it difficult to not feel depressed?
 45. Is it difficult to be with co-workers?
 46. Is it difficult to be in a social setting?
-

APPENDIX 3

Monocular Visual Functioning Questionnaire (MVFQ) results are as follow:

1. NOT difficult
2. SLIGHTLY/MODERATELY difficult
3. EXTREMELY difficult
4. IMPOSSIBLE
- U. Difficult/Don't do for non-monocular reasons (U = Unscored/leave blank)

After losing one eye (or the sight of one eye) _____

Item:	RATING:
1. Is it difficult to walk about alone?	1
2. Is it difficult to run?	2
3. Is it difficult to see steps/curbs/stairs?	2
4. Is it difficult to cross the street?	2
5. Is it difficult to drive a vehicle?	2
6. Is it difficult to park a vehicle?	3
7. Is it difficult ride a motorcycle?	3
8. Is it difficult to ride a bicycle	2
9. Is it difficult to play sports/catching or hitting a ball?	3
10. Is it difficult to go out at night?	2
11. Is it difficult to get around in a crowd?	2
12. Is it difficult to avoid bumping into things?	2
13. Is it difficult to avoid cutting people off?	3
14. Is it difficult to swivel your head from side to side?	1
15. Is it difficult to do yard work	2
16. Is it difficult to work at your current job	4
17. Is it difficult to eat and drink neatly?	2
18. Is it difficult to go to a restaurant?	4
19. Is it difficult to prepare meals?	1
20. Is it difficult to pour liquids into smaller containers without spilling?	3
21. Is it difficult to use appliance dials?	2
22. Is it difficult to read	2
23. Is it difficult to read for long period of time?	3
24. Is it difficult to focus while reading (with correction if needed)?	2
25. Is it difficult to read without feeling tired?	2

26. Is it difficult to keep your place while reading?	2
27. Is it difficult to adjust to bright lights?	2
28. Is it difficult to shop?	2
29. Is it difficult to use a computer?	2
30. Is it difficult to do woodworking/plumbing &/or electrical projects?	4
31. Is it difficult to do fine hand work such as sewing, knitting, crocheting , or carpentry	4
32. Is it difficult to clean the house?	2
33. Is it difficult to groom yourself or put on makeup?	2
34. Is it difficult to play table and card games?	2
35. Is it difficult to work on your favorite hobby?	2
36. Is it difficult to watch TV?	2
37. Is it difficult to play video games?	3
38. Is it difficult to go to the movies?	2
39. Is it difficult to go to spectator events?	4
40. Is it difficult to feel confident in social setting?	3
41. Is it difficult to feel confident at work?	na
42. Is it difficult to feel confident with family and friends?	2
43. Is it difficult to adjust to cosmetic appearance?	3
44. Is it difficult to not feel depressed?	3
45. Is it difficult to be with co-workers?	4 - na
46. Is it difficult to be in a social setting?	3

APPENDIX 4

Computer Orthopter™ (VTS3) DIAGNOSTICS monocular results:

*Saccadic: 100% Correct responses Norms: 80% correct responses;
 1.08 seconds Norms: average time 1.20 sec. or less

*Pursuits: 100% Correct responses Norms: 80% correct responses;
 0.87 seconds Norms: average time 1.20 sec. or less

*Visual Memory: Level 4 correct; Level four acceptable score.

APPENDIX 5

Motor-Free Visual Perceptual Test (MVPT) results:

Test results comparison to same-aged peers

Raw score: 42

Standard score: 67

Conf. interval (85%): 59-75

Percentile rank: 1%

* Percentile rank of 50 represents average performance

Number of total errors: 23/52

Errors per task: # wrong/total items per task

Visual Short-term memory: 5/13

Visual Closure: 8/18

Visual Discrimination: 5/11

Spatial orientation: 3/5

Figure ground: 2/5

APPENDIX 6

Mobility Training for the Monocular Patient⁴

Purpose: To maximize the reduced visual field by eye movements and turning ones head more frequently and further than was needed previously when the patient was binocular.

As you look forward while you walk, you now have a decrease in side vision. Move your head back and forth more often and especially before you make any sudden changes in direction. You should always turn your head first before you turn and change direction.

I. First walk with someone on the same side as your Seeing Eye. Then shift and walk with someone on the side of your non-seeing eye. You need to move your head to see them. Recommend either slowing down to let the person pass, or change sides and walk with someone on the side of your Seeing Eye.

II. This also pertains when you are sitting at a table with someone. Try to position yourself so that the other person is sitting on the side of the Seeing Eye. Also, food servers may approach you from the side of the non-seeing eye. Remember to always look towards the direction of the non-seeing eye before making any gestures or movements in that direction.

III. Stairways: Keep your hand on the handrail and watch for the last step by feeling ahead with your toe.

IV. Curbs: Using relative motion, keep your eye on the edge of the curb as you approach it. If you observe more relative movement against the background of the street's surface, the curb is higher than if there is less relative movement as that observed with a shorter curb.

V. Street corners and crossing the street: Make sure you look both ways before and at the very last moment before attempting to cross the street. Be alert to one way streets and street corners where automobiles can make either a right or left turn.

VI. Revolving doors—Avoid these for safety reasons. Use stationary side doors.

APPENDIX 7

Relative Motion Training for the Monocular Patient

Purpose: to teach the monocular patient new cues for judging depth within 20 feet, to compensate for their loss of depth perception and the narrowing of their peripheral visual field.

The horizontal visual field has been reduced 10 to 20 percent, resulting in the need to move the remaining seeing eye frequently and increase one's head movement.

Observing varying angles and the apparent change in size of objects as you move toward or away from them uses relative motion.

These activities described below, demand good focusing skills and call for a judgment of angle size, distance, relative motion and/or timing.

I. Stationary objects—materials needed: 2 Nerf™ balls

1. Place one round Nerf™ ball at 2 feet and a second one at 5–6 feet. The background should also be observed.
2. First, look directly at the closer Nerf™ ball and at the same time, swivel your head from side to side. Notice the motion of the background area that you observe as you swivel your head.
3. Now, look directly the distant Nerf™ ball and at the same time, swivel your head from side to side. Notice that the motion of the background area that you observe is less.
4. Therefore, with this technique, if you observe more background motion (relative motion) then that object is closer and if you observe less background motion (relative motion) the object is further away.

II. Moving objects—materials needed: Nerf™ balls, Nerf™ bat and ball, Nerf™ paddles and ball, ball that bounces, checkers game, pick-up sticks, pitcher, spoon and cup, and access to objects to reach for.

1. Stand in front of the person (10+ feet) and throw a Nerf™ ball directly toward them. The person should observe and apparent increase in size and straight line to them.
2. Now, throw the Nerf™ ball toward the side. The person should observe the ball traveling at an angle.
3. Level 1: Practice bouncing and catching the Nerf™ ball off a wall.
4. Level 2: Now use the Nerf™ ball and bat to develop eye-hand coordination.
5. Level 3: With 2 people, use the Nerf™ paddles and ball for an advanced eye hand coordination exercise.
6. Level 4: Reaching for objects. Keep moving your hand in a direct line toward the object until you connect. Examples: doorknob, book on shelf, cup on counter, handshake, etc. Checkers and pick-up sticks.
7. Level 5: Pouring: Keep moving the pitcher in a direct line until you touch the upper container (pitcher) to the rim of the lower container (cup). Use the same technique with a spoon and cup.

APPENDIX 8

Perspective Training for the Monocular Patient

Purpose: To observe cues in determining depth and or distance.

When 2 objects are the same size but at different distances, the object in the foreground will appear to be larger than the similar sized object in the distance.

Colors are brighter and bolder in the foreground and softer and muted in the distance.

Objects are more clearly defined in the foreground and tend to blur in the distance.

- I. Show various pictures illustrating this concept.

APPENDIX 9

Driving Tips for the Monocular Patient⁴

I. Issue: Narrow, crowded streets, judging distances on either side of your vehicle and driving through.

Suggestions: Follow the automobile in front of you. If you have a passenger with you, ask them for their input. When alone, look ahead to make sure you have adequate clearance and concentrate all your attention close to the line of cars on your left. You may need to position your head out the window. Drive close to the centerline. This should leave plenty of room between yourself and the parked cars. Project a “mental” centerline onto the street, if there is no centerline.

Frequent head movements to see around obstructions.

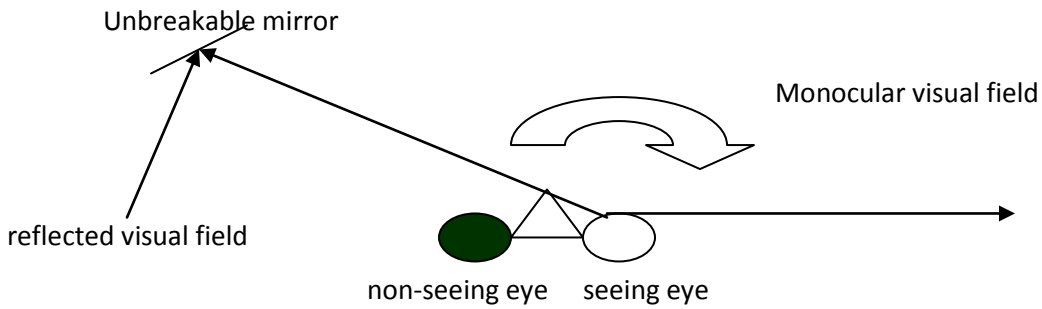
II. Issue: Parking

Suggestions: If you have a passenger with you, ask them for their input. When alone, you may need to get out of your automobile to survey the situation and plan your maneuvers with precision. Or, try to find a wider slot or find a spot that is easier to pull in and back out of.

When pulling into a garage, one suggestion is to turn on your vehicles headlights, even in the daytime and watching the pattern the beam makes on the wall as you approach it. A curved line of light moves downward as you move closer to the wall. A marker (example: tape) can be placed to indicate the stopping point once the headlight reaches the marker.

Or, suspend a tennis ball, or object of your choice, from the ceiling of the garage and adjust the length of string until the ball touches the sloping windshield when your automobile reaches the desired distance from the wall ahead.

APPENDIX 10



Illustrates the potential increase in the peripheral visual field by the reflected image of the unbreakable mirror held on the side of the non-seeing eye. A small mirror can be attached in strategic areas of the car windshield on the side of the non-seeing eye (without obstructing vision) to compensate for the visual field defect of the non-seeing eye while in the drivers' seat.¹

APPENDIX 11



APPENDIX 12

Monocular Visual Functioning Questionnaire (MVFQ) post intervention

1. NOT difficult
2. SLIGHTLY / MODERATELY difficult
3. EXTREMELY difficult
4. IMPOSSIBLE
- U. Difficult / Don't do for non-monocular reasons (U = Unscored/leave blank)

After losing one eye (or the sight of one eye) _____

Item:	RATING: (3 months post intervention):
1. Is it difficult to walk about alone?	1-no change
2. Is it difficult to run?	2-no change
3. Is it difficult to see steps/curbs/stairs?	2-no change
4. Is it difficult to cross the street?	2-no change
5. Is it difficult to drive a vehicle?	2-no change
6. Is it difficult to park a vehicle?	3-no change
7. Is it difficult ride a motorcycle?	3-no change
8. Is it difficult to ride a bicycle?	2-no change
9. Is it difficult to play sports/catching or hitting a ball?	2-was 3
10. Is it difficult to go out at night?	2 -no change
11. Is it difficult to get around in a crowd?	2-no change
12. Is it difficult to avoid bumping into things?	2-no change
13. Is it difficult to avoid cutting people off?	3-no change
14. Is it difficult to swivel your head from side to side?	1-no change
15. Is it difficult to do yard work?	2-no change
16. Is it difficult to work at your current job?	4-no change
17. Is it difficult to eat and drink neatly?	2-no change
18. Is it difficult to go to a restaurant?	2-was 4
19. Is it difficult to prepare meals?	1-no change
20. Is it difficult to pour liquids into smaller containers without spilling?	2-was 3
21. Is it difficult to use appliance dials?	2-no change
22. Is it difficult to read?	2-no change
23. Is it difficult to read for long period of time?	2-was 3
24. Is it difficult to focus while reading (with correction if needed)?	2-no change

25.	Is it difficult to read without feeling tired?	2-no change
26.	Is it difficult to keep your place while reading?	2-no change
27.	Is it difficult to adjust to bright lights?	2-no change
28.	Is it difficult to shop?	2-no change
29.	Is it difficult to use a computer?	2-no change
30.	Is it difficult to do woodworking/plumbing &/or electrical projects?	4-no change
31.	Is it difficult to do fine hand work such as sewing, knitting, crocheting , or carpentry?	4-no change
32.	Is it difficult to clean the house?	2-no change
33.	Is it difficult to groom yourself or put on makeup?	2-no change
34.	Is it difficult to play table and card games?	2-no change
35.	Is it difficult to work on your favorite hobby?	2-no change
36.	Is it difficult to watch TV?	2-no change
37.	Is it difficult to play video games?	2-was 3
38.	Is it difficult to go to the movies?	2-no change
39.	Is it difficult to go to spectator events?	2-was 4
40.	Is it difficult to feel confident in social setting?	2-was 3
41.	Is it difficult to feel confident at work?	na
42.	Is it difficult to feel confident with family and friends?	2-no change
43.	Is it difficult to adjust to cosmetic appearance?	2-was 3
44.	Is it difficult to not feel depressed?	2-was 3
45.	Is it difficult to be with co-workers?	na
46.	Is it difficult to be in a social setting?	2-was 3
