

Appendix 4: 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.