Teaching Compensatory Scanning for Field Cuts

or Unilateral Visual Inattention

Stephen G. Whittaker, PhD, OTR/L, CLVT, Moss Rehabilitation Hospital

Visual scanning with right/left/up/down eye movements is an evidence-based treatment for a unilateral field cut or an overall peripheral field restriction. This compensatory method generalizes to occupational performance because there is no need for special optical devices or artificial supports. Using learning theory or behavioral paradigms, there are 2 phases to this (or any) instructional technique. During the instructional phase, one uses more artificial situations (cues that provide frequent, salient, and immediate feedback) to establish the compensatory scanning behavior. One then changes to more complicated, natural settings and gradually withdraws the cues. The goal is to establish automatic scanning eye movements all of the time in natural settings, especially during mobility.

Instructional Methods

• **Verbal explanation**: Explain the nature of the field loss and demonstrate how one can use searching eye movements to find objects in the blind side. Verbally instruct the client for all tasks described next.

• **Search for markers**: Place the client’s hand or a high-contrast (orange) search marker or a laser spot to the far periphery of the blind side. Instruct the client to look until he or she sees the marker. A marker can be stuck to glasses (see Chapter 11 of the book). Have the client locate one and then multiple objects on a clear surface, scanning to the marker. Tell the client ahead of time how many objects he or she is looking for or give them a task like reading tasks that
provides implicit cues if items or words are missed such as text not making any sense. Try symbol or letter cancellation tasks or word finds telling them how many items to expect. Decrease task demand by adding auditory and tactual stimuli on the affected side or reducing distraction on the unaffected side. Increase task demand by adding elements to search, decrease object contrast and size, increase background clutter, decrease the salience of the field marker and finally perform activities where a client cannot predict how many items but rather must develop systematic scanning. Divide attention by playing Connect-4, Dominoes, checkers, or other spatial games. If left spatial neglect, do not cue the client to look left (or right). Give them a general cue so the client cues him- or herself.

• Laser tag: The client holds one laser pointer; the therapist holds the other. The therapist points the laser spot first in different positions on the unaffected side; the client is to find the spot and “tag it” with the pointer. Now flash the spot back and forth between predictable positions on the right and left side. Finally, randomize the location on the right and left. Decrease task demand by making the movement predictable and on a blank, uncluttered surface. Increase task demand by positioning the pointer to project onto a cluttered surface, at different distances, and finally during mobility or other tasks. Measure and record the number of tags within 2 seconds within about 40 degrees and between 40 and 80 degrees of the midsagittal plane.

• Obstacles during mobility: Walk about 1 or 2 feet in front of your client on the affected side ensuring mobility, then veer into him or her. Bump shoulders if he or she doesn’t see you. Likewise, distract the client when passing an obstacle on the affected side, allowing the client to bump. Let the client bump—taking care to avoid falls, of course. Play 2-on-1 games like soccer or basketball.
• **Generalization:** Gradually withdraw the cues until the client habitually scans to the affected side at all times. At first, the client will scan when looking for something. Using laser tag during mobility, one can start presenting the spot intermittently; that is, less frequently and while the client is distracted. The client should get into the habit of scanning to the affected side at all times—especially during mobility—much as someone uses a rearview mirror in a car.