

**Vision**

- Vision can be defined as how we see and process things in our environment. Vision is made up of three areas: Visual Integrity, Visual Efficiency, and Visual Information Processing.

<b>Components of Vision</b>	
<b>Visual Integrity</b> (How Well Your Eye Sees)	<ul style="list-style-type: none"> <li>▪ Clarity of vision (acuity)</li> <li>▪ Eye health</li> </ul>
<b>Visual Efficiency</b> (How Well Your Eyes Move)	<ul style="list-style-type: none"> <li>▪ Eye movement</li> <li>▪ Eyes moving together (teaming)</li> </ul>
<b>Visual Information Processing</b> (How Well Your Brain Interprets What Your Eyes See)	<ul style="list-style-type: none"> <li>▪ Understanding where objects are in space (visual spatial skills)</li> <li>▪ Finding, using, and remembering things you see (visual analysis)</li> <li>▪ Hand-eye coordination (visual motor skills)</li> </ul>

- The information our eyes see travels through both sides of our brain to be interpreted. Vision problems occur when there is an interruption of communication between the eyes and the brain. When vision problems occur many difficulties in everyday activities can arise, ranging from difficulty reading, blurry vision, headaches, and becoming overstimulated with visual information. Below are some vision problems that are common after mild traumatic brain injury (mTBI) and concussion, and how they may affect daily activities. Read more about vision at My Shepherd Connection: [https://www.myshepherdconnection.org/docs/Vision\\_overview.pdf](https://www.myshepherdconnection.org/docs/Vision_overview.pdf).

**Common vision problems after mTBI and concussion:**

- Blurred vision
- Changes in eye position
- Difficulty judging distances
- Difficulty quickly changing visual focus between objects
- Difficulty seeing objects in your side vision
- Double vision
- Eye pain, strain, or fatigue
- Eyes are unable to follow a moving object
- Headaches when using eyes
- Light sensitivity
- Squinting or closing one eye to see better
- Unable to move both eyes inward to focus on an object
- Nausea, dizziness, or headaches in visually busy environments

**Effect of vision problems in daily activities:**

- Bumping into things and clumsiness
- Difficulty with eye-hand coordination
- Difficulty measuring ingredients when cooking



- Difficulty with driving tasks such as: braking reaction time, braking distance, seeing other cars, increase in dizziness and nausea while driving, etc.
- Discomfort with maintaining eye contact
- Eye strain and/or headaches when reading
- Eye strain and/or headaches during screen time activities
- Losing place or skipping words when reading
- Squinting when looking at something
- Trouble locating items in a store

If you are experiencing any of the above since your injury, it is recommended that you let your doctor know. Your doctor can explain appropriate options for these vision problems. To read more about common visual difficulties after concussion and mTBI, see My Shepherd Connection here:

[https://www.myshepherdconnection.org/docs/Types\\_of\\_Vision\\_deficits.pdf](https://www.myshepherdconnection.org/docs/Types_of_Vision_deficits.pdf)

#### **Treatment for vision problems:**

- If you are experiencing visual changes since your injury, your doctor might recommend seeing an occupational therapist (OT) and/or eye care professional for further examination of your eyes.
- An occupational therapist can help you with improving vision skills and sensitivities to better participate in meaningful activities and roles. These activities and roles can include school, work, reading, driving, hobbies, parenting, and more.
- Common eye care professionals that commonly see individuals after concussion and mTBI include: Optometrists, Neuro-Optometrists, Ophthalmologists, and Neuro-Ophthalmologists. Eye care professionals sometimes prescribe special lenses to improve your vision and may recommend specialized vision therapy. For more information about eye care professionals, view this handout on My Shepherd Connection: [https://www.myshepherdconnection.org/docs/Eye\\_care\\_professionals.pdf](https://www.myshepherdconnection.org/docs/Eye_care_professionals.pdf).

#### **Additional Comments:**

