



## Ask Chris

This month Chris Turner answers a question about vision problems and reading.

My student skips lines when she reads. She also rubs her eyes a lot. She says she can see just fine. What should I do?

*Concerned Tutor*

The symptoms you describe may indicate a vision problem. We have a checklist of problems and behaviors that can signal underlying problems with vision. Ask the staff at the literacy council for a copy of this checklist if you are concerned about your student's vision or make an appointment to talk with me. We also have some reading glasses at the Literacy Council that your student can borrow to see whether they help make reading easier. In many cases, there are some simple adjustments that can help students with vision problems. For example, adjusting the lighting to reduce glare or simple exercises to help pull the eye across a line may make a significant difference. Some students will benefit from seeing an eye doctor, preferably one specializing in behavioral optometry, who can prescribe treatment or exercises.

The relationship between vision and reading is complex. Vision involves three separate areas: the visual pathway itself, visual efficiency and visual information processing. If any one of these areas is compromised, reading can become a difficult and frustrating task.

### **The Visual Pathway**

This area involves the basic health of the eye, the ability to focus and to see clearly. When we talk about good eyesight or 20/20 vision, we are usually referring to the functions of the visual pathway. Obviously, students need to be able to see relatively clearly in order to read accurately. Problems with the visual pathway include being near or far-sighted, having an astigmatism or difficulty in focusing.

As we get older, our eyes' ability to focus for close work diminishes. For students in their mid-thirties or older, the problem may be as simple as needing a pair of reading glasses. Because they do not read regularly, some students may not be aware of this problem as it develops. Warning signs include squinting, holding material far away, rubbing eyes frequently or needing more light. If students find that our reading glasses help, then they need to buy a pair at the drugstore. They only cost a few dollars.

### **Visual Efficiency**

Not all problems related to vision have to do with the visual pathway itself. Our eyes need to work together and track efficiently in order for reading to be fluent and easy. There are four main kinds of eye movements involved in reading. We need our eyes to be able to maintain steady attention, to move smoothly from point to point on the page, to quickly and accurately locate a target and reliably return to the same spot when we look away. Problems with eye movement may be exacerbated by difficulties with peripheral vision, which make it difficult to see the whole word. Without good tracking, fixation and

peripheral vision, reading will be tiring and frustrating. If the eye movements required for fixation or tracking are slow or erratic, students may lose their place easily, omit words, especially “little” words, have difficulty scanning, leave off the ending of words, or skip lines. Students may also have difficulty moving back and forth between a reading passage and questions, for example on a test or when filling out a form.

Reading and writing also require the eyes to work well together (binocularity) and for the eye to work in coordination with the hand. Squinting, seeing double, repeating letters and consistently poor writing may all be signs of problems with eye teaming.

### **Visual Information Processing**

The visual system includes the brain and a set of skills, which allow us to organize and understand the visual information we perceive. A number of visual perceptual skills required for reading. We must be able to readily distinguish between a figure and its background. We must be able to discern meaningful differences between forms. In reading these differences may be very slight. Reversing letters—such as *b* and *d*—in either reading or writing is an example of a visual discrimination problem. The ability to visualize is also critical to developing strong reading comprehension. People with visual information processing problems may confuse similar words, find it difficult to understand what they read, fail to recognize a word they have just read successfully or need to whisper to themselves as they read.

Stress exacerbates visual problems because it literally constricts the perceptual field resulting in students who in the words of one optometrist “observe less, see less, remember less and learn less.” You can help your student to relax and to try some simple techniques, which may make reading less stressful

Much of the information in this column comes from a useful website developed by Optometric Extension Program Foundation. If you would like to know more, go to <http://www.healthy.net/oep/VISION.HTM>.