

Millions with low vision stay active by using special tools

October 10 2011, By Michelle Healy

As a pre-teen, Amber McMahon was a voracious reader. When she stopped curling up with her favorite books, her family chalked it up to adolescent distractions. When she asked to sit closer to the blackboard in school, her parents began to worry and take her to doctors for her worsening vision.

It wasn't until she was 18 and about to start college that she was diagnosed with Stargardt disease, a form of juvenile macular degeneration that affects central vision. About 50 percent of patients with the condition have vision classified as legally blind by age 50.

Today, at 35, McMahon says her central vision is so limited, she "wouldn't recognize my husband if he were a foot away."

Still, she prides herself "on doing whatever I want to do," which, on a typical day in Venice, Calif., includes teaching yoga and spinning, corresponding with friends, caring for her husband and 1-year-old son, and even driving, using specially prescribed small telescopes mounted on eyeglass frames.

Low-vision rehabilitation introduced McMahon to a variety of vision aids, adaptive technologies and strategies. "Without that service, I'd be lost," she says. "I'm truly a different person because of it."

"The core issue for low-vision rehabilitation is maintaining quality of life," says Sarah Hinkley, chief of Low Vision Rehabilitation Services at

the Michigan College of Optometry at Ferris State University.

Low vision is not a direct result of aging, says Dawn Kissner DeCarlo, chair of the American Optometric Association Vision Rehabilitation section and director of the University of Alabama Center for Low Vision Rehabilitation.

It usually "results from [eye injuries](#), birth defects, macular degeneration, cataracts, glaucoma, poorly controlled diabetes and other eye and health conditions," she says.

Tim Michell, 54, a middle-school math teacher and varsity basketball coach in Marion, Mich., was diagnosed with atypical [retinitis pigmentosa](#) at age 40. The eye disease has limited his [central vision](#) so that "from my elbow to my fist, I can't see anything," he says. "There's a big blank" when he looks ahead.

He paces the sidelines with binoculars to identify players as they race up and down the court. He relies on a 24-inch monitor that magnifies reading material 100 times. To enjoy his wife's wildlife photography, he puts on special magnifying glasses that use his peripheral vision.

"The vision you have is so critical," he says. "You can't dwell on what you don't have."

Michell is among 3.6 million visually impaired Americans over age 40, according to a 2008 report by the advocacy group Prevent Blindness America and the federal National Eye Institute.

Given Baby Boomers' higher risk for age-related eye disorders and a dramatic nationwide increase in type 2 diabetes, the National Eye Institute estimates that vision disorders will double in 30 years.

Which makes increasing awareness about vision rehabilitation all the more important, says Hinkley.

She asks new patients, "What would you like to do that you can no longer do because of your vision?" She says she wants them to see "that the possibilities are nearly endless."

DRIVING BLIND - AIDED BY SMALL MOUNTED TELESCOPES

The independence and mobility of driving is a real option for some with vision impairments, thanks to "bioptic driving."

Bioptics are small telescopes mounted into ophthalmic corrective lenses above a person's line of sight that improve the sharpness of far vision. Those eligible for bioptic driving typically have "mild to moderate vision loss that is stable," along with "pretty near-perfect" peripheral vision, says optometrist Laura Windsor of the Low Vision Centers of Indiana. The eyewear lens portion provides general vision, while the telescope aids in the quick spotting of detail, such as reading a road sign or checking a distant traffic light.

About 40 states offer driver licenses to individuals with [vision](#) impairments, but requirements vary greatly from state to state, says Windsor. In Indiana, "a very intense program" includes "careful fitting of the system, followed by extensive training in both the use of the bioptic and behind-the-wheel driver's training." The goal is to make people with visual impairments "successful drivers," says Windsor. "You only put those with the ability on the road."

More information: Learn more about bioptic driving and individual states' regulations at Low Vision Centers of Indiana's site

biopticdrivingusa.com.

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