

You might see better in your eye doctor's office

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Research suggests older adults may have poorer vision at home, mostly because of lower lighting.

(HealthDay)—Researchers warn that patients who see perfectly well in their eye doctor's office often end up seeing considerably less well in the comfort of their own home.

The principal culprit: poor home lighting.

"The results from our study suggest that [older adults](#) are not seeing as well in their homes compared to their [vision](#) when tested in the clinic," said study author Dr. Anjali Bhorade, an associate professor of ophthalmology at the Washington University School of Medicine, in St. Louis.

"For example, a patient may see 20/20 in the clinic. However, [they can] have 20/40 or worse vision in their home," she said. "This decreased vision in the home can negatively affect their function in their home, and thus their quality of life."

"We found that poor lighting in the home was the most significant factor contributing to decreased vision," Bhorade said. "More than 85 percent of older adults had lighting in their homes below that of the recommended level. Our results suggest that simply ... increasing lighting may improve the vision of older adults in their homes."

Bhorade and her colleagues discussed their findings in the Nov. 21 online issue of the journal *JAMA Ophthalmology*.

The researchers focused on 175 eye patients between the ages of 55 and 90.

Most of the patients had been diagnosed with [glaucoma](#) before attending a regularly scheduled appointment with their ophthalmologist at some point between 2005 and 2009. The remainder had no eye health issues.

All of the patients had their vision tested both in their doctor's office and at home. Both exams were scheduled within a one-month span, and took place during the daytime. Home exams included testing that assessed near-vision abilities, such as paying bills or reading.

Digital [light](#) meters also were used to determine lighting levels in both settings.

Vision test results were significantly better in the doctor's office than in a home setting, regardless of whether a patient had glaucoma.

For example, nearly 30 percent of glaucoma patients were able to read

two or more lines more easily on an eye chart when tested in the doctor's office than when at home. Among those with more severe glaucoma, nearly four in 10 read three or more lines better when tested in the office than when tested at home.

The same dynamic was observed with near vision, the researchers said. More than one-fifth of patients experienced better results at the doctor's office when trying to read two or more lines of text.

Bhorade and her associates determined that lighting was the key factor behind the difference. Home lighting was three to four times less bright than in a clinical setting, on average.

"Not all older adults, however, may benefit from increased lighting," Bhorade said. "Therefore, to optimize lighting conditions in the home, we recommend an individualized in-home assessment by an occupational therapist, or a referral to a low-vision rehabilitation specialist."

Dr. Alfred Sommer, a professor of ophthalmology at the Bloomberg School of Public Health at Johns Hopkins University, said the study highlights the broader issue of understanding the real-world limitations of people with vision issues.

"This is a real issue," he said. "The ophthalmologist's office is not the world we live in. It's a very artificial situation, in which vision is tested in a very dark room but with very high contrast letters. And even that's only looking at one measure of vision, without regard to other possible [eye] issues."

"It's no surprise that when people are in their [home](#) setting, under ambient conditions, everything is a little bit grayer and not so intense," Sommer said. "The question is whether that difference has a functional impact. Can people easily navigate through their world and function in

society?"

"This is a whole new science that is now coming into play—the effort to develop ways to test for real-life conditions so we can improve vision in a way that's really meaningful to patients," Sommer said.

More information: For more on eye exams, visit the [U.S. National Eye Institute](#).

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