Myopia on the rise in the United States

By Jan Brogan | GLOBE CORRESPONDENT  MAY 20, 2013

Like autism, obesity, and diabetes, the incidence of nearsightedness is rising fast enough to be labeled an epidemic.

More formally known as myopia, nearsightedness has increased by 66 percent since 1970-1971 according to a National Eye Institute study that compared rates of myopia in the United States with a survey conducted between 1994 and 2004. The rate of myopia rose from 25 percent of participants to 41.6 percent.

Myopia among the black participants increased from 13 percent in 1970-71 to 33.5 percent in 1999-2004. The rate for white respondents rose from 26.3 percent to 43 percent. Statistics in the original 1970-71 survey did not break down rates for Asians or Latinos, so no comparisons could be made for those groups, according to Susan Vitale, NEI epidemiologist of ocular diseases and vision disorders who led the study.

“The good news about myopia is that it is easy to treat,” Vitale said. “The bad news is that it is so common it winds up costing a lot.” The high prevalence is believed to cost Americans billions of dollars in corrective treatment.

Severe myopia also increases the risks of retinal detachment, glaucoma, and other eye disorders including blindness.

Genetics plays a role, but a lack of outdoor activity seems to be a key environmental factor.

According to one NEI study, coauthored by Donald Mutti, professor of Optometry at Ohio State University, less sports and outdoor activity increased the odds of myopia in children who
had two myopic parents more than in those children with none or one myopic parent. The study was published in the 2010 journal Investigative Ophthalmology and Visual Science. Mutti believes that being outdoors is the key.

Even on a cloudy day, outdoor light is 10 times brighter than any indoor light, he said. The primary theory is that the brighter outdoor light stimulates a child’s retina to release dopamine, which makes the eye grow properly for correct vision. A secondary theory is the role of vitamin D produced from exposure to sunlight. Understanding which factor affects myopia is critical, Mutti said.