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Video games shown to improve vision

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According to a new study from the University of Rochester, playing action video games sharpens vision. In tests of visual acuity that assess the ability to see objects accurately in a cluttered space, game players scored higher than their non-playing peers.

"Action video game play changes the way our brains process visual information," says Daphne Bavelier, professor of brain and cognitive sciences at the University of Rochester. "After just 30 hours of training, people who normally don't play video games showed a substantial increase in the spatial resolution of their vision, meaning they could see small, closely packed letters more clearly."

Most of the factors that affect a normal person's ability to read an eye-chart are optical (size of the eye, the shape/thickness of the cornea and lens) and video games will not change those factors. However, there are some types of visual deficits that aren't optical in nature but are instead neural. "It is our hope that video game training can help these people," says Bavelier.

Only certain games create this effect; first-person action games. Shooting games, such as Unreal Tournament, improved vision. More sedate games, such as the puzzle game Tetris, showed no effect. "When people play action games, they're changing the brain's pathway responsible for visual processing," says Bavelier. "These games push the human visual system to the limits and the brain adapts to it. That learning carries over into other activities and possibly everyday life."

This could mean that video games will find a future role in the medical world. Patients with visual impairment from conditions such as amblyopia (commonly known as 'lazy-eye'), or even normal aging of the brain, could use video games as rehabilitation therapy.

Source: Blackwell Publishing Ltd.