

Laser pointers can cause serious eye damage in kids

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(HealthDay)—Laser pointers may look harmless enough, but when

children play with them kids can end up with blurry vision, blind spots or potentially permanent vision loss, eye experts report.

A new study details the cases of four children, aged 9 through 16, whose horseplay with laser pointers caused dramatic injury to the retina, the light-sensitive tissue at the back of the eye that is essential to seeing clearly.

The cases "bring to light this is happening more frequently," said study author Dr. David Almeida, an ophthalmologist in private practice in Minneapolis.

"It was previously thought this was a one-in-a-million event. It's still probably a rare to uncommon reaction, but it's not a never reaction," Almeida said.

Part of the problem is unreliable labeling of laser pointers, which are typically sold in office supply stores and online, the study found.

Prior research revealed that a significant percentage of both red and green laser pointers are labeled as having between 1 and 5 milliwatts of power outputs. That amount is supposedly safe to the eyes. But, the devices had power outputs greater than 5 milliwatts, according to background information in the study.

"Access to laser pointers seems to be growing, and it's easy to order these online and hard to regulate them," said Dr. Charles Wykoff. He's deputy chair of ophthalmology at the Blanton Eye Institute at Houston Methodist Hospital.

Wykoff, who has seen two cases of retinal damage from laser pointers in his own practice, wasn't involved in the new research.

"You don't really know the output of the device you've bought," he noted.

In the study, Almeida and his team detailed the cases of four boys whose vision was damaged when they looked directly at laser pointers, either head-on or reflected in a mirror.

The resulting retinal damage caused "acute, dramatic" symptoms. These symptoms can include blurry, distorted or absent vision in the center of the visual field, Almeida explained.

"Location is everything when it comes to the retina," said Almeida, who treated the four children over a period of two years in his practice. "If the laser hits you at an angle ... you may notice nothing and be totally asymptomatic. But if it hits your central vision, you may have dramatic loss of vision immediately that never recovers."

Treatment options for [retinal damage](#) resulting from laser pointers are scarce, Almeida and Wykoff noted. Surgery may be required for complications stemming from the injury, but most cases can only be monitored through observation.

Some ophthalmologists may prescribe corticosteroids to patients to reduce inflammation inside the eye, Wykoff said, but this option is "controversial" due to lack of research in humans.

Three of the four children highlighted in Almeida's research suffered potentially irreversible vision loss. He urged adults such as health professionals, teachers and parents to educate children about the dangers of laser pointers and to discourage or limit their use.

"If you improperly use laser pointers, they can cause serious, permanent [vision loss](#), and that needs to be considered," Almeida said. "Legislation

[regulating the pointers] is probably overkill, given the numbers of [injuries], but this represents a serious and preventable public health issue."

Wykoff added: "Don't look at them, don't point them in your eye, and don't point them into others' eyes. Once the injury has occurred, there's really not much that can be done.

"The challenge I find frightening for consumers is that just because a [laser pointer](#) is labeled as a certain category, it may not be," he said. "So, I would take the approach that no laser pointer is safe to point at your eyes."

The research was published Sept. 1 in the journal *Pediatrics*.

More information: The American Academy of Ophthalmology offers more information on the eye dangers of [laser pointers](#).

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