

Researcher Places Eye Implants in Cats

Studies are aimed at helping blind cats and humans see.

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A University of Missouri-Columbia veterinary ophthalmologist has been working with a microchip implant to help blind animals "see."

"Our current study is aimed at determining safety issues in regard to the implants and to further develop surgical techniques. We also are examining the protection the implants might provide to the retinal cells that are dying due to disease progression," said Kristina Narfstrom, professor of veterinary ophthalmology.

Narfstrom is working primarily with Abyssinian and Persian cats that are affected with hereditary retinal blinding disease.

"About one in 3,500 people worldwide is affected with a hereditary disease, retinitis pigmentosa, that causes the death of retinal cells and eventually, blindness," Narfstrom said.

The cat's eye is a good model to use for this type of research, Narfstrom said, because it is very similar to a human eye in size and construction, so surgeons can use the same techniques and equipment.

Cats also share many of the same eye diseases with humans. The Abyssinian cats that Narfstrom is working with typically start to lose their sight when they are around 1 or 2 years old and are blind by 4 years old.

To date, Narfstrom has performed eye implant surgeries in severely visually impaired or blind cats. During the surgery, Narfstrom creates a small blister in the retina and a small opening, large enough for the microchip implant, which is just two millimeters in diameter. The chip includes technology that reacts to light and produces small electrical impulses in the retina.

"We are really excited about the potential uses for this technology and the potential to create improved vision in some of the millions of people affected worldwide with retinal blindness," Narfstrom said.

A two-minute streaming video on the research is available [here](#).