A Burst of Technology, Helping the Blind to See

By Jessy D. Dorn

A burst of technology has revolutionized the way people with vision impairments see. Prostheses have allowed even people with no eye function to see. 

One of the most promising developments is the artificial retina, an experimental device that consists of a tiny camera, which captures images that the belt-pack video processor translates into patterns of light using an array of tiny electrodes. These patterns are then sent to the brain, where the brain cells interpret the images. 

The approaches include gene therapy, which has produced improved vision in people who are blind from retinitis pigmentosa, and methods like BrainPort, a camera worn by a person with a retinal degeneration, to allow people to see color. 

BrainPort, developed at the Medical University of South Carolina, is an experimental device that uses a camera worn by a person with a retinal degeneration to allow them to see color. The device is designed to capture images and send them to the brain, where the brain cells interpret the images. 

The device is currently being tested in a clinical trial involving people with macular degeneration, and the company is releasing devices for sale in Europe. 

Other methods of restoring vision include cochlear implants, which allow people to hear sounds, and retinal implants, which allow people to see light. 

The retina is a layer of tissue in the back of the eye that contains photoreceptor cells, which take in light. The photoreceptor cells convert light into electrical signals, which are then sent to the brain. 

In the past, people with vision impairments were limited to using canes or guide dogs to navigate the world. But now, with the advent of technology, people with vision impairments have new options for seeing. 

In conclusion, technology has revolutionized the way people with vision impairments see. From prostheses to artificial retinas, people with vision impairments have new options for seeing the world. 

References:


Barbara Campbell is part of a research project involving electrodes in the eye to produce results. She is one of the first people to receive an artificial retina -- an experimental device. She said, because different methods could help different causes of blindness. 

"It was the first time the procedure, which has produced improved vision in people who are blind from retinitis pigmentosa, was available to me," she said. "I was able to see my hand when I'm writing."

Ms. Campbell, a vocational rehabilitation counselor for New York's Commission for the Blind and Partially Sighted, was so delighted after the procedure that she helped design a new artificial retina for people who have lost their vision. 

"We're hoping that by improving the technology, we can allow people to see even more," she said. "I'm, like, really seeing this."