

Intraocular Retinal Prosthesis

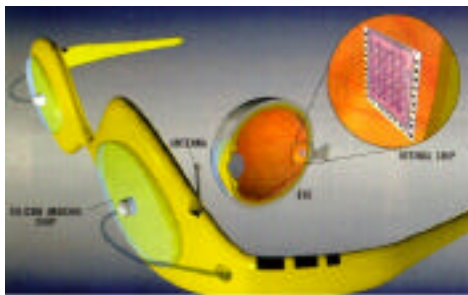
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The ability to see the world around us is arguably one of our greatest gifts. It allows us to interact with our friends and family. Now imagine that you or a loved one lost the ability to see. For a person who has lived all his life privileged by sight, sudden blindness can be devastating.

In many cases this would mean that the patient had to re-learn basic every day functions such as how to eat, walk to the bathroom and even how to interact with others. For patients with debilitating diseases such as age related macular degeneration where a person first loses the ability to recognize faces and objects followed by a total loss of sight. It was very hard to see the light at the end of the tunnel up until now.



Retinal Prosthesis Project

Johns Hopkins University
North Carolina State University

A combined effort of team of electrical engineers and doctors from Johns Hopkins University and North Carolina University developed a technique that has great future potential in the field of biomedical engineering. Intraocular Retinal Prosthesis is a procedure where a microprocessor is implanted into the patient's

eye. The role of the device is to act as an artificial retina. Working in conjunction with an exterior source this device would be able to interface with the existing ganglions and optic nerve. And as a result produce a pulse that the brain would interpret as an image.

Although this technology is very promising it is only in its experimental stages and a FDA approval is very far from the present. In addition to the FDA approval engineers and doctors still have to face the extraordinary task of integrating an electrical device, which require a power source and dissipated heat in a hostile environment. Although many fine adjustments must be made before this becomes widely available to the public significant benchmarks have been achieved.

Some blind patients were actually able to read letters and see moving objects for the first time since their debilitating disease.

