

Bionic Eye Could Restore Sight

'Six Million Dollar Man' Steve Austin wowed 1970's TV audiences with his 'bionic' limbs and eyesight. At the time, this technology seemed like a world away but now scientists in the US have developed a 'bionic eye' that could potentially restore eyesight.

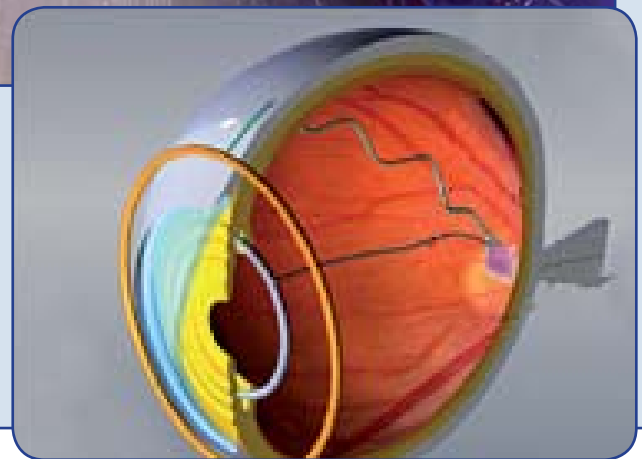
Although in its early stages, the research could one day restore human eyesight with the help of a prosthetic eye. The technology stimulates an area of the brain that processes visual information using electrodes – although implanting enough electrodes to duplicate normal eyesight is currently a serious challenge.

However, in many cases of blindness it is the eye itself that is damaged rather than the brain's visual processing capability. Scientists are aiming to bypass the eye completely and relay a visual image directly to the brain. Even with today's technology, the main issue is how to increase the number of electrodes sufficient for a human brain to read images and patterns.

The research team have used normal-sighted monkeys to help test whether stimulation of an area of the thalamus deep in the brain could produce a visual signal.

They have achieved some measure of success and it is hoped that ultimately patients would wear a set of glasses fitted with a minute digital image processor in the lenses. The processor would transmit image signals to the relevant area of the brain.

Scientists agree that in principle this technology could certainly be made to work. The drawback at this stage is how to make the electrodes small enough to sit inside the human brain.



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