

# I saw the light, says blind man with bionic eye

*Joerg Michner in Tübingen, Germany*

For Daniel Brueck, it truly looked like the light at the end of the tunnel. First his eyes could distinguish brightness from darkness, and then, slowly the shapes of objects in a room. It was the first time the 27-year-old had seen anything since going completely blind six years ago.

Mr Brueck, a student from Heidelberg, has been given hope that one day he and other blind people may have their sight restored completely by an experimental „bio-chip“ that scientists installed in his retina.

The chip, developed at a German eye clinic, is just three millimetres across and thinner than a human hair, yet it has 1,500 tiny sensors that can convert light into electrical impulses that are transmitted to the brain.

In the beginning I could only see really bright lights that were just in front

of me,” said Mr Brueck, who was among seven volunteers to report success with the treatment. „But then they adjusted the sensors and although I could not make out exact outlines and shapes, I could orientate myself, which was great.

„At the very end, they put me in a dark room with only a window, turned me around a few times and then asked me to spot the window, which I could.”

Doctors at the University of Tübingen have been working on the „bionic eye“ for 11 years. Prof Eberhard Zrenner, the project leader, said: „They work just like solar power cells and convert light to electricity. These electrical impulses can then be transmitted via the optic nerve directly to the brain. The treatment works best for people who used to be able to see and have already developed the part of the brain that deals with sight.”

The chip can only be used if a person's optic nerve is still working, as with Mr Brueck. He underwent eight hours of surgery during which the chip was planted into the retina, along with a transmitter and an ultra thin-wire running under the skin to the base of his ear, where it can be plugged into a small transformer to charge the chip.

The chip was installed for a five-week trial period only, but progress has been faster than predicted, and Mr Brueck said that if it went into commercial production, he would be first in the line.

„If it does then I would definitely want to use it,” he said. „It was so good to have light again. Even the vague light and dark made all the difference.” ■