

Macular degeneration patients see hope in embryonic stem cell treatment

Doctors have taken a major step towards curing the most common form of blindness in the UK – age-related macular degeneration.

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The macula is made up of rods and cones that sense light and behind those are a layer of nourishing cells called the retinal pigment epithelium.

When this support layer fails, it causes macular degeneration and blindness.

Doctors have devised a way of building a new retinal pigment epithelium and surgically implanting it into the eye.

The technique, [published in Nature Biotechnology](#), starts with embryonic stem cells. These are a special type of cell that can become any other in the human body.

They are converted into the type of cell that makes up the retinal pigment epithelium and embedded into a scaffold to hold them in place.

The living patch is only one layer of cells thick – about 40 microns – and 6mm long and 4mm wide.

It is then placed underneath the rods and cones in the back of the eye. The operation takes up to two hours.

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So far the patients, the other is a woman in her early sixties, have maintained improved vision in the treated eye for a year. They went from not being able to read with their affected eye at all, to reading 60 to 80 words per minute. Eight more patients will take part in this clinical trial.

Read full, original post: [Macular degeneration: 'I've been given my sight back'](#)