

# Gene injection could save thousands from blindness

By **Jenny Hope**  
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A PIONEERING therapy could prevent thousands of people from going blind through old age.

The treatment, which involves a single injection, has been found to help restore the sight of people who are suffering from inherited eye disease.

Its success in helping two men who were told they would go blind 'surpassed expectations' and it could be used to help the hundreds of thousands of people losing their sight through more common, age-related blindness in future.

Early findings suggest it promotes an improvement for patients on the verge of losing their sight.

It appears to have halted progression of choroideremia, which is caused by a gene defect that destroys light-sensing cells in the retina at the back of the eye. But

researchers said it also had 'huge' implications for the treatment of those with common types of blindness affecting retinal cells.

These include age-related macular degeneration - a disorder affecting 200,000 Britons each year for which there is no preventative treatment, although laser surgery and drugs can help. Professor Rob-

ert MacLaren, who led the operations at Oxford Eye Hospital, said he was 'absolutely delighted' with the results so far.

'It is still too early to know if the gene therapy treatment will last indefinitely, but we can say that the vision improvements have been maintained for as long as we have been following up the patients,



Hope: Toby Stroh

# A dark cloud has been lifted

SOLICITOR Toby Stroh, 56, was told as a schoolboy that an inherited eye disease would eventually leave him blind. Later he was diagnosed with choroideremia, which has an equally bleak outlook. Several months ago he started having to use a stick and had to give up playing tennis. Moving in crowds is 'extremely challenging'.

He said there had been a 'dramatic' improvement in the sight in his left eye after he took part in the trial. 'I have been living under this cloud of the inevitability of going blind,' he said. 'I have said that as long as I can read and play tennis I'll be happy, and there is now a chance I'll be able to do both these things for longer.'

treated, so it could be compared with the other. There was a marked improvement in the vision of two men whose eyesight had been seriously impaired, while the other four subjects - whose vision was so far largely unaffected - retained the same basic level of sight.

The treatment involves a one-off injection of a harmless virus carrying a properly-functioning copy of the CHM gene directly into the retina's light-sensitive cells.

It cannot replace dead cells, but Prof MacLaren believes that it can help heal 'sick' cells and protect healthy cells. 'If we were able to treat people early, we'd be getting the virus in before their vision is lost,' he said. However, choroideremia has one defective gene that needs replacing, whereas macular degeneration involves a number of genes that have to be identified. Trials involving six new subjects are being carried out.

which is two years in one case. In truth, we did not expect to see such dramatic improvements.'

The trial, part-funded by the charity Fight for Sight and reported in The Lancet journal, involved six patients with different stages of choroideremia, a disease caused by a defect in the gene CHM.

Each patient had only one eye

Daily Mail 16.1.14