DAILY MAIL (London)

June 3, 2011 Friday

**WHY THE** **DEAF SEE BETTER THAN THOSE WHO CAN HEAR**  
**BYLINE:** DAILY MAIL REPORTER  
  
**LENGTH:** 255 words

DEAF people have better eyesight than those who can hear, research shows.

Scientists discovered that the retinas of people born deaf, or who lost their hearing early in life, developed differently from those in people who can hear.

This gave them greater peripheral vision, allowing them to see more and thus increase their awareness of their surroundings and any potential hazards.

Researchers at the University of Sheffield discovered that retinal nerve cells are distributed differently in those who are deaf and those who can hear.

This makes them prioritise what they can see at their furthest peripheral vision, close to their ears.

While previous research had already uncovered the link between deafness and increased peripheral vision, scientists had thought the visual cortex in the brain was responsible, not the retinas.

Working on behalf of the Royal National Institute for Deaf People, the Sheffield researchers used ocular coherence tomography to scan the retinas of study participants.

Scientists dilated the pupils of the participants just before scanning their retinas.

They also measured their visual fields in both eyes to compare with the retina scans.

The results, published in the journal PLoS ONE, recorded a significant correlation between changes in retinal distribution in deaf individuals and the effect this had on widening their peripheral vision.

Study co-author Dr Charlotte Codina said: 'Our hope is that as we understand the retina and vision of deaf people better, we can improve visual care for deaf people.'

Metro (UK)

June 2, 2011 Thursday   
Edition 1;   
Ireland

**Deaf people develop better sight**  
**SECTION:** NEWS; Pg. 12  
  
**LENGTH:** 164 words

PEOPLE who are deaf from birth develop enhanced sight because of changes to their retinas, scientists have discovered.

The modification gives them better peripheral vision and increases their field of view.

Scientists found that the retinal nerve cells of individuals born deaf, or who went deaf very early in life, are distributed differently from those of hearing adults.

As a result their retinal neurons prioritise the region at the edge of vision, towards the ears.

Previous research suggested that deaf people can see further into the visual periphery than people who hear.

However, this was thought to be due to an adaptation in the visual centre of the brain.

'Our hope is that as we understand the retina and vision of deaf people better, we can improve visual care for deaf people, the sense which is so profoundly important to them,' said researcher Dr Charlotte Codina of Sheffield University.

The findings are published in the online journal Public Library of Science ONE.

The Daily Telegraph (London)

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National Edition

**Retinas of the deaf develop to aid sight**  
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**LENGTH:** 171 words

People who are deaf have better sight because their retinas develop more fully to allow greater peripheral vision and capture more information, researchers at the University of Sheffield have concluded.

The team noticed the development in the retinas of adults who are either born deaf or become deaf when very young.

They also found that more visual information was transmitted than in people who could hear.

Dr Charlotte Codina said: "Our hope is that as we understand the retina and vision of deaf people better, we can improve visual care for deaf people, the sense which is so profoundly important to them."

Dr Ralph Holme, the head of biomedical research at RNID, Action on Hearing Loss, said: "The better peripheral vision experienced by people who are deaf in comparison to those who hear has significant benefits for their everyday lives, including the ability to quickly spot hazards at the boundaries of their view.

"This research substantially improves our understanding of how changes in the retina create this advantage."