

Brain, not eye mechanisms keep color vision constant across lifespan

May 8 2013

Cone receptors in the human eye lose their color sensitivity with age, but our subjective experience of color remains largely unchanged over the years. This ability to compensate for age-related changes in color perception rests in higher levels of the visual system, according to research published May 8 in the open access journal *PLOS ONE* by Sophie Wuerger from the University of Liverpool, UK.

The study included 185 participants aged 18 to 75 years with normal color vision, and revealed that the appearance of color remains largely unaffected by known age-related changes in the optical media within the lens, but the ability to distinguish between small differences in shades of colors decreases with increasing age, particularly for colors on the yellow-blue axis. The effects of age were most apparent when participants viewed shades of green in daylight- what appeared uniquely green to younger observers appeared more yellowish to older viewers. The author concludes that certain [neural pathways](#) compensate for age-related losses in the eye, so color functions remain largely constant over time.

"We found that colour vision remains fairly constant across the life span, despite the known age-related yellowing of the lens," says Wuerger.

"This suggests that the visual brain re-calibrates itself as we get older."

More information: Wuerger S (2013) Colour Constancy Across the Life Span: Evidence for Compensatory Mechanisms. *PLoS ONE* 8(5): e63921. [doi:10.1371/journal.pone.0063921](https://doi.org/10.1371/journal.pone.0063921)

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Citation: Brain, not eye mechanisms keep color vision constant across lifespan (2013, May 8)
retrieved 27 April 2024 from
<https://medicalxpress.com/news/2013-05-brain-eye-mechanisms-vision-constant.html>

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