

Eyes on ice – medical research from Antarctica

November 5 2018



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Results from a medical research study at British Antarctic Survey's Halley Research Station – "Impact of long-term daylight deprivation on retinal light sensitivity, circadian rhythms and sleep during the Antarctic

winter" – are published this week in *Scientific Reports*.

This research project investigated the potential changes in eye function and health under influence of either constant light or constant darkness. It explored if additional light and medicine can influence the body's natural clock and enable regular sleep/wake patterns. Experiments study how the eye's pupil reacts to different flashes of light after a prolonged period of light or dark and also monitors how physical activity affects the rest-wake cycle by the wearing of special watches.

The remoteness and winter isolation of communities working in Antarctica provide an excellent environment for research into human behaviour, performance, health and well being. Many studies of overwintering staff in Antarctica have been carried out at BAS research stations in partnership with the BAS Medical Unit (BASMU) based at Plymouth Hospitals NHS.

More information: A. Kawasaki et al. Impact of long-term daylight deprivation on retinal light sensitivity, circadian rhythms and sleep during the Antarctic winter, *Scientific Reports* (2018). [DOI: 10.1038/s41598-018-33450-7](https://doi.org/10.1038/s41598-018-33450-7)

Provided by British Antarctic Survey

Citation: Eyes on ice – medical research from Antarctica (2018, November 5) retrieved 4 May 2024 from <https://medicalxpress.com/news/2018-11-eyes-ice-medical-antarctica.html>

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